

**The Perceptions and Practices of Second Language Teachers Regarding
Digital Technologies for Communicative Competence**

**A thesis presented in partial fulfilment of the requirements for the degree of
Doctor of Philosophy in Education**

**Massey University, Manawatū,
New Zealand**

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Abstract

This study investigated how secondary school language teachers in Aotearoa New Zealand perceive and integrate digital technologies to support students' Communicative Competence development in pre-NCEA language classrooms. Employing an explanatory sequential mixed-methods design, it involved a survey of 89 teachers from diverse languages and three case studies across New Zealand Sign Language, Chinese, and te reo Māori classes. Student perspectives were incorporated to complement the teacher-focused analysis.

Findings show the uneven development of Communicative Competence components in beginner-level classrooms. Linguistic competence was consistently perceived as important, with digital technologies primarily used to support vocabulary, grammar, and pronunciation. While Intercultural Communicative Competence (ICC) was conceptually valued, it was typically addressed through static cultural content rather than authentic interaction. Although most teachers expressed positive perceptions of digital technologies, their integration remained cautious and selective, influenced by teacher, student, and technology-related challenges. Students' views on technology integration generally aligned with teachers' established classroom practices, though differing interpretations of specific digital tools were noted.

The study contributes to understanding how the Communicative Competence framework operates in Computer-Assisted Language Learning (CALL), particularly within the linguistically and culturally distinctive language classrooms of Aotearoa New Zealand. It also offers a contextually grounded and methodologically layered understanding of digital language teaching, having examined how teachers of diverse languages interpreted and implemented digital integration, supported by student perspectives to illuminate the classroom experience. In addition, it presents a more dynamic view of the relationship between teacher perceptions and practice, showing that in some cases, digital classroom practice preceded teachers' stated perceptions.

Table of Contents

Acknowledgements	iii
Abstract	v
Table of Contents	vi
List of Figures	xii
List of Tables.....	xiv
List of Appendices	xv
Glossary of Key Terms and Acronyms	xvi
Chapter 1: Introduction to the Study	1
1.1 Research Background and Rationale.....	1
1.2 Scope and Focus	4
1.3 Significance of the Study.....	6
1.4 Researcher Positionality	7
1.5 Structure of the Thesis.....	8
Chapter 2: Literature Review	10
2.1 Communicative Competence in Language Teaching.....	11
2.2 Intercultural Communicative Competence.....	18
2.2.1 Communicative Competence in the Aotearoa New Zealand Context: Incorporating Intercultural Dimensions.....	20
2.2.2 Communicative Language Teaching and Intercultural Communicative Language Teaching.....	23
2.3 Integrating Digital Technologies in Language Teaching: Potential and Challenges	27
2.3.1 The Potential of Integrating Digital Technologies in Language Teaching and Learning	29
2.3.2 Barriers Between Teachers’ Perceptions and Practice in Integrating Digital Technologies	38
2.4 Limited Integration of Teacher and Student Perspectives in Digital Technology Use ..	44
2.5 Chapter Summary	45
Chapter 3: Methodology.....	47
3.1 Introduction	47

3.2 Research Questions.....	47
3.3 Research Paradigm	49
3.4 Mixed Methods Research Design.....	52
3.5 Phase One: Online Survey	54
3.5.1 Development of Survey Questions	56
3.5.2 Survey Data Analysis.....	60
3.6 Phase Two: Multiple Cases Study	62
3.6.1 Case Selection Criteria.....	64
3.6.2 Case Study Data Collection Methods	65
3.6.3 Case Study Data Analysis.....	71
3.7 Reliability, Validity and Trustworthiness.....	74
3.7.1 Reliability of the Online Survey	74
3.7.2 Validity of the Online Survey	74
3.7.3 Trustworthiness of the Case Studies	75
3.8 Research Ethics.....	76
3.9 Chapter Summary	79
Chapter 4: Survey Findings.....	80
4.1 Introduction	80
4.2 Participants of the Survey.....	80
4.2.1 Demographic Characteristics of Participants.....	81
4.2.2 Teaching Context.....	83
4.3 Teachers' Objectives in Developing Communicative Competence	85
4.3.1 Structured Survey Findings: Focus on Communicative Competence	86
4.3.2 Qualitative Insights: Additional Teaching Objectives Valued by Teachers.....	90
4.4 Teachers' Overall Perceptions of Digital Technologies in Language Teaching.....	92
4.5 Teachers' Perceived Roles of Digital Technologies in Language Teaching.....	96
4.6 Teachers' Use of Digital Technologies in Language Teaching	98
4.6.1 Distribution of Teaching Modes Across Demographic Groups	98
4.6.2 Digital Technologies Used in Language Class	105
4.7 Effect of the Pandemic on the Teachers' Perceptions and Practices.....	119
4.8 Chapter Summary	121
Chapter 5: Case Study One	123

5.1 Introduction	123
5.2 Context of Case Study One	124
5.3 Teacher’s Objectives in Developing Students’ Communicative Competencies	127
5.3.1 Linguistic Competence	127
5.3.2 Discourse Competence.....	129
5.3.3 Strategic Competence	130
5.3.4 Intercultural Communicative Competence	130
5.3.5 Digital Competence	131
5.4 The Teacher’s Perceptions and Practices of Using Digital Technologies in Language Teaching	133
5.4.1 How the Teacher Sees and Implements the Potential of Digital Technologies in Language Teaching and Learning.....	133
5.4.2 Challenges in Technology Integration and How the Teacher Responds in Language Teaching and Learning	143
5.4.3 Other Perceptions of Digital Language Learning	148
5.5 Students’ Perceptions and Experience of digital technologies in Language Learning. 150	
5.5.1 How Students Perceive and Experience the Potential of Digital Technologies	151
5.5.2 Bridging Teacher and Student Perspectives on Benefits of Digital Technology Integration in Sign Language Education.....	157
5.5.3 Students’ Perspectives on Challenges and Strategies in Digital Technology Integration.....	160
5.5.4 Comparing Student and Teacher Perspectives on Challenges.....	163
5.6 Chapter Summary	164
Chapter 6: Case Study Two.....	167
6.1 Introduction	167
6.2 Context of Case Study Two.....	167
6.3 Teacher’s Objectives in Developing Students’ Communicative Competencies	170
6.3.1 Linguistic Competence	170
6.3.2 Intercultural Communicative Competence	171
6.3.3 Discourse Competence.....	172
6.3.4 Strategic Competence	173
6.3.5 Digital Competence	173

6.4 The Teacher’s Perceptions and Practices of Using Digital Technologies in Language Teaching	174
6.4.1 How the Teacher Sees and Implements the Potential of Digital Technologies in Language Teaching and Learning.....	174
6.4.2 Challenges in Technology Integration and How the Teacher Responds in Language Teaching and Learning	180
6.4.3 Other Perceptions.....	185
6.5 Students’ Perceptions and Experience of Digital Technologies in Language Learning	186
6.5.1 How Students Perceived and Experienced the Potential of Digital Technologies	186
6.5.2 Bridging Teacher and Student Perspectives on Benefits of Digital Technology Integration in Language Education.....	191
6.5.3 Students’ Perspective on Challenges and Strategies in Digital Technology Integration.....	193
6.5.4 Comparing Student and Teacher Perspectives on Challenges.....	196
6.6 Chapter Summary	199
Chapter 7: Case Study Three.....	202
7.1 Introduction	202
7.2 Context of Case Study Three.....	202
7.3 Teacher’s Objectives in Developing Students’ Communicative Competencies	206
7.3.1 Linguistic Competence	206
7.3.2 Intercultural Communicative Competence	207
7.3.3 Discourse Competence.....	209
7.3.4 Strategic Competence	210
7.3.5 Digital Competence	210
7.4 Teacher’s Perceptions and Practices of Using Digital Technologies in Language Teaching	211
7.4.1 How the Teacher Sees and Implements the Potential of Digital Technologies in Language Teaching and Learning.....	212
7.4.2 Challenges in Technology Integration and How the Teacher Responds in Language Teaching and Learning	219
7.5 Students’ Perceptions and Experience of Digital Technologies in Language Learning	225
7.5.1 How Students Perceive and Experience the Potential of Digital Technologies	226

7.5.2 Bridging Teacher and Student Perspectives on Benefits of Digital Technology Integration in Language Education.....	234
7.5.3 Students' Perspective on Challenges and Strategies in Digital Technology Integration and Alignment with the Teacher's Perspectives	235
7.5.4 Comparing Student and Teacher Perspectives on Challenges.....	238
7.6 Chapter Summary	240
Chapter 8: Cross-case Analysis.....	242
8.1 Introduction	242
8.2 Comparing Teachers' Objectives in Developing Students' Communicative Competencies.....	248
8.3 Teachers' Perceptions and Practice of Using Digital Technologies in Language Teaching	252
8.3.1 How Teachers See and Implement the Potential of Digital Technologies	252
8.3.2 Challenges in Technology Integration.....	258
8.3.3 Adapting to Digital Education and Perceived Teachers' Role	263
8.4 Comparing Students' Perceptions and Experiences of Digital Technologies in Language Learning.....	266
8.4.1 How Students Perceive and Experience the Potential of Digital Technologies	266
8.4.2 Students' Perspectives on Challenges.....	271
8.4.3 Bridging Teacher and Student Perspectives	272
8.5 Chapter Summary	276
Chapter 9: Discussion.....	278
9.1 Introduction	278
9.2 Communicative Competence and Digital Technology Integration	279
9.2.1 Linguistic Competence: A Central Focus in Teachers' Perceptions and Practice. 279	
9.2.2 ICC: The Gap Between Recognition and Implementation	285
9.2.3 Discourse and Strategic Competence: Limited and Implicit Instructional Attention	288
9.2.4 Digital Competence: Divergent Views in Teachers' Perceptions and Practice.....	290
9.3 Beyond Communicative Competence: Broader Technology Integration in Language Education.....	292
9.3.1 Perceived Broader Potential of Digital Integration in Language Teaching.....	293
9.3.2 Perceived Challenges of Digital Technology Integration in Language Teaching .	297

9.3.3 Teacher–Student Perspectives on Digital Learning: Similarities and Differences	302
9.4 Chapter Summary	305
Chapter 10: Conclusions and Implications.....	307
10.1 Introduction	307
10.2 Research Conclusions.....	307
10.2.1 Digital Technology Integration for Communicative Competence and Broader Instruction	307
10.2.2 Challenges in Digital Technology Integration in Language Teaching	310
10.2.3 Similarities and Differences Between Teacher and Student Perspectives.....	311
10.3 Contributions of the Study.....	312
10.4 Implications	314
10.4.1 Implications for Language Teachers.....	314
10.4.2 Implications for Teacher Professional Development.....	316
10.4.3 Implications for Institutional Decision Makers and Technology Developers	317
10.5 Limitations.....	319
10.6 Suggestions for Future Research	320
10.7 Final Remarks.....	321
References	322
Appendices.....	344

List of Figures

Figure 2.1 Revisited Communicative Competence Framework (Adapted from Canale (1983)).....	17
Figure 3.1 Adapted Explanatory Sequential Mixed-Method Design from Creswell (2018)	54
Figure 4.1 School Deciles of the Respondents.....	85
Figure 4.2 Teaching Modes of the Respondents	85
Figure 4.3 Importance of Language Teaching Objectives	89
Figure 4.4 Nine Statements of Teachers’ Perceptions of Using Digital Technologies in Language Teaching	95
Figure 4.5 Perceived Roles of Digital Technologies.....	96
Figure 4.6 Digital Technologies used for Designing and Presenting the Course Content or Uploading Learning Resources.....	110
Figure 4.7 Digital Technologies Teachers Have Students Use for Improving Their Language Performance.....	110
Figure 4.8 Teachers Encourage Students to Use Digital Technologies to Practice Their Language Skills	111
Figure 4.9 Teachers Encourage Students to Use Digital Technologies to Learn at Their Own Pace.....	111
Figure 5.1 Breakdown of the Theme Concerning the Teacher’s Perceived Potential of Using Digital Technologies in Language Teaching in Case Study One	134
Figure 5.2 Breakdown of the Theme Concerning the Teacher’s Perceived Challenges in Technology Integration in Language Teaching in Case Study One.....	144
Figure 5.3 Breakdown of the Theme Concerning the Students’ Perceived Potential of	

Using Digital Technologies in Language Learning in Case Study One	152
Figure 5.4 Breakdown of the Theme Concerning the Students' Perceived Challenges in Technology Integration in Language Learning in Case Study One	162
Figure 6.1 Breakdown of the Theme Concerning the Teacher's Perceived Potential of Using Digital Technologies in Language Teaching in Case Study Two	175
Figure 6.2 Breakdown of the Theme Concerning the Teacher's Perceived Challenges in Technology Integration in Language Teaching in Case Study Two	181
Figure 6.3 Breakdown of the Theme Concerning the Students' Perceived Potential of Using Digital Technologies in Language Learning in Case Study Two	187
Figure 6.4 Breakdown of the Theme Concerning the Students' Perceived Challenges in Technology Integration in Language Learning in Case Study Two	194
Figure 7.1 Breakdown of the Theme Concerning the Teacher's Perceived Potential of Using Digital Technologies in Language Teaching in Case Study Three	213
Figure 7.2 Breakdown of the Theme Concerning the Teacher's Perceived Challenges in Technology Integration in Language Teaching in Case Study Three	220
Figure 7.3 Breakdown of the Theme Concerning the Students' Perceived Potential of Using Digital Technologies in Language Learning in Case Study Three	227
Figure 7.4 Breakdown of the Theme Concerning the Students' Perceived Challenges in Technology Integration in Language Learning in Case Study Three	236

List of Tables

Table 4.1 Demographic Characteristics of Subjects (n=89).....	81
Table 4.2 Language Taught by the respondents	83
Table 4.3 Distribution of Teachers by School Decile Level and Teaching Mode	99
Table 4.4 Distribution of Teachers by Language Taught and Teaching Mode.....	101
Table 4.5 Distribution of Teachers by Age Group and Teaching Mode	103
Table 4.6 Distribution of Teachers by Teaching Experience and Teaching Mode	104
Table 4.7 Digital Devices Used in Language Class	106
Table 4.8 Digital Technologies Used in the Language Class.....	108
Table 5.1 Teachers and Students' Pseudonyms in Case Study One.....	124
Table 5.2 Correspondence Between Data Sources and Research Questions in Case Study One	124
Table 6.1 Teachers and Students' Pseudonyms in Case Study Two.....	170
Table 6.2 Correspondence Between Data Sources and Research Questions in Case Study Two.....	170
Table 7.1 Teachers and Students' Pseudonyms in Case Study Three	206
Table 7.2 Correspondence Between Data Sources and Research Questions in Case Study Three.....	206
Table 8.1 High-Level Cross-Case Comparison Across the Three Cases	243

List of Appendices

Appendix A:	Online Survey for Language Teachers.....	344
Appendix B:	Advertising of Survey	359
Appendix C:	Email to New Zealand Association of Language Teachers (NZALT).....	360
Appendix D:	Information Sheet for the NZALT	362
Appendix E:	Link and QR Code of Online Survey	364
Appendix F:	Information Sheet for Teachers in the Case Studies	365
Appendix G:	Consent Form for Language Teachers in the Case Studies.....	369
Appendix H:	Permission Request Letter to the School.....	370
Appendix I:	Information Sheet for Schools in the Case Studies	371
Appendix J:	Consent Form for School in the Case Studies.....	374
Appendix K:	Information Sheet for Students in the Case Studies.....	375
Appendix L:	Consent Form for Students in the Case Studies	379
Appendix M:	Focus Group Confidentiality Agreement	380
Appendix N:	Information Sheet for the Parents in the Case Studies.....	381
Appendix O:	Consent Form for Parents.....	385
Appendix P:	Interview Questions for Teachers in the Case Studies.....	386
Appendix Q:	Focus Group Guide	392
Appendix R:	Ethics Approval Document	393
Appendix S:	Example of SPSS Analysis	394
Appendix T:	Example of NVivo Codes	395
Appendix U:	Example of Lesson Plan Coding	396
Appendix V:	Example of Observation Note Coding.....	397

Glossary of Key Terms and Acronyms

Automatic Speech Recognition (ASR)	Technology that converts spoken language into text and supports pronunciation or speaking practice.
Communicative Competence	Learners' ability to use a language effectively and appropriately for communication in real contexts.
Communicative Language Teaching (CLT)	A pedagogical orientation that prioritises meaningful communication and the development of learners' Communicative Competence.
Computer-Assisted Language Learning (CALL)	The study and use of digital technologies to support language learning and teaching.
Intercultural Communicative Competence (ICC)	Learners' ability to communicate appropriately and effectively across cultural contexts, integrating knowledge, skills, attitudes, and critical cultural awareness.
Intercultural Communicative Language Teaching (ICLT)	A pedagogical orientation that integrates language learning with the development of Intercultural Communicative Competence. It emphasises helping learners engage with cultural perspectives, compare cultural meanings, and communicate appropriately across cultural contexts through a range of instructional practices.
Learning Management Systems (LMSs)	Digital platforms used to organise course content, deliver resources, manage assessment, and support communication (e.g., Moodle, Schoology).
New Zealand Association of Language Teachers (NZALT)	The national professional association for language teachers in New Zealand.
New Zealand Sign Language (NZSL)	One of Aotearoa New Zealand's official languages, alongside te reo Māori, and the primary language of the Deaf community.
pre-NCEA	Years 9–10 of secondary schooling in Aotearoa New Zealand,

	prior to the National Certificate of Educational Achievement (NCEA)
TPACK	A framework describing teachers' integrated knowledge of technology, pedagogy, and content, used to guide effective technology integration.
Te reo Māori	The Indigenous language of Aotearoa New Zealand and one of its official languages, alongside New Zealand Sign Language.

Chapter 1: Introduction to the Study

1.1 Research Background and Rationale

In contemporary language education, communication has been widely recognised as a central orientation of language learning, as it enables learners to use language effectively in real-world interactions (Kanwit & Solon, 2023). In Aotearoa New Zealand, this communicative focus is explicitly reflected in the New Zealand Curriculum (Ministry of Education, 2007), which positions communication at the heart of language learning and emphasises the role of linguistic knowledge and cultural understanding in students' communicative development. To conceptualise what it means to use language effectively in real-world contexts, language education research has long drawn on the concept of Communicative Competence (e.g., Bachman & Palmer, 1996; Canale, 1983; Canale & Swain, 1980; Hymes, 1972). In particular, the frameworks proposed by Canale and Swain (1980), and further developed by Canale (1983), marked a significant shift away from grammar-based models of language ability towards a multidimensional view of communication that encompasses linguistic, sociolinguistic, discourse, and strategic competencies. The concept of Communicative Competence has informed the development of Communicative Language Teaching (CLT), which emphasises learners' ability to use language meaningfully for communicative purposes (Littlewood, 2014; Qasserras, 2023).

While Communicative Competence has broadened the focus of language teaching beyond grammatical accuracy, its conceptual foundations were developed prior to the current conditions of globalisation and digitalisation (Block, 2010; Savignon, 2007). As communication increasingly takes place across linguistically and culturally diverse contexts and through both digital and face-to-face modes, scholars have suggested that traditional conceptualisations of Communicative Competence may not fully capture the communicative demands of contemporary language use (e.g., Celce-Murcia, 2008; Kanwit & Solon, 2023).

In the present study, drawing on Canale's (1983) framework, Communicative Competence is conceptualised as an umbrella construct that encompasses linguistic, discourse, strategic, intercultural, and digital dimensions of communication. Thus, this study uses the term Communicative Competence to also encompass Intercultural Communicative Competence (ICC), which foregrounds the ability of learners to communicate and relate across cultures, engage with diverse perspectives, and negotiate meaning in varied sociocultural contexts (Byram, 1997; Liddicoat & Scarino, 2010). At the pedagogical level, these intercultural aims have informed the development of Intercultural Communicative Language Teaching (ICLT), which explicitly incorporates attention to cultural difference and intercultural learning within communicative approaches to language teaching (Kennedy, 2016). Despite the prominence of intercultural aims in curricular documents such as the New Zealand Curriculum (Ministry of Education, 2007), their integration into classroom practice has faced challenges. For example, Conway and Richards (2017) and Oranje and Smith (2018) found that teachers often reduce culture to surface-level topics such as food and festivals, with limited engagement in deeper cultural reflection or comparison. Similarly, East et al. (2022) found that a lack of training, assessment tools, and institutional support hindered the meaningful incorporation of intercultural objectives into teaching.

Moreover, digital technologies have been increasingly recognised as resources that can support language teaching and learning, particularly in relation to Communicative Competence (e.g., Ruan & Medwell, 2020; Rustam & Jiatian, 2024). Digital technologies can provide learners with access to authentic language input (Golonka et al., 2014), multimodal resources (Regina & Anitha Devi, 2022), and opportunities for synchronous or asynchronous communication that transcend time and space (Akayoglu et al., 2021; Chun, Smith, & Kern, 2016). However, their effectiveness in supporting learning depends largely on how teachers perceive and integrate them into pedagogy (Stickler, 2022). As Stickler (2022) notes, effective technology integration is shaped not by the tools themselves, but by the pedagogical principles that guide their use.

While numerous studies highlight the pedagogical potential of digital technologies, relatively few have examined how language teachers understand and use these tools in their teaching and how this potential is realised in classroom practice, particularly in relation to students' development of Communicative Competence (Alsuhaibani, 2019; Shin & Son, 2007).

Despite substantial research in the field of Computer-Assisted Language Learning (CALL), significant gaps remain. Much of the literature centres on higher education settings (e.g., Chen, 2008; Xue & Churchill, 2022) and English as a second language teaching contexts (e.g., Albirini, 2006; Coskun, 2011), leaving the integration of technology for communicative purposes in secondary school settings relatively underexplored. In addition, many studies rely on short-term experimental interventions conducted under controlled conditions (e.g., Ashcroft et al., 2018; Özer et al., 2017). While these offer insights into immediate learning outcomes, they often fail to reflect how digital technologies are embedded in the long-term, context-dependent practices of everyday classrooms. Given the dynamic nature of language education, which is shaped by teacher agency, language-specific pedagogical demands, curriculum requirements, and learner diversity, there is a pressing need for more contextualised, practice-oriented research that captures the complexities teachers and students navigate in real settings.

In Aotearoa New Zealand, this need is particularly pronounced. The country's multilingual and multicultural context presents both unique challenges and valuable opportunities for language teachers (Kennedy, 2016). However, little empirical research has examined how secondary school teachers in this setting perceive and use digital tools to support Communicative Competence, including its intercultural dimensions and the role of digital technologies in its development. This study addresses these gaps by exploring how language teachers perceive and use digital technologies to support the development of students' Communicative Competence within the distinctive curricular and cultural landscape of Aotearoa New Zealand. It aims to provide a holistic and context-sensitive account of how Communicative Competence is developed through technology-supported language education.

1.2 Scope and Focus

This study investigates how digital technologies are perceived and implemented by secondary school language teachers in Aotearoa New Zealand, with a particular focus on their role in developing students' Communicative Competence. The research is situated in the pre-NCEA stage of secondary education, typically covering Years 9 and 10 (ages 13–15), which represent the first two years of secondary school in Aotearoa New Zealand. NCEA (National Certificate of Educational Achievement) is the main national qualification for senior secondary students. This pre-NCEA stage marks a transitional period when students shift from general exposure to more formal language learning (Ashton, 2021). Unlike the NCEA phase, where teaching is often shaped by assessment pressures (East, 2016), this stage allows for greater pedagogical flexibility (Ashton, 2021). At the same time, students are still developing their academic identities and digital learning habits, making them less self-directed than tertiary learners (Ashton, 2017).

For some learners, this pre-NCEA stage may represent their first sustained engagement with structured language learning, as well as with how digital technologies are introduced and facilitated by teachers. The ways in which digital tools are integrated during this period may contribute to shaping students' early understandings of technology-supported learning and influence, to some extent, their confidence and willingness to engage in more autonomous language learning over time (Reinders & White, 2016). This pre-NCEA stage is particularly important because language study becomes optional in the senior secondary curriculum. Students' experiences at the pre-NCEA level may therefore play a critical role in shaping their motivation and choices regarding continued language learning in later years (Kennedy, 2016).

The study focuses on registered teachers who teach languages in Aotearoa New Zealand secondary schools. These include commonly taught languages such as French, German,

Japanese, Spanish, and Mandarin Chinese, as well as New Zealand Sign Language (NZSL) and te reo Māori. Both NZSL, recognised under the New Zealand Sign Language Act 2006 (New Zealand Government, 2006), and te reo Māori, recognised under the Māori Language Act 1987 (New Zealand Government, 1987), hold official language status and reflect the distinctive linguistic and cultural landscape of Aotearoa New Zealand. By engaging with teachers across a range of languages, the study hopes to capture the diversity of language teaching contexts in Aotearoa New Zealand secondary schools and to explore how digital technology integration varies across different languages. This contrasts with much of the existing CALL research, which tends to focus on a single language, typically English or other major global languages (e.g., Lai & Morrison, 2013; Stockwell, 2013). As a result, this study offers a more nuanced understanding of how language-specific factors such as curriculum status, teaching traditions, resource availability, and community expectations interact with broader institutional and technological conditions. In doing so, it contributes to a more context-sensitive and inclusive picture of digital integration in language education.

Although the central focus of this study is on teachers' perceptions and practices of using digital technologies in language classes, it also incorporates student perspectives in the case study phase. These student voices do not form a separate object of analysis but are used as complementary evidence to interpret and assess the effectiveness and reception of digital strategies employed by teachers. By attending to how students engage with, resist, or reframe digital learning tasks, the study enriches its understanding of teacher decision-making and reveals the dialogic nature of digital pedagogy. This inclusion also highlights areas of similarity and difference between teacher intention and learner experience, offering critical insight into the relational dynamics of language teaching in digital learning environments.

Regarding technological scope, the study adopts a broad and pedagogically grounded definition of digital technologies (Bui, 2022; Chen, 2008), encompassing internet-based tools, platforms, and multimedia resources commonly used in language instruction. These include learning

management systems (e.g., Google Classroom, Moodle), vocabulary applications (e.g., Quizlet), online videos, collaborative platforms (e.g., Google Docs, Padlet), audio/video recording tools, and synchronous platforms (e.g., Zoom). The research does not evaluate or design technologies, nor does it focus on the technical architecture or user interface of specific tools. Instead, the emphasis lies on how these tools are pedagogically selected, adapted, and embedded into language teaching practices, particularly as they relate to fostering Communicative Competence and shaping learner engagement.

1.3 Significance of the Study

This study addresses a timely and important intersection between digitalisation and language education. In an era where communication and culture are increasingly facilitated by digital technologies, understanding how teachers interpret and enact Communicative Competence through digital means is both conceptually and pedagogically significant. Such understanding is essential for rethinking how communicative goals can be realised in technology-rich learning environments. By examining how communicative and technological intentions converge in classroom practice, the study advances theoretical understanding of how digital technologies support Communicative Competence development in classroom practice. It moves beyond instrumental views of digital tools by foregrounding how teaching practices, digital technologies, and classroom contexts jointly shape the development of students' Communicative Competence.

Focusing on Aotearoa New Zealand, the study holds particular significance in revealing how digital language teaching evolves within a linguistically and culturally diverse education system where inclusivity and responsiveness to local identities are essential. By centring on teachers' perspectives during the pre-NCEA years, it highlights their pivotal role in shaping how digital practices and communicative learning take root at this formative stage of students' language education. Through this lens, the study underscores the broader educational importance of

understanding how technology can meaningfully influence the development of Communicative Competence in secondary schooling contexts.

1.4 Researcher Positionality

As Bogdan and Biklen (2006) argue, a researcher's beliefs, values, past experiences, and personal identity are inherently intertwined with the research process and should not be artificially separated. The reflections below outline how my personal and professional background has shaped the research focus and interpretive lens. My first direct engagement with the New Zealand education system began in 2018, when I participated as a Mandarin Language Assistant in three local schools as part of a master's programme placement. Before this, my academic background was grounded in teaching Chinese as a second language. Growing up in a mid-sized Chinese city, I experienced classrooms where technology use was minimal. Even in university, digital tools such as laptops and online platforms remained peripheral, supporting delivery rather than interaction. In parallel, my own experience as a language learner also shaped my perspective. Like many students in China, I studied English for over a decade, but my learning was heavily exam-oriented. This gap became evident when I failed to respond to a simple question from a foreign student during my postgraduate studies in Shanghai. It was a moment that highlighted the lack of communicative focus in my language learning. This realisation, alongside my teaching placement in Aotearoa New Zealand, prompted me to reframe language learning as a communicative and contextualised process.

These insights were further shaped during my Mandarin Language Assistant placement in Hamilton, where I observed how local teachers integrated diverse digital tools into their practice. Initially enthusiastic about the abundance of online resources, I later faced challenges in selecting and applying them effectively. These early tensions sparked my interest in the complexities of technology use in language education. Through my doctoral research and later teaching experience in a New Zealand secondary school, I came to see that meaningful

integration relies not only on access, but on teachers' perceptions of digital technologies, practices, and adaptability.

Approaching this research as a non-New Zealand-based educator has shaped my perspective in distinctive ways. Rather than seeing this position as a limitation, I view it as a strength that has enabled me to engage with local practices with fresh eyes and a reflexive attitude. My outsider status has encouraged a learning-oriented stance throughout the research process, grounded in openness, curiosity, and a willingness to challenge my assumptions. This has been particularly valuable in interpreting classroom practices that might otherwise appear familiar or self-evident to local observers. For example, in analysing the Chinese language classroom in one of my case studies, my own experience as both a Chinese language teacher and a cross-cultural learner allowed me to recognise subtle tensions between global pedagogical trends and local classroom realities. This dual perspective, rooted in both insider knowledge and outsider reflection, has contributed meaningfully to the way I have approached and interpreted the data throughout this study.

1.5 Structure of the Thesis

This thesis is organised into ten chapters, moving from theoretical and methodological foundations to empirical findings and concluding implications. It investigates how digital technologies are integrated into secondary language teaching in Aotearoa New Zealand, with a particular focus on Communicative Competence. Chapter 2 reviews relevant literature, outlining key frameworks of Communicative Competence and introducing ICC as an important extension, with attention to its relevance in the Aotearoa New Zealand context. It also examines research on digital technology integration, including its pedagogical potential and challenges in language teaching and learning. Chapter 3 details the study's methodological approach, which combines a survey with three qualitative case studies.

Chapter 4 presents findings from the survey, providing a broad overview of teachers' practices and perceptions. Chapters 5 to 7 offer in-depth case studies of three different language classrooms, highlighting teacher perceptions, digital practices, and student experiences. Building on these, Chapter 8 provides a cross-case analysis, identifying commonalities and differences across the cases. Chapter 9 discusses the findings in relation to existing literature, examining how digital tools support or constrain the development of Communicative Competence and related pedagogical aims. Finally, Chapter 10 concludes the thesis by summarising key findings, contributions, and implications, and suggesting directions for future research.

Chapter 2: Literature Review

This study aims to understand how language teachers perceive and use digital technologies in language teaching to support the development of learners' Communicative Competence. This objective aligns with the New Zealand Curriculum (Ministry of Education, 2007), which emphasises communication as the central goal of language learning. To provide a comprehensive understanding of the existing research landscape and the gaps that necessitate this study, this literature review chapter is structured around four key areas.

Firstly, it reviews the evolution of Communicative Competence, highlighting its theoretical foundations, which underpin Communicative Language Teaching (CLT). While CLT promotes authentic language use, scholars have noted various challenges in its practical implementation (Nazari, 2007; Ngoc & Iwashita, 2012). These include tensions between its theoretical ideals and classroom realities (Ngoc & Iwashita, 2012), which will be further explored in the first section of this chapter. Secondly, this chapter examines ICC as an extended component within the Communicative Competence framework, emphasising the ability to communicate effectively across cultural differences. This section details how ICC is understood in global research and how it has been integrated into language education in Aotearoa New Zealand. The third section focuses on digital technology integration in language teaching, discussing how teachers' perceptions and pedagogical choices influence the effectiveness of technology in supporting Communicative Competence. It emphasises that technology alone does not guarantee learning outcomes. Its success depends on pedagogical alignment with teaching content and instructional strategies. Finally, the chapter considers teachers' and learners' perspectives on digital technology use. While this study primarily investigates teachers' perceptions and practices, learners' views were included to enrich the understanding of how technology is experienced in the classroom.

2.1 Communicative Competence in Language Teaching

This section first outlines the historical foundations of Communicative Competence and its significance in language education. It then evaluates several theoretical models of Communicative Competence, with a particular emphasis on Canale and Swain's (1980) framework and Canale's (1983) refinement, which provide a structured perspective on Communicative Competence and form the theoretical foundation of this study. However, as globalisation and digitalisation reshape language education (Chun, Smith, & Kern, 2016), the continued applicability of this classic framework requires further consideration (Chapelle, 2009). Accordingly, this study conceptualises Communicative Competence as an expanded construct that integrates intercultural and digital dimensions, contributing to a more nuanced understanding of language use in contemporary contexts.

The concept of Communicative Competence emerged in the 1960s as researchers and practitioners began to question dominant language learning theories and practices that prioritised grammatical accuracy and mechanical repetition (Kanwit & Solon, 2023; Richards & Rodgers, 2014). Early language teaching methods such as the Grammar Translation Method and the Audiolingual Method, rooted in behaviourist theory (Skinner, 1957), emphasised rote memorisation, drill-based learning, and error avoidance (VanPatten & Williams, 2014). While Chomsky's theory of Generative Grammar (1965) challenged behaviourist assumptions by introducing the idea of an innate language faculty and focusing on internal cognitive processes, it did not account for the functional and social dimensions of language use. Around the same period, interlanguage theory (Selinker, 1972) introduced the notion that second language learners develop a unique linguistic system, shaped by internal cognitive processes and influenced by both the first and target languages. This perspective shifted attention from surface errors to the developmental nature of learner language (Kanwit & Solon, 2023). Later, cognitive-functional linguistics (Larsen-Freeman, 2000) emphasised the role of meaning, usage patterns, and conceptual structures in shaping language knowledge, proposing that language emerges from usage and is grounded in general cognitive abilities. However, as Firth and

Wagner (1997) and Atkinson (2002) argue, such approaches often marginalised the socio-cultural, strategic, and pragmatic dimensions of language use, which are central to real-world communicative success.

In response to these limitations, Hymes (1967) introduced the concept of Communicative Competence, defining successful language learning as the ability to use language appropriately and effectively in real-world contexts, rather than the mere mastery of grammatical rules. His conceptualisation challenged Chomsky's idealised notion of *linguistic competence* (Chomsky, 1965), which had previously been regarded as the sole theoretical basis for language learning, teaching, and assessment (Jeong, 2018; Savignon, 1987). By incorporating a sociolinguistic perspective, Communicative Competence expanded the narrow scope of linguistic competence to include not only internalised grammatical knowledge but also cultural norms, contextual appropriateness, and pragmatic judgement (Hymes, 1972). This shift redirected the focus of language teaching from form-focused instruction to communicative goals, fostering meaningful interaction and negotiation of meaning across diverse social contexts (Firth & Wagner, 1997; Kanwit & Solon, 2023). Unlike traditional theories that positioned learners as deficient communicators striving for native-like proficiency (Firth & Wagner, 1997), the Communicative Competence framework recognised learners as active communicators and meaning negotiators (Richards & Rodgers, 2014). A competent language user, in this view, not only possesses grammatical knowledge, e.g., syntax, morphology, phonology, but also understands how and when to express meaning appropriately within specific sociocultural contexts (Jeong, 2018). This perspective laid the foundation for CLT, which explicitly prioritises learners' ability to participate in meaningful interaction over rigid grammatical accuracy (Kanwit & Solon, 2023; Richards & Rodgers, 2014).

While Hymes' model was groundbreaking, it was criticised as lacking clear operational definitions, making their application in language teaching challenging (Wiemann & Backlund, 1980). In response, Canale and Swain (1980), and later Canale (1983) expanded Hymes' model

by developing a more structured and pedagogically applicable model of Communicative Competence (Richards & Rodgers, 2014; Whyte, 2019). Their framework, which remains highly influential in second language education (Kanwit & Solon, 2023), conceptualises Communicative Competence as the integration of four key components (Canale, 1983; Canale & Swain, 1980): grammatical competence, sociolinguistic competence, discourse competence, and strategic competence:

- **Grammatical competence:** It refers to the ability to master the formal rules of a language, including grammar, vocabulary and pronunciation. It provides the foundation for constructing meaningful utterances. Canale and Swain (1980) emphasised that grammatical competence alone is insufficient for effective communication but remains a fundamental component.
- **Sociolinguistic competence:** It refers to the ability to use language appropriately in different social and cultural contexts. This includes understanding politeness conventions, speech acts, and the influence of cultural and social norms such as participant roles and levels of formality (Canale, 1983). For example, a language learner greeting a professor in an academic setting might say, “Good morning, Professor,” whereas in a casual setting with a friend, they might use “Hey, how’s it going?”, highlighting how sociolinguistic awareness operates in everyday communication (example by the author).
- **Strategic competence:** This refers to the ability to overcome communicative barriers through verbal or non-verbal strategies caused by limited language proficiency, such as a lack of vocabulary, and also enhance the efficiency and effectiveness of communication (Canale, 1983). The strategies include paraphrasing, using gestures, or adjusting speech to maintain interaction. For instance, when a learner forgets the word “vegetarian”, they might say, “I don’t eat meat” to convey the intended meaning effectively (example by the author).
- **Discourse competence:** The ability to produce coherent and cohesive language beyond the sentence level, ensuring logical flow and appropriate structuring of ideas. This involves both cohesion (e.g., using pronouns and conjunctions) and coherence (e.g.,

maintaining logical connections). Canale (1983) highlights the role of discourse competence in structuring extended communication, such as storytelling, academic writing, or formal presentations. For instance, in “John went to the store. He bought some milk,” the pronoun “he” creates cohesion, while the logical relationship between the two sentences ensures coherence (example by the author). Also, this competence requires an awareness of genre and style, enabling speakers or writers to adapt their language to different contexts.

Together, these four components define Communicative Competence as the ability to convey and interpret messages meaningfully and appropriately across grammatical, sociocultural, discourse, and strategic dimensions (Canale, 1983). Compared to Hymes’ model (1972), Canale and Swain’s framework of Communicative Competence stands out for its clear structure and strong practicality (Richards & Rodgers, 2014), making it well-suited for language teaching practice (Kanwit & Solon, 2023). It provides specific guidance on communicative functions and defines the key competences learners need to master for effective and appropriate communication (Heng, 2014), leading to its widespread acceptance in second and foreign language education (Rahman & Ahmed, 2017). However, the literature has identified several limitations in this framework (e.g., Whyte, 2019). While it offers a comprehensive theoretical foundation, it primarily outlines the ideal competences learners should develop, without providing guidance on how teachers can cultivate these competences in classroom contexts (Whyte, 2019).

Building on this foundational model, several scholars (e.g., Bachman & Palmer, 1996; Celce-Murcia, 2008) further developed and elaborated the concept of Communicative Competence to accommodate new emphases in language education. For instance, Celce-Murcia et al. (1995) expanded sociolinguistic competence into sociocultural competence to better account for cultural knowledge, and renamed grammatical competence as linguistic competence to include broader language components such as phonology and vocabulary. They also introduced actional

competence, emphasising the alignment between linguistic forms and communicative intentions. In a later revision, Celce-Murcia (2008) restructured the model to place discourse competence at its centre and elaborated on strategic competence to include compensatory and preventive strategies. Meanwhile, Bachman and Palmer (1996) proposed a comprehensive model particularly influential in the field of language assessment. Their framework distinguishes between organisational knowledge (including grammatical and textual knowledge) and pragmatic knowledge (including functional and sociocultural competence) and introduces metacognitive strategies to account for learners' ability to monitor and regulate their communication (Bachman & Palmer, 1982, 1996).

Although both models offer valuable insights, they present certain limitations for the purposes of the present study. Celce-Murcia et al.'s model has been critiqued as overly complex for practical application (Syarief, 2005), whereas Bachman and Palmer's framework was primarily designed for assessment purposes (Kanwit & Solon, 2023) and has been noted for insufficient attention to cultural adaptability (Liao et al., 2023). Given these considerations, the present study primarily adopts Canale and Swain and Canale's (1983; 1980) framework as its theoretical foundation, with selective reference to subsequent developments that have expanded and restructured the categorisation of Communicative Competence. In particular, it adopts the term "linguistic competence" (Celce-Murcia et al., 1995) in place of Canale's original "grammatical competence", as the updated terminology more accurately reflects the full range of formal language knowledge, including grammar, vocabulary and phonology. This broader framing better captures the foundational elements that underpin communicative development across all proficiency levels.

Given that Canale's (1983) model of Communicative Competence was proposed at a time when the impacts of globalisation and digitalisation were not as profound and widespread as they are today, communication remained largely confined to face-to-face contexts (Block, 2010; Chapelle, 2009). Today, however, the accelerating processes of globalisation have dramatically

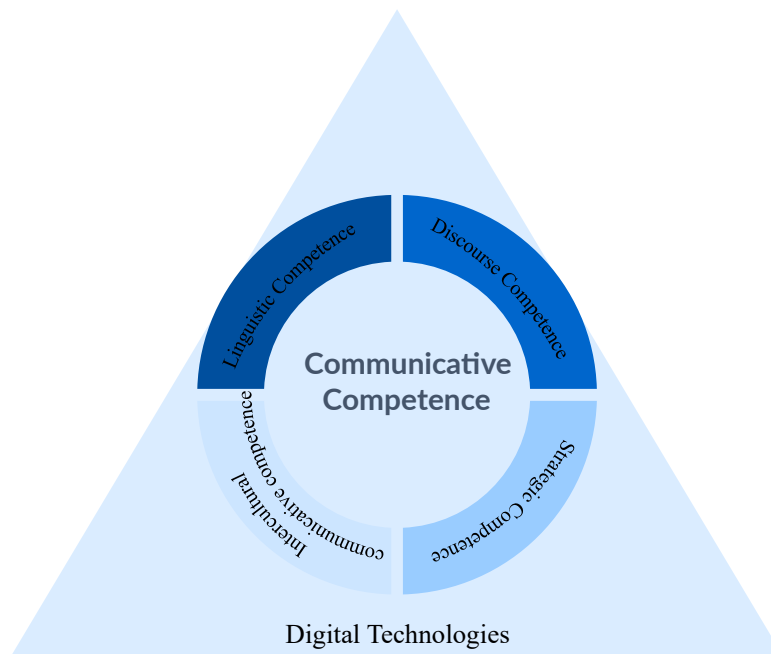
reshaped the sociolinguistic landscape in many parts of the world. In Aotearoa New Zealand, for example, increasing ease of international travel, business, education, and migration has led to significant demographic shifts, resulting in a superdiverse society (Ashton & Qi, 2025). This rapid diversification has highlighted the urgent need for individuals to establish effective communication across linguistic and cultural boundaries. At the same time, the digitalisation of communication has introduced new and complex demands on language learners, extending beyond traditional face-to-face interaction. As Chapelle (2009) argues, the definition of Communicative Competence developed prior to the digital era is no longer sufficient in today's communicative landscape that spans both digital and face-to-face contexts. Learners are now expected to demonstrate multimodal communication skills, digital literacy, and the ability to interact appropriately across both virtual and physical contexts. These evolving requirements highlight the need to reconceptualise Communicative Competence to incorporate digital tools, online discourse strategies, and context-sensitive mode selection in communication (Chapelle, 2009). As illustrated in Figure 2.1, this study extends Canale's framework (1983) of Communicative Competence by incorporating intercultural and digital dimensions. These additions better address the communicative needs arising from globalisation and digitalisation and respond to curriculum expectations for digital technology integration in Aotearoa New Zealand secondary schools.

Specifically, the first refinement involves introducing ICC to replace Canale's sociolinguistic component, thereby extending the framework to encompass a broader intercultural dimension. While sociolinguistic competence focuses on the appropriate use of language based on established norms such as politeness conventions, forms of address, and register (Canale, 1983), it has been critiqued for conceptualising culture in static terms (Byram, 1997). In contrast, ICC emphasises learners' ability to navigate cultural diversity, understand alternative perspectives, and co-construct meaning across cultural boundaries (Byram, 1997). To reflect this shift, this study conceptualises ICC as a distinct and integral component of Communicative Competence, positioned alongside linguistic, discourse, and strategic competences, as illustrated in Figure 2.1. Although it incorporates elements of sociolinguistic competence, ICC is broader in scope,

extending to intercultural awareness and interaction. A detailed discussion of ICC follows in Section 2.2.

The second refinement involves incorporating a digital dimension into the Communicative Competence framework, recognising the increasing role of technology in shaping communicative practices and language learning environments. As shown in Figure 2.1, this study conceptualises digital competence not as a standalone component but as a cross-cutting factor that intersects with the four components of Communicative Competence, influencing how learners engage in multimodal, synchronous, and asynchronous communication. Digital competence has been shown to support opportunities for language use and development across different dimensions of Communicative Competence (Huang, 2018; Rustam & Jiatian, 2024). This includes supporting linguistic practice and access to input (Golonka et al., 2014), facilitating intercultural interaction in online environments (Akayoglu et al., 2021), supporting discourse organisation through tools such as collaborative writing platforms (Eleni & Eleni, 2024), and enabling interactional strategies in online settings (Chimeva & Trenchs-Parera, 2024). More broadly, in this study, digital competence in language learning refers to learners' ability to use digital tools effectively to support target language development and participate in social interaction within digital environments using the target language.

Figure 2.1



2.2 Intercultural Communicative Competence

ICC has become a key focus in language education, reflecting the intrinsic link between language and culture (East et al., 2022; Liddicoat & Scarino, 2013; Newton et al., 2015). As Liddicoat (2008) has pointed out, learners' need for cultural knowledge is as much as their need for grammar and vocabulary. As East et al. (2022) observe, in the early days of CLT, cultural knowledge was often reduced to "facts about the target culture" (p. 10), reflecting an "isolationist approach" in which culture was treated as an "optional extra" rather than an integral part of communication (pp. 10-11). Such perspectives tended to emphasise sociolinguistic appropriateness, such as knowing how to greet others or behave politely in a given context, without fully engaging learners in the exploration of cultural perspectives or the development of reflective intercultural awareness (Liddicoat & Scarino, 2013). In contrast, contemporary understandings of ICC promote a more dynamic and dialogic view of culture, encompassing not only knowledge but also attitudes, dispositions, and the ability to interpret and convey meaning across cultural boundaries (Byram, 1997; Newton et al., 2015). Specifically, learners are encouraged to approach "the other" with openness, curiosity and

criticality, developing the capacity to “engage with” culture rather than simply “know about” it (East et al., 2022, p. 10; see also Liddicoat & Scarino, 2013). In this sense, ICC is not merely a supplementary skill but a core competence that enables individuals to participate meaningfully in intercultural communication and navigate the complexities of globalised, multilingual societies (Newton et al., 2015).

ICC is understood by scholars (e.g., Byram, 1997; Deardorff, 2006; Liddicoat & Scarino, 2013) not only as a set of competences but as a dynamic process that is continually shaped and reshaped through actual intercultural interaction. Different scholars have proposed distinct frameworks to describe this process, such as Byram’s (1997) *Savoirs* model, which conceptualises ICC in terms of attitudes, knowledge, and skills involved in intercultural interaction, and Deardorff’s (2006) *Pyramid Model*, which presents ICC as a developmental and process-oriented construct, both of which have become influential in language education research. However, rather than detailing the numerous ICC models and their evolution, this study draws primarily on the common aspects highlighted across models to capture the core conceptual essence of ICC and to embed it within the extended *Communicative Competence* framework (Figure 2.1), which constitutes the main theoretical foundation of the present study. Within these shared conceptions, ICC is therefore understood to involve openness and curiosity towards other perspectives, an awareness of both one’s own and others’ cultural backgrounds, and the ability to interpret meanings, compare viewpoints, and interact effectively across cultural boundaries (Byram, 1997; Liddicoat & Scarino, 2013; Newton et al., 2015).

The following subsections outline the ways in which the concept of *Communicative Competence*, with a focus on its intercultural dimension, has been embedded in the Aotearoa New Zealand language education context. It then examines the development and interpretation of *CLT* and *Intercultural Communicative Language Teaching (ICLT)* in the wider international literature, before narrowing the focus to studies conducted in school settings and in the Aotearoa New Zealand context. Accordingly, the following subsections focus on *Communicative*

Competence and its intercultural dimension, as well as the development and interpretation of CLT and ICLT, while the integration of digital technologies in language teaching is addressed in Section 2.3.

2.2.1 Communicative Competence in the Aotearoa New Zealand Context: Incorporating Intercultural Dimensions

In the New Zealand Curriculum, language and culture are positioned side by side as mutually reinforcing components within the overarching strand of communication (Ministry of Education, 2007). This structural integration reflects an understanding of language learning as a culturally situated process, in which Communicative Competence encompasses not only linguistic proficiency but also the ability to acquire cultural knowledge, compare cultural perspectives, and interact meaningfully with others.

From a historical perspective, the linguistic landscape of Aotearoa New Zealand has evolved significantly, shaped by political, social, and cultural transformations (East et al., 2022). During the early colonial period, te reo Māori was the primary language among the indigenous Māori population. However, as English gained political and economic dominance, te reo Māori faced significant suppression (East et al., 2022; Skyrme & Ker, 2020; Starks et al., 2005). At the same time, the arrival of European settlers brought other European languages, which influenced not only language use within specific communities but also had a lasting impact on national language policies and the range of languages taught in Aotearoa New Zealand schools (East et al., 2022). From the latter half of the 20th century, the Māori cultural renaissance revitalised te reo Māori, leading to policy changes such as the Māori Language Act (New Zealand Government, 1987), which granted te reo Māori official status, followed by the recognition of NZSL as an official language in 2006. Despite these efforts, English remains the dominant language in both official and everyday communication (Starks et al., 2005). More recently, significant migration and demographic changes, particularly from Asia and the Pacific, have played an increasing role in shaping the contemporary linguistic landscape of Aotearoa New

Zealand (Ashton & Qi, 2025; Spoonley, 2023).

The approach to language education of Aotearoa New Zealand has evolved alongside broader language policy debates and curricular reform (East et al., 2022). The 1987 curriculum review marked a turning point by recommending the development of a national language policy, which would recognise the role of English, te reo Māori, Pasifika languages, and international languages across both L1 and L2 contexts (East et al., 2022; Waite, 1992). This call was reaffirmed by Waite (1992), who argued for the need to address the linguistic needs of a diverse and increasingly globalised society. However, despite repeated advocacy, no formal national languages policy has ever been implemented in Aotearoa New Zealand (East et al., 2022). Language learning gained more visibility with the 1993 New Zealand Curriculum Framework (NZCF), which recommended that students in Years 7 to 10 be given the opportunity to study an additional language. Yet, as East et al. (2022) note, L2 learning was often marginalised in practice, largely because it was subsumed under a broader learning area—Language and Languages—that prioritised English, enabling schools to meet curriculum expectations without offering foreign language instruction.

A more substantial shift occurred with the publication of the New Zealand Curriculum in 2007, which introduced Learning Languages as a distinct learning area. L2 learning was framed as an “entitlement” rather than a compulsory requirement (East et al., 2022, p. 52), meaning that schools were expected to provide L2-learning opportunities (Skyrme & Ker, 2020), but students were not required to participate in them unless individual schools chose to make language learning mandatory within their local curriculum structures. The revised 2007 New Zealand Curriculum nevertheless created space for L2 programmes in Years 7 to 10 and reinforced a communicative orientation to language learning (East et al., 2022; Ministry of Education, 2007). It stated that “learning a new language extends students’ linguistic and cultural understanding and their ability to interact appropriately with other speakers” (Ministry of Education, 2007, p. 24). The 2007 Curriculum thus emphasises that the core objective of language learning is to

develop students' Communicative Competence, encompassing accuracy, fluency and behavioural appropriateness in language use, while also placing greater emphasis on cultural understanding and interaction.

The New Zealand Curriculum provides a structured framework for language learning in which language knowledge and cultural knowledge are positioned as two complementary strands that work together to support the overarching goal of communication (Ministry of Education, 2007). This configuration reflects a core principle of the New Zealand Curriculum, namely that effective communication is built upon a solid understanding of how language works and how it is shaped by cultural context. These strands define both curriculum structure and a progressive learning pathway, ensuring systematic skill development. According to the New Zealand Curriculum (Ministry of Education, 2007), the **communication strand**, as the core, focuses on developing students' ability to use the target language effectively. It enhances both receptive (listening, reading, viewing) and productive (speaking, writing, presenting) skills, guiding learners from basic expressions to complex interactions. The **language knowledge strand** supports communicative development by fostering an understanding of linguistic structures, including grammar, vocabulary, and text organisation. Over time, this enables learners to progress from basic comprehension to analysing meaning across diverse contexts. The **cultural knowledge strand** deepens students' awareness of the relationship between language and culture, requiring them to reflect on and critically analyse cultural values, norms, and practices. Together, these strands create a cohesive, progressive framework, embedding linguistic and intercultural development from the outset.

While the 2007 New Zealand Curriculum remained in place during the period of this study, it is important to note that a comprehensive curriculum refresh is currently underway. This national initiative represents the most significant revision to the curriculum since 2007, aiming to create a more structured, knowledge-rich, and consistent foundation for learning across Aotearoa New Zealand. The refreshed curriculum is being released in phases, with full

implementation expected by 2027. Nevertheless, during the time of this research, the 2007 New Zealand Curriculum continued to guide language teaching in most secondary schools and served as the primary policy framework for understanding Communicative Competence in classroom practice.

2.2.2 Communicative Language Teaching and Intercultural Communicative Language Teaching

The concept of Communicative Competence has profoundly shaped modern language pedagogy, prompting a shift from structuralist paradigms to a focus on meaningful, purposeful language use (Canale, 1983; Savignon, 2002). Emerging in response to the limitations of grammar-focused instruction, CLT advocates for authentic communication, learner interaction, and the negotiation of meaning (Littlewood, 1981; Richards & Rodgers, 2014). Rather than prescribing rigid techniques, CLT functions as a flexible pedagogical approach grounded in core principles such as balancing fluency and accuracy, engaging learners in functional tasks, and fostering interactional competence (Larsen-Freeman & Anderson, 2013). These principles are often realised through activities like role-plays, problem-solving tasks, and information gap exercises (Larsen-Freeman & Anderson, 2013), and further operationalised through Task-Based Language Teaching, which promotes agency and language development through goal-oriented communication (Littlewood, 1981; Richards & Rodgers, 2014).

However, while CLT prioritised authentic communication, its early conceptualisations offered only limited engagement with the cultural dimensions of language use. In response, ICLT represents a related but distinct pedagogical orientation that places ICC at the centre of its pedagogical goals (Liddicoat, 2008). Grounded in the notion that language and culture are inseparable, ICLT broadens the communicative focus to include intercultural awareness, critical reflection, and the ability to navigate cultural diversity in authentic contexts (Liddicoat & Scarino, 2010; Oberste-Berghaus, 2024). The theoretical and pedagogical significance of ICLT has been acknowledged globally through influential frameworks such as the U.S.

National Standards for Foreign Language Learning (National Standards in Foreign Language Education Project, 1999). Recent developments in Aotearoa New Zealand language education similarly reflect growing interest in integrating culture within communicative pedagogy. By embedding cultural inquiry into communicative practices, ICLT enriches the goals of CLT, fostering not only linguistic proficiency but also the capacity to engage meaningfully and ethically across cultures.

While CLT has received extensive theoretical support, studies have shown that its implementation can be uneven, particularly in multilingual and multicultural contexts such as Aotearoa New Zealand. Although CLT promotes authentic communication and student interaction, its classroom realisation is often constrained by institutional, pedagogical, and sociocultural factors (Butler, 2011; Nam, 2023). In some contexts, teacher training and curriculum development prioritise grammatical accuracy and exam preparation, leading to a misalignment between pedagogical ideals and everyday teaching practice (Fatima et al., 2024). Where high-stakes assessments prevail, and teacher-led instruction dominates, the inherently interactive nature of CLT may be difficult to sustain (Nam, 2023; Ngoc & Iwashita, 2012).

In Aotearoa New Zealand, the implementation of CLT reflects both opportunity and constraint. Although the New Zealand Curriculum endorses communicative goals, translating these into practice is shaped by broader systemic pressures. One such influence is the National Certificate of Educational Achievement (NCEA), which reoriented senior-level language assessment from *Converse*, a scripted oral test, to *Interact*, which emphasises spontaneous and co-constructed communication (East, 2016). This shift reflected an effort to align assessment more closely with CLT principles. Yet, as East (2016) notes, many teachers expressed concerns about the logistical complexity and reliability of such tasks. Moreover, junior secondary teaching (Years 9–10), although formally outside NCEA, is often driven by implicit preparation for senior standards, leading to alignment in curriculum focus and pedagogical strategies across year levels (Hipkins, 2010; Hipkins & Spiller, 2012).

Whereas CLT focuses primarily on communicative fluency and meaning negotiation, ICLT repositions language learning as a process of intercultural engagement. However, while language education curricula (e.g., Ministry of Education, 2007; National Standards in Foreign Language Education Project, 1999) increasingly highlight intercultural goals, empirical research consistently shows a significant gap between aspiration and enactment. This gap is illustrated by international studies showing that, although teachers often support the idea of fostering intercultural competence, their practices are constrained by curricular pressures and by the lack of suitable pedagogical models (Oberste-Berghaus, 2024; Young & Sachdev, 2011). Also, Shishkina and Ushakova (2019) show that meaningful integration remains challenging without sustained professional learning and institutional support. This tension is also evident in Aotearoa New Zealand. The national curriculum articulates intercultural competence as a key outcome of language learning (Ministry of Education, 2007), and Newton et al. (2015) outline six principles for implementing ICLT, including integrating language and culture from the outset, fostering comparison, and encouraging interaction. Yet Newton et al. (2015) found that teachers felt underprepared to implement these principles, citing insufficient training and a lack of practical resources. Similarly, Oranje and Smith (2018) found a disconnect between teachers' stated support for intercultural goals and their classroom practices, shaped in part by external pressures and internal uncertainties. Further classroom-based research echoes these findings. Kennedy (2016), in her case study of a Chinese language class in Aotearoa New Zealand, found that while intercultural moments sometimes arose, they were rarely planned or pedagogically framed. Without intentional design, cultural references tended to remain superficial, centred on topics like food or festivals, rather than fostering reflective engagement or cultural comparison (Liddicoat & Scarino, 2010). These findings suggest that even when teachers value the intercultural dimension, they may lack the conceptual or practical tools to make it a consistent part of their pedagogy (Kennedy, 2016; Liddicoat & Scarino, 2010; Oranje & Smith, 2018).

Moreover, recent research has also underscored the need to consider the local sociolinguistic

realities of Aotearoa New Zealand classrooms. Qi (2024) argues that culturally responsive pedagogy, which shares conceptual ground with ICLT, must be tailored to New Zealand's superdiverse learning environments. Her study reveals that teachers' interpretations of intercultural teaching are deeply shaped by their professional histories and school contexts. However, Conway and Richards (2017) found that while teachers acknowledged student diversity, their responses were often broad and lacked the specificity needed for deeper intercultural engagement.

In addition, much of the existing ICLT literature has focused on commonly taught foreign-language subjects (e.g., Ruan & Medwell, 2020; Shadiev & Yu, 2024). This focus has tended to overlook more complex multilingual and multimodal settings. In Aotearoa New Zealand, language subjects taught in schools may include not only commonly taught additional languages, but also indigenous and signed languages such as te reo Māori and NZSL, each of which presents unique pedagogical and cultural considerations. Te reo Māori, as an official language with its own curriculum framework (Ministry of Education, 2009), is deeply embedded in cultural and political imperatives shaped by the Treaty of Waitangi (Ministry of Education, 2011). Teachers of te reo Māori often operate within a more detailed educational curriculum and bring distinct understandings of language, culture, and identity (Ministry of Education, 2011). NZSL, on the other hand, poses additional pedagogical challenges due to its visual-spatial modality and lack of a written form, features largely unaccounted for in mainstream ICLT models (Fox et al., 2025). Beyond these two languages, the broader language education landscape in New Zealand encompasses a diverse range of languages, including Chinese, Japanese, French, and Spanish.

Despite growing recognition of this diversity, few studies have examined how secondary school language teachers in Aotearoa New Zealand integrate digital technologies into their teaching to support students' development of Communicative Competence across different language subjects. East et al. (2022) begin to address this gap by exploring how primary and intermediate

language teachers in Aotearoa New Zealand attempted to develop ICC among young learners. The study highlights both the potential of professional development and teacher inquiry, as well as the challenges posed by limited time and assessment ambiguity. However, the study by East et al. (2022) focused primarily on fostering ICC and did not explore other dimensions of Communicative Competence in depth.

Additionally, digital tools can offer potential for intercultural exchange and authentic interaction (e.g., Liu et al., 2023), at the same time, they also raise challenges related to pedagogy, access, and digital literacy. Studies have shown that although technologies have the potential to support the development of communicative competence, their effectiveness depends on thoughtful pedagogical design and teacher readiness (Conway & Richards, 2017; Oberste-Berghaus, 2024). In some cases, digital tools have been used to promote cultural awareness through telecollaboration and multimodal resources, yet persistent issues such as unequal access, teacher training gaps, and curriculum misalignment remain (Newton et al., 2015; Oranje & Smith, 2018). These issues point to the importance of examining both the pedagogical potential and the challenges that digital technologies pose in pursuing communicative goals in language education.

2.3 Integrating Digital Technologies in Language Teaching: Potential and Challenges

As illustrated in Figure 2.1, digital competence functions as a cross-cutting dimension within the theoretical framework of Communicative Competence adopted in this study, influencing the development of its core components. In this sense, the integration of digital technology is not peripheral but central to understanding how Communicative Competence is enacted in contemporary language education. With the continued advancement of digital technologies, language learning and cultural exchange have increasingly moved beyond physical classrooms, supporting communication across linguistic and cultural contexts in more fluid and multimodal ways (Chun, Kern, & Smith, 2016; Kern, 2015; Reinders & White, 2016). As Chun, Kern and

Smith (2016, p. 65) pointed out, “Teachers must pay attention to technology not because it is either a boon or a threat, but because technology inevitably affects language use.” The New Zealand Curriculum also acknowledges this shift: “Learning a new language can expand students’ linguistic and cultural understanding ... Such interaction, whether face-to-face or supported by technology, encourages students to think, question, and interpret the world and their place in it in new ways” (Ministry of Education, 2007, p. 24). This statement acknowledges the potential of technology as a medium for communication and learning, aligning with broader understandings of how digital tools can enrich linguistic input, foster multimodal expression, and enable authentic interaction to create a more immersive learning environment. Beyond the Learning Languages area, the New Zealand Curriculum also designates Technology as a distinct learning area, which has evolved to encompass the integration of digital technologies and their impact on how learners interact, create, and solve problems in an increasingly connected world.

However, digital technologies do not inherently transform learning; their impact depends on how they are integrated into pedagogy for specific teaching content (Dashtestani & Hojatpanah, 2022; O’Rourke & Stickler, 2017; Stickler, 2022). Meanwhile, as digital technologies continue to reshape modes of interaction, Communicative Competence is increasingly understood to include the skills needed for navigating online platforms, interpreting multimodal content, and participating effectively in technology-supported exchanges (Ilomäki et al., 2016; Reinders & White, 2016). Guth and Helm (2010) similarly argue that traditional models of Communicative Competence, such as those proposed by Byram, require expansion to account for the complex social practices, multimodal literacies, and interactional demands that arise in online intercultural exchanges. From this perspective, learners need to develop the capacity to shift between synchronous and asynchronous communication modes, engage across visual, textual, and oral channels, and negotiate meaning in diverse digital spaces (Avgousti, 2018; Guth & Helm, 2010). Developing such competencies supports more meaningful participation in both face-to-face and virtual settings, enhancing learners’ Communicative Competence in technology-rich environments (Avgousti, 2018; Reinders & White, 2016).

This section reviews literature on teachers' perceptions and classroom practices, considering how digital technologies support Communicative Competence and the constraints affecting their pedagogical use. In this study, "digital technologies" refer to internet-based tools, software, and multimedia resources in language teaching. These technologies have the potential to facilitate content delivery (Yükselir, 2016) and promote learner engagement (Dehghanzadeh et al., 2021), support multimedia input (Lim & Aryadoust, 2021), enable interactive communication (Avgousti, 2018), and simulate real-world experiences (Shadiev & Yu, 2024). When thoughtfully integrated into pedagogy, they can support the development of Communicative Competence by enabling authentic interaction (Chen & Yang, 2016), multimodal meaning-making (Avgousti, 2018), and cross-cultural exchange (Susilo et al., 2023). The following two sections review empirical studies on how language teachers perceive and implement digital technologies in classroom practice, with particular attention to how these practices align with the dimensions of Communicative Competence outlined in Figure 2.1. The first focuses on the potential of digital technologies in language teaching and the specific constraints reported in relation to these practices, including uses linked to Communicative Competence as well as broader teaching purposes. The second examines studies that identify challenges between teachers' stated perceptions and their actual implementation.

2.3.1 The Potential of Integrating Digital Technologies in Language Teaching and Learning

This section reviews the potential identified in the literature for integrating digital technologies into language teaching, particularly in ways that support the development of Communicative Competence. The reviewed studies highlight several pedagogical potentials, including enhancing language input (e.g., Bahrani et al., 2014; Golonka et al., 2014), expanding opportunities for practice (e.g., Ashcroft et al., 2018; Regina, 2022), facilitating learner interaction (e.g., Börekci & Aydin, 2019; Yang, 2018), supporting flexible content presentation and resource management (e.g., Rafiee & Purfallah, 2014; Snodin, 2010), and fostering learner

engagement (e.g., Dehghanzadeh et al., 2021). At the same time, to avoid a technology-centric perspective and to provide a more balanced understanding of technology integration, these potentials are examined alongside the constraints or challenges that have emerged in these same areas of practice.

Enhancing Language Input

Language input is essential for developing learners' Communicative Competence, as it forms the linguistic foundation for meaningful interaction. In line with the theoretical framework presented in Figure 2.1, digital technologies can serve as an enabling factor that supports linguistic competence, when purposefully integrated into pedagogy. A large body of research has demonstrated that digital technologies, when selected with clear pedagogical intent, can significantly enhance the quantity and quality of input available to language learners. For example, as Golonka et al. (2014) note, tools such as online platforms, podcasts, videos, and mobile applications offer learners exposure to authentic, spontaneous, and culturally embedded discourse, provided that these tools are embedded within communicative tasks and guided interaction. Teachers can employ these tools to construct learning environments that mirror the complexities of natural language use (Golonka et al., 2014). For instance, audiovisual materials such as documentaries and news broadcasts allow learners to engage with authentic input that features varied speech styles and registers (Bahrani et al., 2014; Soong, 2012). According to Kress (2010), such input is particularly powerful when it is multimodal, integrating text, image, and sound to promote deeper cognitive processing and retention through multiple channels of meaning-making. This is especially relevant in CALL environments, where learners can control pace, replay segments, and engage actively with multimodal texts (Yeh, 2018). Empirical studies have also supported the benefits of these technologies in classroom settings. For example, Nim Park and Son (2009) found that Korean EFL teachers viewed computer-based resources, particularly those with rich audiovisual features, as highly effective for improving learners' listening and reading skills when integrated through teacher-designed tasks.

Electronic dictionaries and vocabulary tools are another common aid for digital language input (Alamri & Hakami, 2022). When used purposefully, they can offer just-in-time lexical support. As Lee and Lee (2015) demonstrate, embedding click-based dictionary tools in reading tasks with pedagogical intent can facilitate rapid access to lexical meanings without disrupting reading flow, while Peters (2007) highlights that such tools yield greater benefits when target words are instructionally relevant to comprehension tasks, thereby increasing both lookup behaviour and word retention. However, the presence of such tools does not guarantee effective use. As Zamkova et al. (2023) observe, learners often overlook or underuse features such as phonetic transcriptions, etymology, and example sentences in electronic dictionaries, suggesting that accessibility alone does not ensure meaningful or strategic engagement with these tools. This gap between availability and effective use has also been noted by teachers. According to Dashtestani (2013a), teachers consistently expressed concerns about students' lack of training in using electronic dictionaries and their frequent reliance on unsuitable tools. The study also found that learners' usage patterns varied according to proficiency level, with lower-proficiency students more dependent on bilingual dictionaries, highlighting the need for pedagogical guidance that is responsive to learners' contextual needs and curriculum goals. To address these challenges, Krajka and Campoy-Cubillo (2020) argue that to fully realise the pedagogical potential of e-dictionaries, teachers must model their use and strategically embed them into classroom practices. Without such scaffolding, learners are unlikely to develop the necessary skills for meaningful engagement.

A key challenge for language teachers lies in helping students transfer the benefits of digital tools into Communicative Competence, particularly in spontaneous language production. As Krajka and Campoy-Cubillo (2020) note, while learners often rely on electronic resources to access vocabulary and translation support, they may do so passively, with limited reflection or contextual integration. Without appropriate pedagogical framing, such use can hinder the development of active language skills. Similarly, Levy and Stockwell (2006) argue that many CALL tools prioritise the delivery of linguistic information over learner interaction, and when not embedded in communicative tasks, these tools are unlikely to foster productive language

use.

Increasing Repetitive Language Practice

A growing body of research in CALL has explored the role of digital technologies in supporting repetitive language practice, particularly in vocabulary acquisition and pronunciation training. In vocabulary learning, studies have shown that when embedded in structured classroom activities, digital flashcard tools such as Quizlet can support vocabulary retention through repeated exposure, multimodal input, and gamified practice (Regina & Anitha Devi, 2022). For instance, research involving high school beginner EFL learners found significant gains in both immediate and delayed post-tests, highlighting the value of such tools in reinforcing learning and facilitating self-monitoring processes (Özer et al., 2017). Similarly, in the domain of pronunciation training, features such as self-recording and playback have been found to enhance learners' awareness of phonetic errors, contributing to phonological development (Luo, 2016). However, the long-term effectiveness of such tools remains uncertain. Tejedor-García et al. (2020) observed that although initial pronunciation gains were evident, prolonged use often led to stagnation, and the iterative trial-and-error model embedded in many systems did not necessarily foster communicative readiness. This reflects a trend in the literature to conflate repetitive digital practice with effective language learning, often without sufficient attention to the pedagogical contexts that support meaningful use (Tejedor-García et al., 2020).

In response to such concerns, scholars have increasingly emphasised the crucial role of teachers in guiding digital learning. While digital tools can foster autonomy and self-paced engagement (Bahari et al., 2022), their effectiveness ultimately depends on how they are integrated into classroom teaching. Teachers play a pivotal role in designing activities that turn digital input into communicative output, such as embedding vocabulary tools into speaking tasks or aligning pronunciation training with interactive activities. Without this kind of teacher support, digital practices risk becoming decontextualised drills rather than meaningful opportunities for language development (Calvo-Ferrer, 2017). Yet some experimental studies, including

Ashcroft et al. (2018), continue to focus narrowly on tool efficacy in controlled settings, often overlooking how these tools are shaped by teacher involvement and adapted to real classroom needs.

One motivational strategy frequently applied to repetitive practice is gamification, which has shown promise particularly among beginner learners (Bahari et al., 2022; Dehghanzadeh et al., 2021). As Medina and Hurtado (2017) observed, students using Kahoot! reported increased engagement and performed better on vocabulary retention tests, attributing their improvement to the tool's interactive and competitive structure. Similarly, Quizlet has been shown to enhance vocabulary learning through multimodal input and gamified repetition modes such as matching and fill-in-the-blank (Ashcroft et al., 2018; Özer et al., 2017). However, as Dehghanzadeh et al. (2021) noted, motivational effects depend on how well game elements such as leaderboards and badges are aligned with teaching objectives. Some caution that gamification may divert attention from linguistic content to superficial engagement (Bahari et al., 2022). Bahari et al. (2022) cautioned that without appropriate pedagogical alignment, gamification may become a superficial motivational layer rather than a meaningful teaching tool. Moreover, Calvo-Ferrer (2017) warns that overstimulating visuals and competitive dynamics may alienate certain learners or lead to cognitive overload. Thus, while gamified tools can enhance engagement and reinforce repetition, their educational value is contingent on thoughtful pedagogical integration and ongoing teacher guidance.

Promoting Interaction and ICC

A growing body of research has explored how digital technologies could support the development of ICC in language education, which is conceptualised in the present study as one of the dimensions of Communicative Competence, as shown in Figure 2.1. Drawing on Byram's (1997) model, which encompasses attitudes, knowledge, skills of interpreting and relating, skills of discovery and interaction, and critical cultural awareness, recent studies have examined the pedagogical potential of using digital technologies to engage learners with

cultural diversity. Multimodal resources such as videos, blogs, and podcasts have been widely adopted to provide learners with situated exposure to culturally embedded content (Chun, 2016; Maryani & Aguskin, 2019). However, this potential is seldom realised through exposure alone, particularly in classrooms where intercultural content is acknowledged but not systematically embedded in instruction (Conway & Richards, 2017; Young & Sachdev, 2011). Research increasingly highlights that digital media only contribute meaningfully to ICC when embedded in structured tasks that prompt reflection, interpretation, and dialogic interaction (Akayoglu et al., 2021; Avgousti, 2018). Such integration has been found to stimulate curiosity, support perspective-taking, and nurture openness to cultural difference, core attitudinal and interpretive dimensions of ICC (Byram & Wagner, 2018; Liddicoat & Scarino, 2010). When used critically and accompanied by instructional support, digital tools can help learners interrogate cultural assumptions and engage ethically with diversity.

At the same time, there is growing consensus that cultural content, if not pedagogically guided, may be engaged with in fragmented or superficial ways (Young & Sachdev, 2011). Studies across different contexts, including Aotearoa New Zealand, reveal that while teachers often value ICC, they frequently struggle to translate it into classroom practice (Conway & Richards, 2017). This limits opportunities for learners to move beyond observational engagement toward deeper intercultural development (Conway & Richards, 2017; Young & Sachdev, 2011). Skills central to ICC, including negotiating meaning, comparing perspectives, and reflecting on one's own assumptions, rarely emerge through passive viewing or unguided exploration (Chun, 2016). Instead, effective outcomes depend on how tasks are designed to scaffold intercultural tensions and support critical engagement (Akayoglu et al., 2021). Reviews of telecollaborative and online exchange projects further confirm that without such scaffolding, learners tend to acquire factual knowledge but fall short in developing empathy, decentring, or critical awareness (Avgousti, 2018).

These findings underscore the pivotal role of the teacher in making digital tools effective means

for intercultural learning (Godwin-Jones, 2019; Liddicoat & Scarino, 2010). Chun (2016) and Chen and Yang (2016) argue that educational value of technology lies not in the medium itself but in how it is framed within pedagogical sequences that support reflective engagement. When students critically explore cultural topics and co-construct meaning under teacher guidance, digital tools can have more chance to foster interpretive capacities and intercultural awareness (Susilo et al., 2023). However, as Liddicoat and Scarino (2010) caution, presenting culture as fixed knowledge, especially when it centres on surface-level practices such as food or festivals, risks reinforcing essentialist understandings. Without dialogic tasks and space for negotiation, learners may remain passive recipients of cultural content rather than becoming active participants in intercultural meaning-making (Chen & Yang, 2016; Godwin-Jones, 2019).

Despite such theoretical support, practical implementation is often hindered by structural and institutional barriers. In the Aotearoa New Zealand context, for example, curriculum pressure, limited teacher training, and the absence of robust ICC assessment frameworks remain significant challenges (Newton et al., 2015; Oranje & Smith, 2018). East (2016) further notes that misalignment between curricular intentions and high-stakes assessment discourages teachers from embedding intercultural aims in daily practice. As Avgousti (2018) observed, digital tools are frequently used in ways that mirror one-way transmission paradigms, where cultural content is delivered statically rather than through authentic intercultural interaction. This tension reinforces the need, highlighted by Chun, Kern and Smith (2016), to situate digital technologies within pedagogical designs that prioritise reflection, cultural comparison, and dialogue.

Enhancing Efficiency of Resource Storage and Sharing

The integration of Learning Management Systems (LMSs) into language education has received sustained attention for their capacity to support teaching continuity (Lyashenko & Malinina, 2015), resource organisation (Wulandari & Budiyanto, 2017), and online

communication (Dogoriti et al., 2014). Commonly used platforms such as Moodle and Google Classroom provide flexible access to materials and allow for systematic resource management, aligning well with the demands of distance and blended learning (Wulandari & Budiyanto, 2017). When used purposefully, LMSs can also facilitate personalised feedback, structured task engagement, and extended learning beyond the classroom (Lyashenko & Malinina, 2015; Qaddumi & Smith, 2024; Snodin, 2010). In this regard, LMS tools are increasingly used in integrative ways, allowing teachers to embed external applications, sequence tasks, and structure content around pedagogical goals, repositioning these platforms from passive content archives into interactive learning environments (Lyashenko & Malinina, 2015; Ndibalema, 2025; Wulandari & Budiyanto, 2017).

While LMSs offer substantial potential, their pedagogical impact depends largely on how teachers integrate them into pedagogical orchestration (Dogoriti et al., 2014; Lyashenko & Malinina, 2015). This includes selecting appropriate tools, applying pedagogical strategies, and adapting practices to meet learners' needs (Lyashenko & Malinina, 2015). However, technological familiarity alone is insufficient. Many teachers lack the training and support required for effective use (Ndibalema, 2025). From the learner side, digital literacy and navigation skills are essential for meaningful engagement with LMS content, particularly in asynchronous environments (Snodin, 2010). Without explicit support in self-regulation and strategies for monitoring their own learning, students may engage only superficially, limiting the value of these platforms (Wulandari & Budiyanto, 2017).

Beyond pedagogical concerns, teachers also encounter structural challenges when using LMS platforms, including cross-platform incompatibility, resource overload, and unstable system performance, all of which reduce teaching efficiency and content sustainability (Kennedy & Levy, 2009; Lyashenko & Malinina, 2015). In language education, the lack of standardised classification systems within LMS environments further complicates the retrieval of linguistically and culturally appropriate materials (Altunay, 2015). Although LMS platforms

can expand access to a wide range of resources, the quality of such materials is not always assured and often requires cultural adaptation (Altunay, 2015). While LMSs can facilitate the sharing and co-creation of digital resources to support collaborative and intercultural learning (Godwin-Jones, 2019), such collaboration is often constrained by copyright concerns and local contextual demands (Altunay, 2015).

Presenting Teaching Content

Digital presentation tools are now common in language classrooms, valued for enhancing the clarity, organisation, and visual appeal of teaching content (Rafiee & Purfallah, 2014). Kim (2013) notes that well-designed slides can support learner attention and facilitate conceptual understanding. However, despite these benefits, excessive reliance on static, text-heavy slides may hinder deeper cognitive engagement and fragment understanding (Chen & Chang, 2011). When used primarily to deliver scripted content, such tools offer limited interactivity and reduce opportunities for active meaning-making. Kim (2013) also observes that teachers often employ these tools within teacher-centred frameworks, potentially limiting their pedagogical impact. Similarly, Littlewood (2014) cautions that superficial engagement with digital materials, especially without interaction or spontaneous language use, can constrain communicative development.

In summary, the reviewed literature illustrates a wide range of recognised potentials for integrating digital technologies into language teaching. These represent the most frequently discussed and classroom-relevant forms, though many others are also discussed in the literature. Among the most frequently discussed and classroom-relevant technologies, some, such as those that enhance language input or enable online exchanges, are directly linked to particular dimensions of Communicative Competence, while others, like LMSs, contribute in less explicit yet still significant ways, for instance by improving accessibility, organisation, and learning continuity. Consistent with this study's stance, the integration of digital technologies in language teaching is viewed not as a narrowly defined pursuit of communicative outcomes but

as a multifaceted process accommodating diverse pedagogical goals and classroom realities.

2.3.2 Barriers Between Teachers' Perceptions and Practice in Integrating Digital Technologies

In educational research, terms such as teacher cognition, beliefs, attitudes, and perceptions are often used to describe teachers' internal understandings and dispositions, although they are not always clearly distinguished and sometimes used interchangeably (Borg, 2003). This study adopts the term teacher perceptions to refer broadly to how teachers understand, interpret, and respond to their teaching contexts. While it overlaps with the more theorised concepts of teacher cognition and beliefs, perceptions are often used in empirical studies to capture teachers' situated views and understandings as expressed through practice. Teacher cognition, as defined by Borg (2003), encompasses teachers' thoughts, knowledge, and beliefs, and how these inform teaching practice. Teacher beliefs, although closely related, tend to refer to more evaluative and deeply held positions that are relatively stable and often shaped by personal experience (Gao, 2014; Pajares, 1992). Teacher attitudes are typically understood as context-sensitive emotional orientations that shape how teachers engage with pedagogical innovations (Gilakjani & Leong, 2012). Within this conceptual landscape, teacher perceptions are used here as a practical and flexible construct, enabling the study to explore how teachers experience, interpret, and act upon the use of digital technologies in their everyday classroom contexts. This usage acknowledges the fluid and context-responsive nature of perceptions, and supports the investigation of how language teachers negotiate curricular goals, digital demands, and communicative objectives in real time. Having clarified the use of the term perceptions in this study, this section considers how language teachers' perceptions relate to their actual classroom practices in the context of digital technology integration.

Although digital technologies are widely recognised for their potential to enhance language teaching and learning, research increasingly highlights a persistent gap between teachers' positive perceptions and their actual classroom integration (Dashtestani, 2012). This

perception–practice gap reflects the complex interplay of pedagogical, technological, and institutional factors (Ertmer & Ottenbreit-Leftwich, 2010; Nim Park & Son, 2009). For example, Al-Zaidiyeen et al. (2010) and Nim Park and Son (2009) found that while teachers valued the potential of CALL, contextual constraints limited its use. Yükselir (2016) similarly reported that EFL instructors in Turkey expressed enthusiasm for internet-assisted teaching but used it inconsistently, often constrained by time pressures and technical challenges. Other studies noted that CALL was frequently viewed as a supplementary rather than integrated component (Alsuhaibani, 2019), or that usage was strongly dependent on digital competence and infrastructure availability (Ahmed et al., 2020). These findings suggest that positive perceptions, while important, are insufficient on their own to ensure meaningful technology integration. To understand this gap, it is essential to examine the barriers that lie between perception and practice. The remainder of this section identifies three interrelated categories: teacher-related constraints (e.g., time, training), student-related challenges (e.g., digital literacy, distractions), and technological limitations (e.g., access, software usability).

Teacher-Related Challenges

A growing body of literature has emphasised teacher agency as central to how digital technologies are interpreted, adapted, and enacted in language teaching, while also highlighting the complex personal and professional challenges that influence and at times constrain this process (e.g., Ahmed et al., 2020; Li & Walsh, 2011). Rather than being a straightforward matter of simply using digital technologies, meaningful integration has been shown to entail a sustained and iterative process of pedagogical reconfiguration, technical adaptation, and emotional resilience (Ahmed et al., 2020; Ertmer et al., 2012). Teachers often invest significant time and effort in sourcing materials, revising lesson plans, supporting students, and troubleshooting issues, all of which add to their workload and cognitive demands (Li & Walsh, 2011). Xue and Churchill (2022) further note that managing digitally rich classrooms involves continuous multitasking and emotional labour, often blurring the boundaries between professional responsibilities and personal life and contributing to teacher fatigue.

Moreover, research has shown that teachers' perceptions and prior experiences also shape technology adoption (e.g., Al-Zaidiyeen et al., 2010; Ertmer et al., 2012). Those accustomed to teacher-centred or textbook-driven instruction may perceive digital tools as misaligned with their established routines (Ertmer et al., 2012), while previous negative experiences, such as implementation failures or classroom disruptions, can further erode motivation and confidence (Buabeng-Andoh, 2012). In addition, cultural expectations play an important role. For example, Liu (2011) found that in exam-oriented contexts like Taiwan, parental and institutional pressures often discourage student-centred digital practices. Similarly, Albirini (2006) observed that Syrian EFL teachers' attitudes toward digital technologies were shaped by perceived cultural compatibility, underscoring the need for context-sensitive integration approaches.

These individual-level demands are frequently intensified by structural and institutional barriers. In exam-driven systems, rigid curricula may discourage pedagogical experimentation, leading some teachers to view digital tools as burdens rather than pedagogical assets (Nim Park & Son, 2009; Yunus, 2007). The absence of consistent institutional support, such as technical assistance, leadership endorsement, or structured professional development, can leave teachers to manage integration efforts in isolation, undermining both confidence and long-term sustainability (Buabeng-Andoh, 2012). While some schools offer technology integration training, such sessions often prioritise technical skills over pedagogical application, providing limited support for curriculum-aligned use (Chen, 2008; Shin & Son, 2007). This challenge is echoed in Mishra and Koehler's (2006) Technological Pedagogical Content Knowledge (TPACK) framework, which argues that effective technology integration requires more than technical skill; it involves the interdependent understanding of content, pedagogy, and technology. Rather than treating these domains in isolation, the framework highlights their dynamic interplay, arguing that meaningful integration depends on how well teachers can adapt technology to support specific pedagogical strategies and subject matter goals, a requirement that is often overlooked in surface-level training (Mishra & Koehler, 2006; Tseng et al., 2022).

To address both individual and systemic barriers, teacher collaboration and professional learning opportunities have emerged as critical yet often underutilised support mechanisms (Chen, 2008). Teachers working in isolation may lack opportunities to share effective strategies, co-develop materials, or reflect on challenges, thereby limiting innovation and compounding stress (Ahmed et al., 2020). Conversely, participation in professional learning communities, peer mentoring, or co-teaching arrangements has been associated with more confident and contextually responsive technology use (Tondeur et al., 2017). Such environments facilitate practical knowledge exchange and provide emotional reassurance, enabling teachers to engage with digital integration more purposefully and sustainably (Howard et al., 2021).

Learner-Related Challenges

Research increasingly indicates that students' adaptation to digital learning environments is neither automatic nor consistent (Choi & Chung, 2021; Shadiev & Wang, 2022; Sun & Rueda, 2012). This challenge is especially pronounced in secondary education, where learners often face cognitive, motivational, and behavioural barriers that limit their meaningful engagement with digital resources (Ashton, 2017; Lai & Morrison, 2013; Shin & Son, 2007). A key contributing factor is the lack of self-regulation skills among many school-aged learners, particularly in online environments where structured guidance is limited (Cheng et al., 2025). These difficulties are compounded when tasks are insufficiently guided and lack clear expectations or feedback, leading to confusion and disengagement (Torrington et al., 2023).

Another compounding issue is digital distraction (Wang, 2022; Wood et al., 2012). Many platforms used for language learning are situated within environments optimised for entertainment and user retention, rather than educational depth (Golonka et al., 2014). Algorithmic features and persuasive design may inadvertently encourage superficial engagement with language input (Golonka et al., 2014; Wang, 2022), diverting attention away

from communicative goals. Crucially, when learners perceive digital tasks as peripheral to their learning goals, they are more likely to disengage or adopt a passive stance (Sun & Rueda, 2012; Wang, 2022).

Concerns have also been raised regarding students' ability to critically evaluate digital language content. Although access to online resources has increased substantially, many still struggle to assess the credibility, accuracy, or pedagogical relevance of such materials (Yu & Zadorozhnyy, 2022). Ng (2012) highlights the cognitive dimension of digital literacy, which involves critical selection and judgement of digital information. Focusing specifically on school-aged learners, Buckingham (2007) stresses that digital literacy education must prepare children and adolescents to interrogate the ideological and representational dimensions of digital texts, rather than consume them passively. Extending this concern, Helsper (2021) frames such disparities in evaluative skills as a second-level digital divide, in which inequality lies not in access but in the capacity to use technology critically and purposefully. Similarly, Livingstone and Helsper (2007) argue that meaningful digital inclusion depends on the social and cognitive resources needed to navigate online environments effectively. Without such competencies, students risk engaging only superficially with digital content (Ng, 2012; Taghizadeh & Hasani Yourdshahi, 2019; Xue & Churchill, 2022). This challenge is heightened in informal digital spaces such as social media and online communities, which offer authentic language exposure, but are largely unmoderated and pedagogically unstructured (Thorne, 2010). In such contexts, students may encounter inappropriate or misleading language input (Shin & Son, 2007), or become disengaged when learning tasks lack structure and intercultural guidance (Shadiev et al., 2017). These risks are particularly salient when learners rely heavily on uncurated, user-generated content, where opportunities for critical reflection are often minimal without teacher guidance (Çiftçi & Savas, 2018).

Technological Challenges

A substantial body of research has identified persistent technological barriers that hinder the

meaningful integration of digital tools in language teaching. While often framed as a first-level digital divide, such barriers extend beyond physical access to encompass broader socio-economic inequalities that constrain sustained and effective use (Livingstone & Helsper, 2007; Helsper, 2021). Inadequate access to up-to-date devices, stable internet, and technical support continues to affect under-resourced schools, compounding existing educational disadvantages (Tomczyk, 2021). Further complicating this landscape, Kimmons (2015) characterises the digital environment as a fragmented ecosystem, where incompatible platforms and inconsistent functionality pose daily logistical and pedagogical challenges for teachers.

Moreover, Kukulska-Hulme et al. (2023) note that many digital learning platforms are designed around dominant languages and standardised curricula, limiting their relevance for less commonly taught languages and culturally embedded practices. While infrastructural barriers remain pressing, an equally critical challenge lies in the unequal access to appropriate digital resources. For certain language programmes, particularly those involving less widely taught or minority languages, digital materials are often scarce or poorly localised, restricting teachers' ability to implement meaningful technology-supported learning. This raises concerns about the inclusivity and appropriateness of digital technologies in diverse linguistic and cultural contexts.

These systemic issues were further exposed and intensified during the COVID-19 pandemic, which highlighted stark inequalities in digital readiness worldwide (Starkey et al., 2021). In Aotearoa New Zealand, the sudden shift to online learning prompted government interventions, including the distribution of printed materials, laptops, and internet modems to students lacking access (Mutch, 2021). However, disparities persisted. Yates and Starkey (2020) found that students in better-resourced schools, which serve more affluent communities under New Zealand's former funding model, were far more likely to report reliable digital access than their peers in under-resourced schools. This highlights ongoing inequities in access to technology and learning opportunities across schools. Moreover, in recent years, the COVID-19 pandemic has played a pivotal role in shaping how digital technologies are used in education, and in many

cases, reshaping existing practices. Several studies have observed that pandemic-related school closures and the shift to emergency remote teaching prompted many teachers to adopt digital tools more extensively, often out of necessity (Whalen, 2020). While this experience contributed to increased digital confidence and a wider appreciation of the potential of digital technologies for some teachers, others reported challenges such as increased stress and uncertainty around technology use (Cutri et al., 2020). Given that data collection for this study took place during and shortly after the pandemic period, it is necessary to take this context into account when analysing teachers' digital practices and perceptions.

2.4 Limited Integration of Teacher and Student Perspectives in Digital Technology Use

While research on CALL has expanded in recent years, much of the literature continues to examine teacher and student perspectives in isolation. Numerous studies have explored students' perceptions of digital tools and their effects on engagement or learning outcomes (e.g., Chryso, 2016; Jeong, 2018; Karaaslan & Kilic, 2019), while parallel strands focus on teachers' perceptions and their adoption of digital technologies in classroom practice (e.g., Aydin, 2013; Coskun, 2011). However, few studies have systematically compared teacher and student viewpoints within the same teaching and learning context, particularly in relation to the integration of digital technologies in language education (e.g., Ngoc & Iwashita, 2012; Sarfraz et al., 2015). This represents a notable gap, as teachers and students co-construct the digital learning environment, and their interaction fundamentally shapes the effectiveness of digitally supported instruction.

Both Khatib and Tootkaboni (2019) and Ngoc and Iwashita (2012) argue that the effective development of Communicative Competence in classroom settings requires close alignment between teacher beliefs and learner expectations. As Ngoc and Iwashita (2012) stress, teachers and learners are the primary stakeholders in communicative pedagogy, particularly approaches such as CLT, and overlooking learner attitudes in learner-centred teaching is inherently ironic.

In technology-supported communicative classrooms, Sarfraz et al. (2015) found that while both groups expressed positive attitudes, their priorities diverged: teachers emphasised task structure, pedagogical control, and evaluative clarity, whereas students valued usability, familiarity, and affective engagement. Such differences not only influenced perceptions of task effectiveness but also shaped their classroom enactment. Findings from Khatib and Tootkaboni (2019) and Ngoc and Iwashita (2012) further indicate that students often retain teacher-centred and form-focus expectations, in contrast to teachers' endorsement of a decentralised, interactive ethos. These patterns suggest that in technology-supported classrooms, the effective cultivation of Communicative Competence depends not only on sound task design but also on the ongoing negotiation of teacher and learner expectations (Sarfraz et al., 2015).

2.5 Chapter Summary

This chapter reviewed key theoretical and empirical literature on Communicative Competence and the integration of digital technologies in language education. Building on Canale's (1983) framework, the chapter recognised its enduring influence while also highlighting the need to extend its scope in response to globalisation and digitalisation (Chun, Kern, & Smith, 2016). This study therefore extended the original Communicative Competence model by incorporating ICC as a distinct dimension and positioning digital competence as a cross-cutting element shaping language use across modalities and contexts. The review also examined how Communicative Competence, including ICC, has been conceptualised and implemented, particularly in the context of Aotearoa New Zealand (Conway & Richards, 2017; East et al., 2022). Although Communicative Competence objectives are widely endorsed, research consistently identifies a gap between aspiration and enactment, with teachers often underprepared to embed communicative approaches meaningfully into classroom practice (East et al., 2022; Kennedy, 2016).

The final section reviewed the pedagogical potential and challenges of digital technologies to

support language teaching and learning, particularly in developing communicative competence. While these tools offer valuable potential, their effectiveness relies on thoughtful integration aligned with pedagogical goals (Stickler, 2022). Studies further reveal that various constraints, such as limited training (Chen, 2008), uneven digital literacy (Albirini, 2006) and resource disparities (Nim Park & Son, 2009), continue to impede sustainable and equitable implementation. Despite expanding interest in this field, several research gaps persist. These include the limited integration of teacher and student perspectives, the under-examined role of digital tools in fostering communicative competence, and the persistent perception–practice gap, particularly within the context of Aotearoa New Zealand secondary education. By investigating how Aotearoa New Zealand secondary school language teachers perceive and integrate digital technologies to support Communicative Competence, and by giving attention to both teacher and student perspectives, this study seeks to address gaps in theory, practice, and empirical understanding.

Chapter 3: Methodology

3.1 Introduction

This chapter outlines the methodological approach adopted in this study, which investigates how secondary school language teachers in Aotearoa New Zealand perceive and integrate digital technologies in their teaching to foster students' Communicative Competence. The study employed a pragmatic paradigm and followed an explanatory sequential mixed-methods design, integrating an online survey (Phase One) with multiple case studies (Phase Two). The first phase involved an online survey designed to capture broad patterns in teachers' perceptions and practices regarding digital technology use. The second phase built on these findings through multiple case studies, incorporating document analysis, classroom observations, teacher interviews, and student focus group interviews to gain deeper insights into teachers' pedagogical strategies and students' learning experiences. This chapter begins by presenting the research questions, followed by an explanation of the pragmatic research paradigm that underpins the study. The rationale for employing a mixed-methods research design is then introduced. Subsequent sections provide details on data collection procedures, data analysis strategies, and ethical considerations, ensuring transparency and methodological rigour.

3.2 Research Questions

This study seeks to explore how secondary school language teachers in Aotearoa New Zealand's pre-NCEA stage perceive and integrate digital technologies in their teaching, particularly in relation to fostering students' Communicative Competence. To achieve this goal, this study was guided by one overarching research question:

How do secondary school language teachers in Aotearoa New Zealand perceive and integrate digital technologies in their teaching to foster students' Communicative Competence?

In order to investigate this central question comprehensively, four sub-questions have been formulated:

- RQ1: What are language teachers' objectives in developing students' Communicative Competence?
- RQ2: What do teachers perceive the role of digital technologies to be in language teaching and why do they hold such perceptions?
- RQ3: How do language teachers use digital technologies to develop students' Communicative Competence?
- RQ4: How do students perceive and experience language learning using digital technologies in relation to Communicative Competence development?

These research questions reflect the complexity of technology integration in language education. While the overarching research question seeks to establish a broad perspective on teachers' views and practices, the sub-questions enable a more detailed exploration of specific aspects of this inquiry, including teachers' pedagogical objectives, their perceptions of digital technologies, their classroom practices, and students' perspectives. The first research question focuses on teachers' teaching objectives in developing different components of students' Communicative Competence. A comprehensive understanding of this issue requires capturing perspectives at both a broad and an individual level. It is necessary to examine overarching patterns in how teachers conceptualise Communicative Competence, while also considering how these perspectives may vary according to individual teaching contexts.

The second research question explores how teachers perceive the role of digital technologies in language teaching and the reasoning behind their perspectives. A meaningful investigation of this issue needs to account for both the commonalities in teachers' perceptions and the specificities that emerge in different teaching environments. By considering perspectives from a range of teachers, this study aims to identify broader trends while also acknowledging the contextual factors that may contribute to variations in perception.

The third research question moves from perception to practice, examining how teachers integrate digital technologies into their teaching to support students' Communicative Competence development. While understanding how teachers conceptualise digital technologies is valuable, this study also considers whether, and to what extent, these perceptions are reflected in their classroom practices. By analysing teachers' pedagogical strategies alongside their stated perceptions, the research explores the extent to which reported views align with observed practices, thereby offering insights into both teachers' perspectives and classroom implementation.

The fourth research question extends the inquiry to include students' perspectives, examining how they perceive and experience the use of digital technologies in language learning. Much of the existing literature on technology in education has tended to focus either on teachers' or students' perspectives in isolation. However, a more holistic understanding can be achieved by considering both viewpoints together, particularly when evaluating how digital technologies contribute to Communicative Competence development. This study, therefore, takes into account students' voices to complement the insights gained from teachers, ensuring that findings reflect both pedagogical intentions and learners' actual experiences.

3.3 Research Paradigm

A research paradigm serves as the philosophical foundation upon which an inquiry is constructed, shaping how researchers conceptualise reality, generate knowledge, and determine appropriate methodologies (Cohen et al., 2018). As Kuhn (1970) originally introduced, a paradigm represents a set of shared beliefs, values, and theoretical principles within a scholarly community, guiding the way knowledge is produced and interpreted (Kaushik & Walsh, 2019; Punch & Oancea, 2014). These underlying assumptions not only influence how researchers perceive the world but also shape the boundaries of inquiry and inform the criteria by which

knowledge claims are evaluated (Denzin, 2024; Guba & Lincoln, 1994).

Providing a well-substantiated philosophical justification for the chosen research paradigm is a fundamental component of any rigorous academic inquiry (Johnson & Christensen, 2014; Teddlie & Tashakkori, 2011). Theoretical paradigms serve as conceptual lenses through which data are interpreted and methodological decisions are made (Kivunja & Kuyini, 2017; Mackenzie & Knipe, 2006). Moreover, adhering to a research paradigm ensures coherence in research design by aligning ontological, epistemological, axiological, and methodological positions, thus safeguarding the integrity of research findings and mitigating the risk of researcher bias (Creswell, 2018; Shannon-Baker, 2016; Teddlie & Tashakkori, 2011). A research paradigm is typically characterised by four fundamental philosophical components (Guba & Lincoln, 1994):

- Ontology – The nature of reality and what can be known.
- Epistemology – The nature of knowledge and how it can be acquired.
- Axiology – The role of values and ethics in research.
- Methodology – The principles governing research design and procedures.

The selection of a research paradigm, therefore, is not merely a theoretical preference but an essential step in ensuring that the research approach aligns with the inquiry's purpose, methodological choices, and the interpretation of findings (Cohen et al., 2018). For much of the history of scientific inquiry, **positivism** has served as the dominant paradigm, grounded in the assumption that objective reality can be measured through systematic observation (Guba & Lincoln, 1994). Its strengths lie in empirical evidence, replicability, and standardised measurement, making it well suited for studies aiming to identify measurable patterns (Denzin, 2024). However, in the realm of language education, where teaching practices are deeply intertwined with personal beliefs, institutional constraints, and evolving pedagogical discourses, a strictly positivist approach risks reducing intricate human experiences to quantifiable variables, thereby stripping them of their richness and complexity. **Interpretivism**, by contrast,

promotes a socially constructed, context-dependent view of reality shaped by human interaction (Crotty, 2020). It prioritises qualitative methods to explore participants' subjective perspectives and meaning-making (Cohen et al., 2018). However, while interpretivism provides deep, contextualised insights, it lacks the generalisability and replicability often sought in educational research (Guba & Lincoln, 1994). In the context of this study, which aims to examine general patterns in teachers' digital technology use alongside the complex and situated realities of their classroom practices, a strictly interpretivist approach would be insufficient in capturing both the broader landscape and the contextual variations within it. Given these constraints, it becomes clear that neither positivism nor interpretivism alone can fully address the research questions of this study. These constraints highlight the need for a paradigm that draws on the strengths of both traditions while remaining responsive to the research questions.

Pragmatism, rooted in the philosophical traditions of Charles Sanders Peirce, William James, and John Dewey, represents a departure from the rigid dichotomy between positivism and interpretivism, advocating instead for an approach that prioritises inquiry, action, and consequences over adherence to philosophical absolutes (Morgan, 2014). At its core, pragmatism asserts that research should be guided not by strict epistemological commitments but by the demands of the research question itself (Creswell, 2003). This orientation is reflected in its emphasis on “what works” in a given context (Cohen et al., 2018, p. 36), allowing researchers to adopt methods, whether quantitative, qualitative, or a combination of both, that are best suited to addressing their research aims (Teddlie & Tashakkori, 2011).

The adoption of a pragmatic paradigm is particularly well suited to this study for several reasons. First, it accommodates both teachers' perceptions (qualitative inquiry) and general patterns of technology use (quantitative inquiry), ensuring that the study captures both individual meaning-making and broader trends. Second, it allows for methodological flexibility, ensuring that the research approach remains responsive to the complexity of the phenomenon under investigation. Furthermore, it facilitates data integration, enabling the study to synthesise findings from

different sources, thereby producing a more comprehensive and actionable understanding of digital technology integration in language education (Cohen et al., 2018). By moving beyond rigid methodological boundaries, pragmatism provides the theoretical and practical grounding necessary to investigate teachers' perceptions and experiences with digital technologies in a way that is both rigorous and meaningful. The pragmatic orientation of this study directly influences its research design and methodological choices. Pragmatism supports the use of mixed methods research, which integrates quantitative data (to identify general patterns) with qualitative data (to capture in-depth perspectives and contextual nuances). In the next section, this study will further elaborate on how mixed methods research is applied at the methodological level to align with the principles of pragmatism.

3.4 Mixed Methods Research Design

Mixed methods research, as defined by Creswell (2018), is a systematic approach that integrates both quantitative and qualitative data within a single study, leveraging the strengths of each method while compensating for their respective limitations. Quantitative methods contribute a broader scope, enabling the identification of trends and patterns across a larger sample, while qualitative methods provide depth, offering insight into the lived experiences and pedagogical practices of individual teachers. Specifically, this study investigated the use of digital technologies in language education, particularly in relation to the development of communicative competence, as well as how teachers and students experienced and interpreted this use, by integrating the following mixed-method approaches:

- Quantitative data were needed to establish general trends regarding the prevalence, frequency, and nature of digital technology use in secondary language classrooms. A survey was disseminated widely among secondary language teachers in Aotearoa New Zealand, providing indicative insights into their use of digital technologies.
- Qualitative data were necessary to delve deeper into teachers' perceptions, pedagogical decision-making processes, and classroom dynamics. This is achieved through multiple case studies, interviews, and classroom observations, providing a rich, contextualised

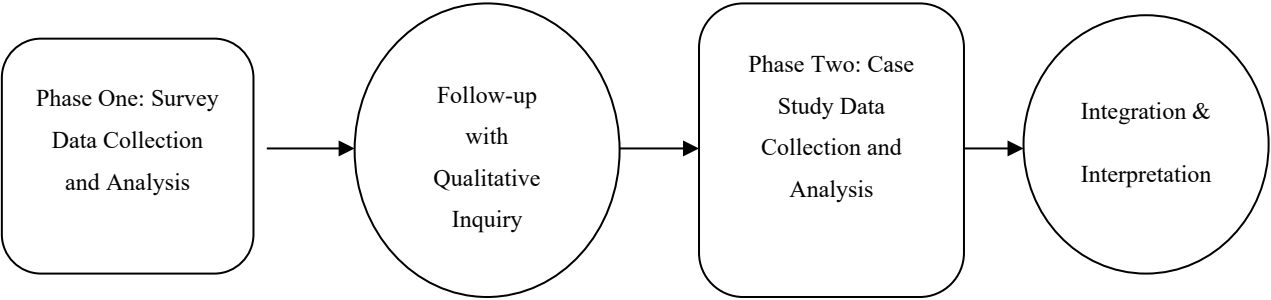
understanding that cannot be captured through survey data alone.

In this study, **an explanatory sequential mixed methods design** was selected. This two-phase approach consisted of quantitative data collection and analysis first, followed by a qualitative phase designed to explain, expand upon, or contextualise the quantitative findings (Subedi, 2016). The two interconnected phases were as follows:

- **Phase One:** Online Survey – The study began with a survey distributed to secondary school language teachers, aiming to identify general patterns in their perceptions and practices regarding digital technology use in language classrooms. The survey offered a macro-level snapshot of how teachers engaged with digital tools, how frequently they used them, and what types of technologies were adopted. This phase provided initial insights that guide the subsequent qualitative phase.
- **Phase Two:** Multiple Case Study – Once the quantitative findings were analysed, a multiple case study approach was employed to delve deeper into the key themes that emerged from the survey data. Teachers who had participated in the survey and expressed willingness to continue in the study were invited to take part in the case study phase. This phase enabled the researcher to explore not only what teachers perceived and did, but also why they made certain pedagogical choices, uncovering in-depth perceptions and contextual factors shaping their digital teaching practices. In addition to teacher perspectives, selected students also participated in this phase, contributing valuable insights into their experiences with digital learning environments. This phase offered a detailed exploration of decision-making processes, teaching interactions, and perceived impacts of technology use, thereby clarifying and deepening the findings from the survey (Subedi, 2016).

This design allows for a systematic, structured approach to inquiry, beginning with a broad, quantitative overview before narrowing into specific, qualitative insights. It ensured that qualitative inquiry was directly informed by quantitative findings, enabling the researcher to refine the questions explored in the second phase based on patterns identified in the first. Additionally, it enhanced validity and depth by integrating both numerical trends and lived experiences, reducing the potential for misinterpretation or bias associated with a single-method approach (see Figure 3.1). By structuring the study in this way, the research ensures that quantitative trends are not left as abstract numerical findings but are contextualised through qualitative exploration, leading to a more meaningful and actionable interpretation of results. The following sections will provide a detailed account of data collection procedures, describing how the survey was designed and administered (Phase One) and how qualitative data were gathered through case studies (Phase Two). These sections will also outline ethical considerations, data analysis methods, and the integration of findings to ensure a rigorous, comprehensive approach to answering the research questions.

Figure 3.1
Adapted Explanatory Sequential Mixed-Method Design from Creswell (2018)



3.5 Phase One: Online Survey

To gain an overview of how digital technologies are perceived and used in secondary language education, an online survey was conducted as the first phase of this study. Surveys are widely used in educational research for their capacity to capture data from a broad population in a cost-

effective and time-efficient manner (Cohen et al., 2018; Dillman et al., 2014). They enable the collection of standardised data on perceptions, attitudes, and behaviours, supporting the identification of general patterns and correlations (Cohen et al., 2018). Online surveys, in particular, offer advantages such as immediate data processing, broader reach, reduced costs, and greater convenience for respondents (Dillman et al., 2014). These features made the survey well suited to this study's initial phase, which aimed to establish an indicative understanding of language teachers' use of digital technologies. However, surveys also have limitations. They rely on self-report, which may introduce bias, and offer limited insight into nuanced or context-dependent experiences (Cohen et al., 2018). Online formats may further face challenges such as low response rates, sampling bias, and technical barriers (Cohen et al., 2018). To address these limitations, the survey included open-ended items intended to elicit more reflective responses. However, the quality and length of these responses varied, which limited the depth of insight into the reasons behind certain trends. To complement these findings, a follow-up qualitative phase was conducted to add contextual depth. The remainder of this section outlines the procedures for participant recruitment, data collection, survey development, and data analysis.

To reach a diverse range of secondary school pre-NCEA language teachers in Aotearoa New Zealand, an online survey was distributed via professional networks and organisational channels rather than through direct individual contact. The survey link, created in Qualtrics, was disseminated between 10 October and 25 December 2021 through the mailing lists and online platforms of the New Zealand Association of Language Teachers (NZALT), Education Perfect, and Tui Tuia | Learning Circle (which was formerly known as Future Learning Solutions at the time of the study), who shared the invitation on the researcher's behalf. These organisations were selected because they represent major professional networks for language teachers in Aotearoa New Zealand, ensuring that the survey reached teachers actively engaged in language teaching and professional development. As the survey was circulated through these external networks, the exact number of individuals who received the invitation could not be determined. To maximise response rates, a follow-up reminder was sent two weeks after the

initial invitation, encouraging teachers who had not yet participated to complete the survey.

3.5.1 Development of Survey Questions

A full version of the survey instrument used in this study is provided in Appendix A. The instrument was developed by drawing on established questionnaires from prior studies examining language teachers' perceptions of digital technology integration, while also creating new items tailored to the specific aims of this research. In particular, the design was informed by previous instruments used in studies such as Aydin (2013), Chen (2008), Shin and Son (2007), and Yükselir (2016), which explored language teachers' perceptions of technology integration and their reported use of specific digital tools and resources. This survey incorporated both attitudinal statements (measured via a five-point Likert scale) and frequency-based items to capture teachers' perceptions and practices across key components of Communicative Competence.

To enhance the clarity and relevance of the survey, a pilot testing phase was conducted with four language teachers. These teachers completed the survey and provided feedback on the wording, clarity, and appropriateness of the questions. Based on their responses, certain terms and options were revised to ensure that the survey items were as clear and comprehensible as possible. For example, participants suggested including digital tools more commonly used in Aotearoa New Zealand secondary schools, which had not been initially listed. The data collected from these four teachers during the pilot phase were not included in the final analysis but were solely used to refine the survey items.

Moreover, as the survey instrument was assembled from multiple existing sources and newly created items rather than adapted from a single validated scale, formal reliability testing such as Cronbach's alpha was not undertaken. This decision reflected the exploratory nature of the study, which prioritised contextual fit and theoretical breadth over the development of a fixed,

standardised instrument (Sijtsma, 2009; Tavakol & Dennick, 2011). Given the abstract nature of the construct of Communicative Competence, the survey aimed to capture a wide range of teacher perspectives rather than to establish a single psychometric scale. To further ensure robustness, open-ended items were included to elicit teachers' qualitative reflections, and the survey findings were subsequently triangulated with case study data to enhance interpretive validity (Creswell, 2018).

The final survey consisted of five sections, corresponding to the specific research questions:

- **Part One: Personal Information.** The first part gathered demographic information about participants, including their age, ethnicity, years of teaching experience, and contextual factors such as the grade levels and languages they taught, their school's geographical location, and school decile rating. The inclusion of these items primarily served to inform the purposive sampling of participants for the subsequent case studies, ensuring diversity across teaching contexts. Moreover, this information provided useful contextual background for interpreting the survey findings.
- **Part Two: Objectives in Second Language Teaching.** This part addressed the first research question: what are teachers' objectives in developing second language Communicative Competence? Specifically, this part was designed to examine how teachers perceived the importance of different components of Communicative Competence in their teaching, namely linguistic competence, discourse competence, strategic competence, ICC, and digital competence. Since these components can be relatively abstract, they were operationalised as concrete teaching objectives to enhance clarity for participants. For instance, linguistic competence was represented by specific teaching goals such as "Be competent in correct pronunciation of the target language," "Be competent in using vocabulary correctly," and "Be competent in using the grammar of the target language." The design of this part aligned with the Communicative Competence framework adapted in this study (Figure 2.1), ensuring theoretical grounding in how teachers valued these language learning objectives. In total, eleven

teaching objectives were developed to represent the five components of Communicative Competence. Participants rated the importance of each Communicative Competence component using a five-point Likert scale, with options ranging from “Not at all important”, “Low importance”, “Neutral”, “Important”, and “Very important”. In addition to the eleven predefined objectives, an open-ended question invited teachers to identify any additional goals they considered important in their teaching practice.

- **Part Three: Use of Digital Technologies for Language Teaching.** The third part corresponded to the third research question: how do teachers use digital technologies in language teaching? This part examined teachers’ actual use of digital tools, including both hardware (digital devices) and software or online resources. Participants were first asked to rank different digital devices based on their frequency of use. A multiple-choice question followed, allowing teachers to indicate the specific technologies they used in their classrooms. If a particular technology was selected, follow-up questions appeared, prompting participants to specify the types of instructional activities for which they used these tools. The survey covered 12 types of digital technologies, including digital language reference tools, social networking tools, and videoconferencing platforms.
- **Part Four: Perceptions of Using Digital Technologies in Language Teaching.** This part aimed to answer the second research question: What do teachers perceive the role of digital technologies to be in language learning? Participants were asked to indicate their level of agreement with various statements about the role of digital technologies in their teaching, using a five-point Likert scale ranging from “Strongly disagree” to “Strongly agree”. Additional multiple-choice and ranking questions explored teachers’ views on how digital technologies contributed to different aspects of language learning. This part ended with an open-ended question that invited teachers to provide additional comments or insights on the use of digital technologies in their classrooms.
- **Part Five: Effect of the Pandemic on Teachers’ Perceptions and Practices.** The final part of the survey contained a single open-ended question that asked teachers to reflect on whether and how the COVID-19 pandemic had influenced their perceptions and practices regarding digital technologies in language teaching. This item was included

because, at the time of data collection (October–December 2021), schools in Aotearoa New Zealand had recently experienced multiple lockdowns and an abrupt transition to online teaching (Ashton, 2022). The pandemic therefore represented a particularly salient and immediate contextual factor during the period of data collection that was likely to have affected teachers’ engagement with digital technologies. While the survey primarily focused on teachers’ broader perceptions and uses of digital technologies, the inclusion of this question acknowledged the significant and then-recent disruption caused by the pandemic, providing an opportunity for teachers to articulate how it shaped their thinking and practices. Other external influences, such as policy shifts and ongoing technological change, could also be important but were not addressed through specific items in the survey, as they were less immediately linked to the timing of this study. The insights from this question were used to contextualise teachers’ reflections in the survey findings rather than to answer a separate research question.

While this study examines language teachers’ perceptions and use of digital technologies, particularly in relation to students’ Communicative Competence, only the second part of the survey explicitly measured teachers’ objectives related to developing different components of Communicative Competence. Other parts of the survey, particularly Parts 3 and 4, took a broader perspective on digital technology integration in language teaching rather than limiting questions to CLT. This approach was intended to avoid narrowly framing responses within the CLT paradigm and to ensure that teachers’ varied applications of digital tools, including non-communicative activities, were also captured. A more specific focus might have overlooked diverse teaching practices where digital technologies play a role beyond Communicative Competence. By adopting this broader perspective, the study acknowledges that digital technology use is not confined to a single pedagogical approach, reducing bias and providing a more comprehensive view of its integration across teaching contexts. Nevertheless, in the analysis, the study will highlight the connections between teachers’ objectives related to Communicative Competence and their digital technology use, identifying which applications support or hinder its development while also considering digital technologies’ role in other

teaching activities.

3.5.2 Survey Data Analysis

The survey data were processed and analysed using descriptive statistical methods to examine patterns in language teachers' perceptions and practices regarding digital technologies. The analysis involved data cleaning and preparation, summarising participant characteristics and response distributions, and using visualisation techniques such as frequency tables and bar charts to illustrate categorical data. Inferential statistical methods, such as chi-square tests, were initially considered to explore potential relationships between categorical variables. However, given the modest sample size, the results of these analyses were not considered sufficiently robust for detailed interpretation (Cohen et al., 2018). Therefore, the quantitative findings were interpreted descriptively to highlight general trends consistent with the study's exploratory nature, focusing on identifying patterns and generating insights (Salkind & Frey, 2020) rather than testing specific hypotheses. In addition to the quantitative analysis, the study also incorporated qualitative insights from open-ended responses, which were analysed thematically to provide supplementary explanations and additional context for interpreting statistical trends.

Once data collection was completed, the survey responses were exported from Qualtrics to Excel for initial screening. This stage focused on identifying and removing incomplete or invalid responses that could compromise the integrity of the dataset. After data cleaning was completed, the remaining responses were imported into SPSS 23 for statistical analysis.

To provide an overview of the participant population, descriptive statistics were used to analyse gender, age, ethnicity, teaching experience, school type, and languages taught, using frequency counts and percentages. In cases where categorical data needed to be visualised, such as school decile levels, teaching modes, and class contexts, bar charts were used to illustrate distributions. Frequency distributions were also used to analyse teachers' perceived roles of digital

technologies in language learning, with bar charts providing a visual summary of responses. The actual use of digital technologies in language teaching was reported in a ranked table, displaying the frequency and percentage of each technology's use from the most to the least commonly used tools.

For the Likert-scale questions, the data were systematically processed to facilitate interpretation. In the part measuring teachers' objectives related to different components of Communicative Competence, response options ranged from "Not at all important", "Low importance", "Neutral", "Important", to "Very important". To ensure clarity in reporting and to increase the number of responses within each category, these responses were grouped into three broader categories: "Important" (merging Important and Very important), "Neutral" (retained as a separate category), and "Non/low importance" (merging Low importance and Not at all important). The re-categorised results were visualised using stacked bar charts, where different colours represented each category, providing a clear representation of how teachers perceived different aspects of language learning. A similar approach was applied to the part on teachers' perceptions of digital technologies, where responses originally ranged from "Strongly disagree", "Disagree", "Neither agree nor disagree", "Agree", to "Strongly agree". To facilitate analysis and ensure sufficient responses within each group, "Agree" combined Agree and Strongly agree, "Neither agree nor disagree" remained as a separate category, and "Disagree" merged Disagree and Strongly disagree. These results were also presented in stacked bar charts, allowing for a visual representation of the overall trends in teachers' perceptions of digital technology use.

In addition to the quantitative survey responses, open-ended questions allowed teachers to elaborate on their perspectives, providing more authentic and in-depth data that could not be captured through closed-ended items (Cohen et al., 2018). The qualitative data derived from these responses were analysed thematically (Braun & Clarke, 2022), following a structured process to identify recurring patterns and themes. This process involved three key stages: familiarisation, coding, and theme development. When reporting survey findings, both

quantitative and qualitative data of the survey were analysed and presented within the same chapter (Chapter Four: Survey Findings) rather than integrating qualitative responses into the qualitative data from later case study analysis. This decision was made because the open-ended responses in the survey were closely linked to the quantitative findings, serving as direct explanations and elaborations of the statistical data. Integrating them in the same chapter allowed for a more coherent interpretation of the survey findings. For instance, when teachers were asked to identify additional language learning objectives, their open-ended responses complemented the relevant Likert-scale data, revealing further areas of teaching goals, such as confidence-building and motivation that were not fully captured in the closed-ended items.

3.6 Phase Two: Multiple Cases Study

The second phase of this study aimed to explore teachers' perceptions and practices regarding digital technologies in language teaching, as well as the underlying factors shaping their pedagogical decisions. While Phase One provided broad quantitative insights into teachers' perceptions and practices, it did not capture the contextual complexities that influence teachers' decisions, such as school policies, technological possibilities, institutional constraints, and individual teaching philosophies. Given that digital technology use is not a uniform practice but rather shaped by a range of contextual and pedagogical factors, a multiple-case study approach was adopted to provide a deeper and more holistic understanding of these variations (Duff, 2018). Unlike other qualitative research methods, such as ethnography, which requires prolonged immersion in a cultural or social group, or action research, which is designed to enact immediate change in a specific setting, case study research is particularly suited for investigating contemporary educational practices while maintaining a clear focus on bounded cases (Punch & Oancea, 2014; Yin & Campbell, 2018). In this study, each case was defined as a teacher together with their classroom teaching and learning context, recognising that teachers' pedagogical practices cannot be meaningfully separated from the environments in which they occur (Duff, 2018). Because this study examines how teachers engage with digital tools within specific classroom environments, a case study approach was essential for capturing the

interplay between teacher agency, technological possibilities, and contextual constraints.

Each case was studied within its natural setting, ensuring that the complexity and context of digital technology use in language teaching were fully captured (Duff, 2018; Punch & Oancea, 2014). Case study research should be understood not as a rigid methodological framework but as a strategic and flexible approach that enables in-depth investigation of complex educational phenomena through multiple perspectives (Punch & Oancea, 2014). Therefore, as is common in case study research, multiple data sources were collected and triangulated to provide a holistic and contextually grounded understanding of teachers' experiences and practices (Duff, 2018; Yin & Campbell, 2018). These data sources included lesson plans, classroom observations, teacher interviews, and student focus groups. The triangulation of data enhanced the credibility of the findings and supported a rich interpretation of how digital technologies were integrated into language teaching across different classroom contexts.

The adoption of a multiple-case study design over a single-case study was essential to answering the study's research questions. A single case may have provided a deep but contextually limited account of how one teacher navigates these questions in a specific teaching environment (Cohen et al., 2018; Duff, 2018; Yin & Campbell, 2018). However, this study phase sought to examine whether teachers' views and practices were shaped by contextual variations (Cohen et al., 2018). By selecting multiple cases, this study was able to compare how these contextual differences influenced teachers' objectives for Communicative Competence, their perceptions of digital tools, their actual use of technology and their students' perspectives on technology use. A multiple-case study approach also allows for cross-case comparison, which strengthens the findings by identifying both shared patterns and case-specific variations (Duff, 2018). For example, in the context of Research Question 2, which explores teachers' perceptions of digital technologies in language learning, a multiple-case design allowed for an investigation of how teachers in different teaching settings (fully online vs. blended classrooms) and cultural backgrounds perceived digital technologies differently. Similarly, in the context of

Research Question 3, which examines teachers' actual use of digital technologies, multiple cases enabled the study to explore how access to professional development and language-specific characteristics influenced teachers' classroom practices. Without a multiple-case design, these variations might not have been fully captured, potentially leading to overgeneralised conclusions based on a single context. As Creswell (2018) argues, multiple cases enhance the depth and breadth of qualitative findings by enabling researchers to explore how different environmental conditions shape individual behaviours and practices. Therefore, the multiple-case design facilitated both within-case depth and cross-case comparison, enabling a well-rounded and contextually grounded exploration of digital technology use in diverse language teaching environments.

3.6.1 Case Selection Criteria

The selection of cases was guided by purposive sampling, ensuring that the participants represented diverse teaching contexts while meeting specific inclusion criteria. At the end of the online survey, teacher respondents were invited to indicate their willingness to participate in the second phase of the study. From those who expressed interest, three teachers and their classrooms were selected as cases for this phase. To ensure that the selected cases were sufficiently representative of digital technology use in language teaching, the following criteria were applied:

- Teaching context: Teachers were selected based on differences in the language taught and variations in teaching delivery methods (fully online vs. blended learning).
- Professional background: All participating teachers had at least two years of experience in teaching second or foreign languages in an Aotearoa New Zealand secondary school.
- Teaching certification: Participants were fully registered teachers with the Teaching Council of Aotearoa New Zealand (Teaching Council of Aotearoa New Zealand, n.d.), indicating that they were professionally accredited to teach in secondary schools.

These criteria were established to ensure that the selected teachers had sufficient teaching experience and professional expertise to provide insightful reflections on digital technology integration in language teaching. However, given the limited number of volunteers, final selection also took into account participants' availability and the diversity of teaching contexts. Three teacher participants were included, each teaching a different language: NZSL, Chinese, and te reo Māori. The study thus captured variation in language subjects and teaching modes, with one teacher conducting fully online teaching and the other two using blended approaches. Despite this variation, the sample lacked diversity in geographic and socioeconomic contexts, as all participants taught in high- or middle-decile schools in the North Island of Aotearoa New Zealand, with no representation from the South Island or low-decile schools. Notably, while much of the CALL literature has centred on widely taught foreign languages, the inclusion of te reo Māori and NZSL reflects the linguistic realities of the Aotearoa New Zealand context. It is also important to note that te reo Māori has its own curriculum guidelines and holds a unique status as both an official and indigenous language. These distinctions, and their implications for interpreting the findings, are addressed in later chapters.

The second group of participants consisted of students from the classes of the participating teachers. With the teachers' assistance, three to eight students per class were invited to participate in one focus group interview for each case. Information sheets and consent forms were distributed in class by the language teacher, and students who voluntarily expressed interest were included. No additional selection criteria, such as language proficiency, achievement, or demographic balance, were applied.

3.6.2 Case Study Data Collection Methods

This phase of the study employed a multi-method qualitative data collection approach to ensure a comprehensive and contextualised understanding of language teachers' perceptions and practices regarding digital technologies. Within each case study, data were typically collected in a staged sequence. First, relevant lesson plans were gathered and analysed to understand the

language teaching content, lesson structure, and how digital technologies were planned to be used in the lesson. This was followed by three classroom observations and a semi-structured interview with the language teacher, which were closely connected and, in some cases, conducted in an interchangeable order depending on practical constraints and school timetables. Finally, a student focus group interview was conducted to capture learners' perspectives after they had experienced the observed lessons. By integrating these methods, this study was able to triangulate findings, ensuring a richer dataset while capturing different perspectives on digital technology integration in language teaching. The rationale and implementation of each data collection method are outlined below.

Document Analysis

Document analysis is a systematic method for evaluating and interpreting printed and electronic materials, providing insights into teaching philosophies, instructional strategies, and resource use (Bowen, 2009). In this study, document analysis focused on teachers' lesson plans, which were gathered in close connection with the classroom observations. These plans contributed primarily to addressing Research Question 1, by identifying teachers' instructional objectives related to Communicative Competence, and to Research Question 3, by revealing their intended use of digital tools in lesson design and the designed language activities.

However, lesson planning practices in reality varied among the participating teachers. One teacher prepared detailed lesson plans for each class session, outlining specific learning objectives and pedagogical strategies. Another teacher provided a term-based scheme, which outlined weekly teaching goals rather than lesson-specific details. The third teacher shared a generalised year-long syllabus, which was structured as a broad teaching framework for all student levels rather than a breakdown of individual lessons.

Classroom Observations

Classroom observations are widely used in educational research to collect direct, real-time data on teaching and learning interactions, offering a first-hand perspective on classroom practices (Dörnyei, 2007). Unlike self-reported data, which may be influenced by recall bias or social desirability, observations provide a more objective account of teachers' pedagogical choices and how they integrate digital technologies in practice (Cohen et al., 2018). By documenting actual teaching behaviours, observations help bridge the gap between teachers' stated perceptions (as captured in interviews and lesson plans) and their classroom realities. In this study, classroom observations captured teachers' enacted practices and teacher–student interactions involving digital technologies, contributing primarily to Research Question 3 (the enacted use of digital tools) and partly to Research Question 4 (students' engagement with digital technologies).

While classroom observations and a teacher interview within each case study were conducted in close succession, the order varied across cases due to practical considerations. Observations sometimes provided points for follow-up in teacher interviews. Where the interview occurred prior to observations, interview data sensitised the researcher to particular teaching practices or digital technology use, which were subsequently attended to during classroom observations. The observations also provided a basis for comparing teachers' intended teaching objectives, which were presented in both lesson plans and the teacher interview, with their actual classroom practices. To guide the observation process, several key aspects were identified. The first was teachers' instructional practices, particularly how they implemented their planned learning objectives in the classroom. The second was the types of language activities and the integration of digital resources used by the teachers in class and how they aligned with Communicative Competence. Finally, student engagement and participation were observed, particularly in relation to digital tools and their effectiveness in facilitating language learning. Moreover, it should be noted that these observations focused only on in-class activities and did not include digital practices that occurred outside the classroom.

Each classroom case was observed three times, with each observation corresponding to a full class session of approximately 45 minutes. The researcher adopted a non-participant observation role, aiming to minimise influence on class dynamics. In face-to-face lessons, the researcher sat at the back of the classroom without engaging in teaching activities. In online lessons, the researcher joined the virtual classroom with the camera and microphone turned off to reduce visibility and minimise disruption. To reduce observer bias and ensure systematic data collection, observations were recorded in detailed field notes (Creswell, 2018). Observations were recorded as detailed field notes, which captured how teachers used digital technologies, made instructional choices, and interacted with students in real time. These notes formed the basis for subsequent analysis, ensuring that interpretations remained grounded in the actual classroom context.

Semi-Structured Interviews with Teachers

To gain deeper insights into teachers' perceptions and classroom practices, semi-structured interviews were conducted with each participating teacher. This interview format was chosen because it allows researchers to combine a structured approach with the flexibility to explore participants' perspectives in greater depth (Dörnyei, 2007). By ensuring that key research topics were systematically addressed while also allowing teachers the freedom to elaborate on their experiences, semi-structured interviews provided a rich and detailed dataset.

Each teacher participated in a one-on-one interview lasting no longer than 60 minutes, balancing the need for in-depth discussion with respect for teachers' time constraints. While the study initially planned to conduct interviews after classroom observations, scheduling and teachers' availability varied. As a result, one teacher was interviewed before classroom observations, requiring the researcher to use follow-up questions to explore teaching practices in greater depth. The remaining two teachers were interviewed after classroom observations, allowing for recall prompts, where teachers reflected on specific classroom moments and explained their pedagogical decisions. All interviews were audio-recorded and transcribed for

analysis, and English was the only language used to avoid potential misunderstandings arising from translation. It is also important to acknowledge that, as a non-native English speaker with limited experience in the Aotearoa New Zealand school context, the researcher may have faced challenges in probing certain context-specific aspects during the interviews.

The interviews provided an in-depth understanding of how teachers perceived the development of components of Communicative Competence (addressing Research Question 1), how they perceived the pedagogical potential and constraints of digital technologies (addressing Research Question 2), and how they applied and reflected on these experiences in their actual classroom practices (addressing Research Question 3). Consistent with the survey design, only a specific part of the interview explicitly asked teachers about their teaching objectives of different components of Communicative Competence. The rest of the interview was intentionally kept broad and open-ended, allowing participants to freely express their views without being restricted to Communicative Competence alone. This open approach was adopted to minimise the risk of imposing predefined assumptions on teachers' responses, ensuring that the interview captured a diverse range of teaching perceptions and practices. The full interview guide is provided in Appendix P. The design of this interview guide was informed by previous studies that explored teachers' perceptions and practices regarding digital technology use in language education (e.g., Chen et al., 2021; Kim, 2013; Xue & Churchill, 2022).

The interview questions always began by asking teachers about their general use of digital technologies and online resources in language teaching before exploring their personal perceptions and reflections. This part also served as an icebreaker, allowing teachers to gradually ease into the discussion by reflecting on their daily technology use before transitioning to more in-depth topics. Teachers were asked to describe the common technologies or online resources they used in the classroom, discuss both positive and negative aspects of technology integration, and reflect on their own technological expertise and confidence. These broad questions helped establish a comfortable and open discussion

environment (Cohen et al., 2018). Then, the interview explored more detailed teachers' use of digital tools for specific second language learning objectives. This initial focus on factual and practice-based descriptions provided a natural transition into teachers' personal reflections and evaluations of digital technology use. By first recalling specific practices, teachers were able to reflect on their experiences before being asked to evaluate them, leading to more reflective insights (Patton, 2015). The final part of the interview prompted teachers to reflect on their overall evaluation of digital technologies in language teaching. Teachers were encouraged to assess the impact of digital tools not only on different language learning activities (e.g., listening, reading, speaking, writing) but also students' learning processes and outcomes. They were also invited to discuss whether they had received training in technology integration. This phase helped explore perceived gaps in professional development and potential challenges in digital technology integration.

Focus Group Interviews with Students

Each case study included one focus group interview with students, aiming to capture their experiences and perspectives on digital technology use in language learning. Focus group interviews were selected because they allow participants to interact with one another, build on each other's ideas, and identify shared experiences (Bolderston, 2012; Krueger & Casey, 2015). Research has shown that an ideal focus group size is between five and eight participants, as this allows for a manageable discussion while capturing diverse viewpoints (Krueger & Casey, 2015; Nyumba et al., 2018). In this study, student groups were kept to fewer than eight participants per case to ensure a focused and productive discussion. Although the student participants in each case were from the same language class, they contributed diverse perspectives reflecting their individual learning experiences. Also, their insights provided an important complement to understanding how teachers' perceptions and practices influence students' use of digital tools.

Each focus group interview followed a structured interview protocol with predefined open-ended questions to encourage natural conversations. The researcher's role was to facilitate

discussion, ensuring that students remained on topic while also allowing them to express their thoughts freely. All interviews were audio-recorded, and participants were informed in advance to ensure transparency and ethical compliance. Each focus group interview was structured around three main foci, progressing from general discussions to more specific reflections on digital technology use (see Appendix Q for the full protocol). The design of these focus group questions was informed by previous research on students' experiences with digital tools in educational contexts, including studies by Alawadhi and Abu-Ayyash (2021), Eleni and Eleni (2024) and Soussi (2016).

The first part of the interview aimed to get to know the students and establish rapport, encouraging them to talk about their learning goals and motivations for studying a second language. This warm-up discussion provided insight into their personal perspectives on language learning, creating a comfortable environment for the rest of the interview. The second part of the interview focused on students' use of digital technologies in their language learning. Similar to the semi-structured teacher interviews, this section was designed to first encourage students to describe their actual use of digital tools before moving into their personal reflections and evaluations. To ensure that students clearly understood the scope of the discussion, the researcher clarified what digital technologies and online resources were included and reminded them that the focus was on technology use in the classroom rather than personal use outside of school. The final part of the interview explored students' perceptions of using digital technologies in their language classrooms. Again, rather than limiting students' responses to Communicative Competence, this part was also intentionally kept broad and flexible.

3.6.3 Case Study Data Analysis

The case study analysis drew on multiple qualitative data sources, including lesson plans, classroom observation notes, and transcripts from teacher interviews and student focus groups. These data were analysed together to support triangulation (Duff, 2018) and to develop a contextualised understanding of digital technology use in language classrooms. All data were

imported into NVivo 20 and analysed within each case before cross-case comparison.

The data were analysed using thematic analysis (Braun & Clarke, 2022). Analysis began with familiarisation through repeated reading of all data sources, followed by a hybrid coding process that combined both deductive and inductive strategies (Braun & Clarke, 2022). An illustrative example of the coding structure is provided in Appendix T (Example of NVivo Codes). Deductive coding was guided by the study's theoretical framework (Figure 2.1) and involved predefined categories related to components of Communicative Competence, including linguistic, discourse, strategic, intercultural, and digital competence. During deductive coding, teacher and student data were also coded separately within these predefined categories to ensure that teacher and student perspectives were clearly distinguished during analysis. Inductive coding was then used to identify themes emerging from the data related to the use of digital technologies in practice. Through this data-driven process, detailed pedagogical potentials and challenges associated with digital technologies were identified within both teacher and student datasets. This combination of theory- and data-driven coding (Nowell et al., 2017) enabled the identification of both expected and unanticipated insights.

Each data source was analysed in relation to the specific research questions it addressed, as outlined in Section 3.6.2. Lesson plans involved coding references to intended communicative goals, planned language activities, and the anticipated role of digital tools in supporting learning. An illustrative example of lesson plan coding is provided in Appendix U. Observation notes were analysed to capture enacted teaching practices, with particular attention to teacher–student interaction and the real-time use of digital technologies. An example of observation note coding is included in Appendix V. Interview and focus group transcripts were analysed to examine how teachers and students described their experiences and perceptions of using digital technologies, with attention to how these tools were perceived to support or constrain communicative goals, classroom interaction, and learning processes, as well as the challenges encountered in practice.

As coding progressed, code definitions and groupings were refined. Themes, subthemes, and codes were then reviewed to ensure internal consistency and clear conceptual boundaries. For example, initially fragmented codes related to teacher-student interaction were consolidated under a broader theme “classroom-based interaction”. Finalised themes were documented and visualised using mind maps to illustrate thematic relationships within each case. These mind maps are presented in the relevant findings chapters (Chapter 5, 6, and 7). To complement this visualisation, thematic summary figures (e.g., Figures 5.1, 5.2, and 6.1) report the number of coded excerpts associated with each theme and subtheme. The format used is theme/subtheme (N = total; Perceptions n = ...; Teaching Practice n = ...), where N indicates the total number of coded segments, and n shows their distribution across data sources. This breakdown helps clarify the relative representation of themes. However, frequency was not treated as the only indicator of importance, as less frequently coded items may still convey nuanced or theoretically important insights (Braun & Clarke, 2022).

Once within-case analysis was complete, a cross-case analysis was conducted to identify similarities and differences across the three cases. In line with Braun and Clarke’s (2022) guidance, this cross-case analysis built on themes developed within individual cases to support comparative interpretation across contexts. All cases were analysed using the same perspective-based analytic structure established during deductive coding, including teachers’ perceptions and practices and students’ perceptions and learning experiences related to digital technology use. Cross-case comparison focused on the presence or absence of themes, their relative prominence, and how practices or perceptions were positioned in different classroom contexts. Interpretation was further informed by contextual factors such as the language taught and its cultural positioning. The outcomes of this comparative analysis are presented in Chapter 8.

3.7 Reliability, Validity and Trustworthiness

This study employed a mixed methods approach, combining an online survey with multiple case studies. In this section, reliability and validity are used to assess the quality of the online survey, while trustworthiness is applied to ensure the credibility and rigour of the case study research.

3.7.1 Reliability of the Online Survey

Reliability concerns the consistency and stability of a research instrument, ensuring that if the same survey were conducted under similar conditions, the results would be comparable (Dörnyei, 2007). To enhance the reliability of the survey, several measures were taken throughout the design and data collection process. The survey was informed by existing studies on language teachers' perceptions and practices regarding digital technology. Instead of adopting a single established instrument, relevant items were drawn from multiple sources and adapted to fit the study's objectives. Following the initial draft, input from two doctoral supervisors led to further refinement. As outlined earlier, the survey was also piloted with language teachers, whose responses informed additional revisions to improve clarity and ensure alignment with the intended constructs.

3.7.2 Validity of the Online Survey

Validity concerns whether a survey accurately measures what it intends to measure and whether its findings genuinely reflect the underlying constructs (Dörnyei, 2007). In this study, particular attention was given to content and construct validity to ensure the instrument's appropriateness and alignment with the research objectives. Content validity refers to how well the survey represents the key aspects of the research questions. The survey was developed to address the first three research questions, focusing on teachers' perceptions of components of Communicative Competence and the integration of digital technology in language teaching. As the target participants were teachers rather than students, the survey did not address the fourth

research question concerning student perspectives.

Construct validity concerns the alignment between survey items and the theoretical frameworks underpinning the study. The design drew on the Communicative Competence framework (Byram, 1997; Canale, 1983) and literature on digital technology integration in language education. To enhance conceptual clarity and accessibility, technical terminology was avoided in favour of language grounded in familiar teaching practices. For instance, items measuring Communicative Competence were phrased around classroom objectives rather than abstract terms. Similarly, items on digital competence addressed both practical tool use and broader notions of digital literacy. These design choices helped ensure that the survey captured the intended constructs in a way that was theoretically grounded yet comprehensible to respondents.

3.7.3 Trustworthiness of the Case Studies

In qualitative research, trustworthiness is essential for ensuring the credibility and rigour of findings, given the focus on interpretation rather than measurement consistency (Lincoln & Guba, 1985; Shenton, 2004). Lincoln and Guba (1985) proposed four criteria to evaluate trustworthiness in qualitative inquiry: credibility, transferability, dependability, and confirmability, which have since been widely adopted in applied linguistics and educational research (Nowell et al., 2017). Credibility was enhanced through triangulation of multiple data sources (Lincoln & Guba, 1985), including lesson plans, classroom observations, teacher interviews, and student focus groups, which provided both unique insights and opportunities for cross-validation. Member checking (Shenton, 2004) was also employed: teacher interview transcripts were returned to participants for verification, and the coding process, as previously described, was reviewed by two doctoral supervisors to support analytical rigour.

To support transferability, detailed contextual information was provided at the beginning of each Case Study Findings Chapter. These descriptions included teacher backgrounds,

classroom characteristics, and institutional settings, enabling readers to assess the relevance of the findings to their own contexts. Dependability was addressed by thoroughly documenting the research process (Lincoln & Guba, 1985). Section 3.6 provides a transparent account of data collection, coding, and thematic analysis procedures, ensuring that the study's analytical approach is traceable and could be replicated under similar conditions. Finally, confirmability was ensured through reflexive practice (Lincoln & Guba, 1985). The researcher actively considered potential biases during data interpretation to maintain objectivity. Transparency was further supported through the use of direct data excerpts (Nowell et al., 2017), including verbatim interview quotes, field notes, and lesson plan extracts, in the findings chapters, grounding the analysis in participants' actual words and actions.

3.8 Research Ethics

This study was conducted in accordance with established ethical standards and received formal approval from the Massey University Human Ethics Committee: Human Ethics Southern B Committee (Approval Reference: SOB 21/39; see Appendix R). The approval process involved a detailed review of recruitment procedures, informed consent protocols, data management, and risk mitigation strategies, all designed to safeguard participants' rights and well-being. Compliance with Massey University's Code of Ethical Conduct (2017) ensured that the research was carried out with transparency, fairness, and respect.

Prior to formal approval, the research design underwent extensive peer and supervisory review. These discussions contributed to the development of a robust ethical framework, guided by key principles in educational research, including respect for autonomy, beneficence, non-maleficence, and justice (Cohen et al., 2018; Lincoln & Guba, 1985). These principles were operationalised through clear consent procedures, strict data confidentiality, and efforts to minimise participant burden, particularly when working with students and minors. The study followed an ethics model that placed emphasis on researcher judgement and professional

responsibility, rather than strict rule-following. This approach recognises that ethical decisions are context-specific and require ongoing reflection and adaptation throughout the research process (Cohen et al., 2018). In the Aotearoa New Zealand context, the study also acknowledged bicultural obligations under the Treaty of Waitangi, and was guided by values such as respect, caution, and reciprocity when engaging with participants from diverse cultural backgrounds.

A central ethical concern was securing informed consent from all participants, including language teachers, students, parents, and school administrators. For the online survey, participants received a digital information sheet outlining the study's purpose, voluntary nature of participation, and data confidentiality measures (see Appendix A). The survey collected no personally identifiable information unless respondents voluntarily expressed interest in the case study phase. In such cases, contact details were submitted separately from survey responses to preserve anonymity. For the case study phase, teachers who volunteered were provided with detailed information sheets (see Appendix F) and consent forms (see Appendix G). They were informed of their rights, including the ability to decline any questions, withdraw at any point before data analysis, request transcript amendments, and suspend classroom observations if desired. Participation involved sharing lesson plans, permitting three classroom observations, and taking part in a one-hour semi-structured interview. All components were designed to minimise disruption to teaching schedules. Interviews were recorded with consent, and transcripts were returned to participants for review prior to analysis.

Special ethical considerations were applied when involving students in focus group interviews. Given that some participants were under 16 years old, both student assent and parental consent were required (see Appendix K, L, N, O). Age-appropriate information sheets were provided to ensure clarity of purpose and procedures. Students were assured that participation was voluntary, that there were no "right" or "wrong" answers, and that their responses would remain confidential and unrelated to academic performance. Focus groups were conducted in small

peer-based settings to encourage open discussion, and the researcher actively monitored verbal and non-verbal cues to ensure comfort and well-being. Before each focus group began, students were informed that withdrawal could involve choosing not to answer particular questions, leaving the session, requesting that their comments not be included in the transcript or analysis without any negative consequences (Massey University, 2017). However, it was also acknowledged that, due to the interactive and collective nature of focus group discussions, withdrawal could not fully remove information that had already been shared with other participants, nor entirely undo the contribution of such interaction to the co-constructed data (Sim & Waterfield, 2019). In practice, only one student informed the researcher in advance that she needed to leave early for personal reasons, and consent was confirmed for her earlier contributions to remain part of the data. It is also acknowledged that language classes took place within a broader teaching and learning environment. When collecting data related to students' perspectives, the focus was limited to those who had provided consent. Only the participating students' behaviours and interactions were observed and recorded, and only they took part in the focus group interview for each case. The engagement of non-participating peers was not recorded. Nevertheless, students' reflections and classroom experiences were inevitably situated within the wider educational ecology and could not be completely separated from the overall classroom context, reflecting the inherently contextual and interactional nature of group-based qualitative data (Sim & Waterfield, 2019).

Data confidentiality and security were prioritised throughout the project. Survey responses were collected via Qualtrics and stored on a password-protected work computer accessible only to the researcher. Pseudonyms were assigned to all case study participants, and no real names appeared in any reports or publications. Hard copies of consent forms were initially stored in a locked cabinet at Massey University and later moved to a secure location in the researcher's home due to a shift to remote working. Digital data were stored on password-protected university-provided cloud storage (OneDrive), with consent forms kept separately from research data. All data will be retained for five years post-completion and then securely deleted or shredded, in line with institutional policy. Moreover, upon conclusion of the research,

participating teachers will be offered a summary of findings, promoting transparency and allowing them to see how their input contributed to broader understandings of digital technology use in language education. Broader dissemination of findings will occur through conference presentations and peer-reviewed publications, with all outputs adhering to ethical requirements for participant anonymity.

3.9 Chapter Summary

This chapter has outlined the methodological framework of the study, which adopts a pragmatic paradigm to explore Aotearoa New Zealand secondary school language teachers' perceptions and practices regarding digital technologies in language education. The explanatory sequential mixed-methods design was justified, incorporating an online survey to capture broad trends and multiple case studies to provide in-depth insights through classroom observations, lesson plans, teacher interviews, and student focus group interviews. The chapter also detailed data collection and analysis procedures, and ethical considerations. The methodological choices made in this study ensure a comprehensive and balanced examination of teachers' perceptions and practices. The following chapters will present the survey findings, followed by detailed case study findings, and a cross-case analysis to synthesise key themes generated through the analysis.

Chapter 4: Survey Findings

4.1 Introduction

This chapter presents the findings from the online survey, which was distributed to secondary school language teachers and addressed three research questions: teachers' objectives in developing different components of Communicative Competence in language teaching, their perceptions of digital technologies for language teaching, and their reported use of digital tools in language classes. The chapter comprises six sections. It first outlines the respondents' demographics and teaching contexts, followed by an examination of teachers' objectives related to Communicative Competence. The subsequent sections explore teachers' perceptions of digital tools in language education and their actual classroom practices, including the types of tools used and factors influencing their pedagogical integration. The final section explores the then-recent contextual impact of COVID-19 on teachers' use of digital technologies in language teaching. The survey was administered between October and December 2021, a period during which schools in Aotearoa New Zealand experienced intermittent lockdowns and transitions between online and in-person teaching, which likely shaped teachers' perceptions of digital technology use. This context, although not directly addressed in the research questions, offered a valuable lens for interpreting the survey findings.

4.2 Participants of the Survey

This section provides an overview of the survey participants. A total of 48 responses were excluded from the analysis due to missing essential data. Specifically, responses were omitted if participants did not answer any survey questions ($n = 25$), failed to provide consent to participate ($n = 2$), consented but did not proceed to answer any further questions ($n = 8$), or only completed the demographic section without responding to key research-related questions ($n = 13$). After these exclusions, 89 valid responses were retained for analysis. These responses represent language teachers from diverse educational settings. The following subsections provide further details on their demographic backgrounds, teaching contexts, and use of digital

technologies in language teaching.

4.2.1 Demographic Characteristics of Participants

The demographic characteristics of the 89 respondents in this online survey are summarised in Table 4.1. The majority of participants were female (83.1%), with a smaller proportion identifying as male (14.6%) or preferring not to disclose their gender. Participants' ages varied widely, though over half (53.9%) were aged 40 or older, with the 50-59 age group (28.1%) being the largest. The sample was ethnically diverse, with New Zealand European (Pākehā) (52.8%) and Māori (21.3%) as the most commonly reported backgrounds, followed by Asian participants (18.0%). A smaller proportion identified with other ethnic categories. Regarding language teaching experience, nearly a quarter (23.6%) had over 20 years of experience, while 12.4% were in their first two years of teaching. Most participants reported teaching Year 9 (91.0%) and Year 10 (85.4%) students, indicating that many teachers worked across multiple year levels.

Table 4.1
Demographic Characteristics of Subjects (n=89)

Demographic information	Frequency	Proportion of sample
Gender		
Female	74	83.1%
Male	13	14.6%
Prefer not to say	2	2.2%
Age group		
20-29	6	6.7%
30-39	20	22.5%

40-49	23	25.8%
50-59	25	28.1%
60 and over	15	16.9%
<hr/>		
Ethnicity		
New Zealand European (Pākehā)	47	52.8%
Māori	19	21.3%
Asian	16	18.0%
Pacific peoples	6	6.7%
Middle Eastern, Latin American and African (MELAA)	4	4.5%
Other ethnicities	13	14.6%
<hr/>		
Language teaching experience		
Less than 2 years	11	12.4%
2-5 years	15	16.9%
6-10 years	16	18.0%
11-15 years	11	12.4%
16-20 years	14	15.7%
over 20 years	21	23.6%
<hr/>		
Year level		
Year 9	81	91.0%
Year 10	76	85.4%
<hr/>		

The respondents in this study taught a variety of languages, reflecting the diversity of language education in Aotearoa New Zealand. As shown in Table 4.2, among the surveyed teachers, te reo Māori had the highest proportion of respondents teaching it (19.1%), followed by French

(18.0%) and Spanish (16.9%). Japanese and Chinese were also widely taught, representing the most commonly reported Asian languages in the sample.

Table 4.2
Language Taught by the respondents

Language taught	Frequency	Proportion of sample
Te reo Māori	17	19.1%
French	16	18.0%
Spanish	15	16.9%
Japanese	13	14.6%
Chinese	13	14.6%
German	7	7.9%
English for Speakers of Other Languages (ESOL)	2	2.2%
Samoan	2	2.2%
Other language	2	2.2%
New Zealand Sign Language (NZSL)	1	1.1%
Latin	1	1.1%

Note. While English for Speakers of Other Languages (ESOL) is included in the table to reflect the full range of languages reported by respondents, it is important to acknowledge that ESOL is classified under the English learning area in the New Zealand Curriculum, rather than the Learning Languages area.

4.2.2 Teaching Context

The surveyed teachers worked in schools across various geographical and socioeconomic contexts, including different school locations, decile rankings, and teaching modes. The

majority of respondents (73.0%) were based in the North Island, with the largest proportions working in Auckland (38.8%), Waikato (11.2%), and Wellington (10.1%). A further 25.8% of participants were located in the South Island, predominantly in Canterbury (9.0%) and Otago (6.7%).

In terms of socioeconomic contexts, the respondents' schools spanned a range of school decile rankings, which reflect the socioeconomic composition of the school community. As indicated by the New Zealand Ministry of Education (2021), school deciles range from 1 to 10, with lower-decile schools receiving higher levels of government funding to support students from lower-income backgrounds. According to Hartnett (2017), decile rankings serve as a proxy for socioeconomic status and these ten school deciles can be grouped into three categories: low-decile schools (Decile 1-3), medium-decile schools (Decile 4-7), and high-decile schools (Decile 8-10). As shown in Figure 4.1, the majority of participants in this survey were teaching in high-decile schools (41.6%) and medium-decile schools (36.0%), while a smaller proportion worked in low-decile schools (15.7%). These high-decile schools were primarily located in Auckland (n=16), Wellington (n=5), Otago (n=5), and Canterbury (n=4), aligning with the geographic distribution of respondents. It should be noted that, although the decile system was in use at the time of data collection, it has since been replaced by the Equity Index (EQI) from 2023 (New Zealand Government, 2023).

In this study, the term teaching mode refers to the overall pattern of digital technology integration in teachers' language classes, based on their self-reported frequency and manner of use. Specifically, classes were categorised as minimal use, blended, or fully online. Minimal use classes referred to those where teachers reported rarely or never integrating digital tools; blended classes involved a regular combination of face-to-face instruction and digital technologies to support teaching and learning; and fully online classes were those conducted primarily or entirely through digital platforms. Regarding these teaching modes, Figure 4.2 shows that the majority of respondents (76.1%) taught in blended language classes, while

approximately one-fifth reported teaching in classrooms with minimal use of digital tools. Fully online classes were the least common among the surveyed teachers.

Figure 4.1
School Deciles of the Respondents

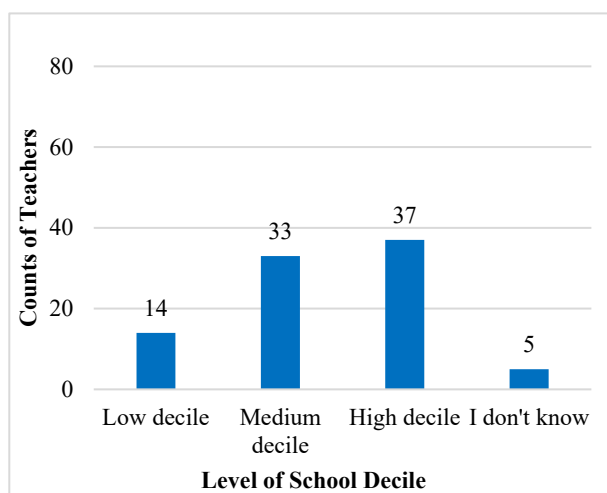
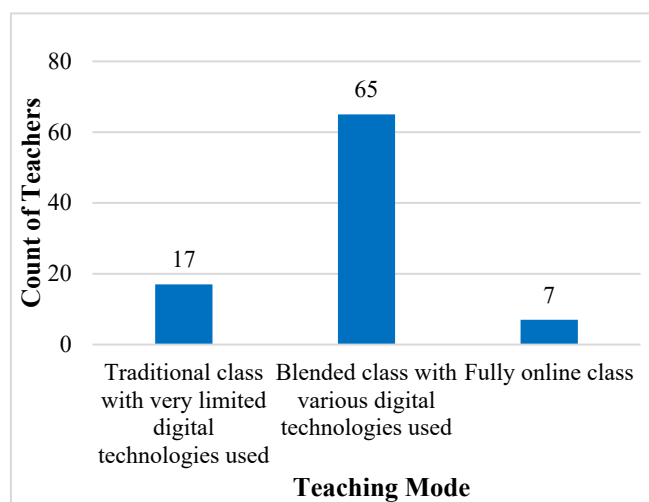


Figure 4.2
Teaching Modes of the Respondents



4.3 Teachers' Objectives in Developing Communicative Competence

This section examines language teachers' objectives in developing different components of Communicative Competence. It consists of two parts. The first presents findings from the structured survey, which employed a five-point Likert scale and focused on the theoretically defined components of Communicative Competence. To enhance clarity and relevance for teachers, these components were operationalised through specific teaching objectives. These correspond to key areas: linguistic competence (e.g., pronunciation, vocabulary, grammar), discourse competence (e.g., coherence in speech and writing), strategic competence (e.g., using verbal and non-verbal strategies to manage communication breakdowns), ICC and digital competence. Within ICC, the objectives include sociolinguistic competence, cultural knowledge, comparative cultural understanding, and intercultural interaction. Additionally, digital competence is examined in relation to its role in supporting language learning and facilitating social interaction. The second part explores qualitative insights from an open-ended

survey question, highlighting additional teaching objectives that teachers value. Together, these findings provide a comprehensive understanding of what language teachers perceive as important in language education.

4.3.1 Structured Survey Findings: Focus on Communicative Competence

The data in Figure 4.3 provide insights into how language teachers perceive the importance of different teaching objectives related to the components of Communicative Competence. The bar chart is segmented into High importance, Neutral, and Non/low importance categories, with different colours representing the extent to which teachers perceive each teaching objective as important. The findings suggest that teachers place a strong emphasis on Communicative Competence, especially linguistic accuracy and ICC, while their perceptions of learners' digital competence in language learning appear to be more varied. It should be noted, however, that the survey did not capture whether teachers' ratings were influenced by personal beliefs or by external factors such as curriculum or textbook requirements; therefore, the reported patterns reflect teachers stated teaching priorities rather than the underlying reasons for these priorities.

Linguistic competence was identified as the most highly valued area, with pronunciation (TO1), vocabulary (TO2), and grammar (TO3) receiving strong support. Nearly all teachers rated vocabulary as highly important (96.6%), reinforcing its central role in language learning. Pronunciation (87.6%) and grammar (82.0%) also received substantial support, reflecting the enduring emphasis on linguistic accuracy in language instruction. However, grammar (TO3) was rated as slightly less important compared to vocabulary and pronunciation, which may indicate that some teachers place greater emphasis on lexical and phonological accuracy in their teaching.

While **discourse competence** (TO4) and **strategic competence** (TO5) were widely recognised as important, they were rated slightly lower compared to linguistic competence. Discourse-level

coherence (TO4) was considered important by 87.6% of teachers, and 82% valued strategic competence (TO5), reflecting their relevance in communication. However, both ranked below core linguistic skills such as correct use of vocabulary and pronunciation, suggesting that while teachers recognise their role in effective interaction, they may place greater emphasis on linguistic accuracy.

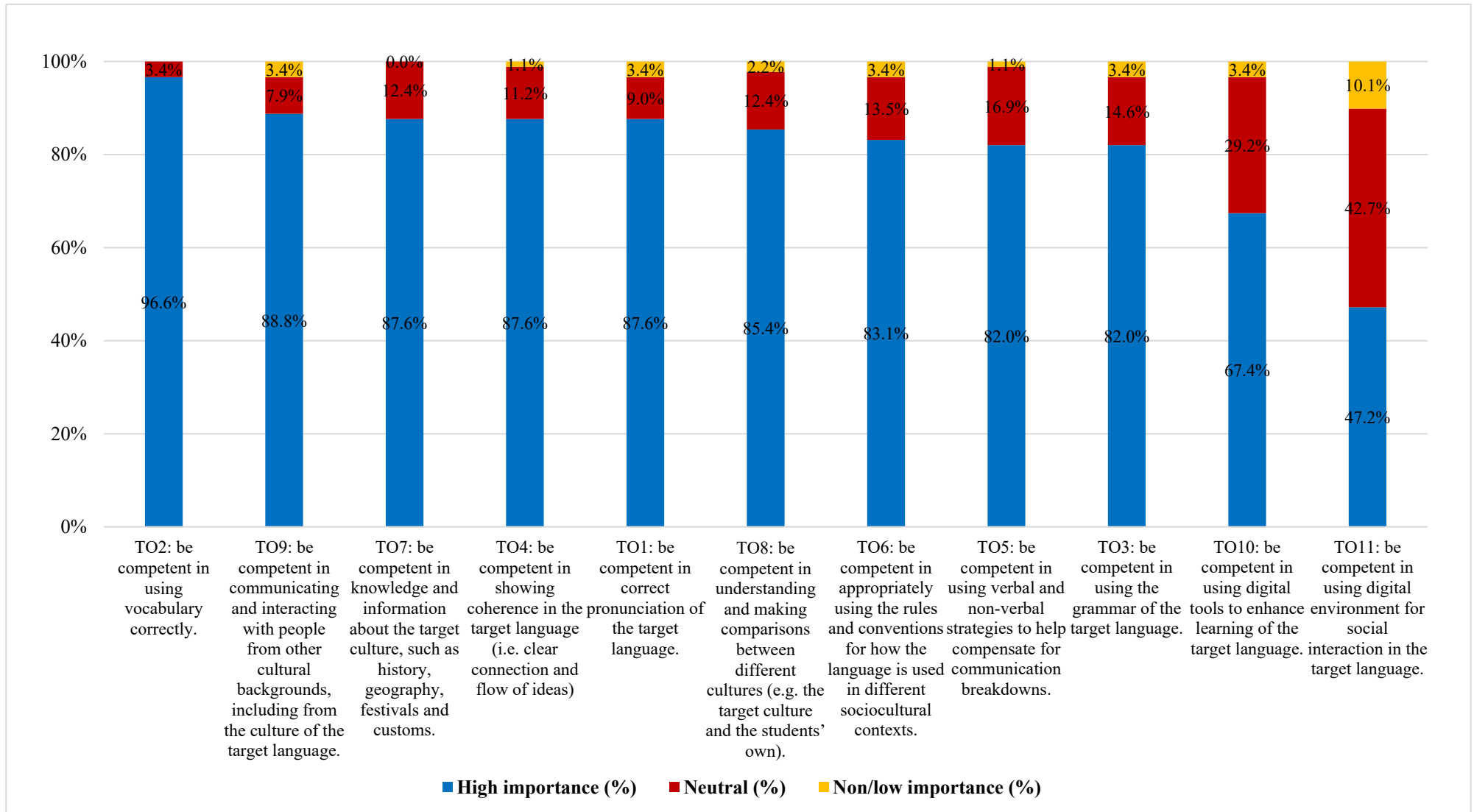
The data also highlights that **ICC** was widely recognised as an important component of language teaching. The ability to communicate effectively with individuals from diverse cultural backgrounds (TO9) was rated as highly important by 88.8% of teachers, and explicit knowledge of cultural facts (TO7) was also valued by 87.6%. This indicates that teachers view both practical intercultural engagement and cultural knowledge as essential in language education. Additionally, making cultural comparisons (TO8) and understanding the sociocultural rules of communication (TO6) were considered important by 83.1% and 82.0% of teachers, respectively, reflecting a strong emphasis on both awareness of cultural differences and the ability to use language appropriately in different contexts. These findings suggest that, while linguistic accuracy remains a core focus, teachers also place considerable importance on equipping students with the cultural knowledge, the skills to communicate intercultural, navigate cultural differences and sociocultural conventions.

The data reveals a notable gap in teachers' endorsement of **digital competence** compared to other language teaching objectives. While 67.4% of teachers considered using digital tools to support language learning (TO10) as important, a substantial proportion remained neutral or rated it as less important. However, the level of endorsement dropped further for using digital tools to facilitate social interaction in the target language (TO11), with less than half of teachers rating it as important. This pattern suggested that teachers tended to assign lower importance to digital interaction compared with face-to-face communication, indicating that such interaction was not yet fully recognised as a key means of fostering communicative development.

The high proportion of neutral or low-importance ratings for TO10 and TO11 indicates that digital competence is not widely perceived as essential for student learning, particularly in relation to communicative development. The proportion of neutral does not necessarily imply teachers' complete neutrality but may instead reflect a degree of hesitation or uncertainty about integrating digital tools effectively in language teaching. This could indicate varying levels of confidence and experience in utilising digital technologies effectively in the classroom, especially for fostering social interaction in the target language. Such a high proportion of neutral response rate may reflect teachers' varying levels of access to digital technologies across school contexts, as well as differing degrees of confidence and experience in utilising digital tools for instructional purposes, especially in fostering social interaction in the target language. Additionally, the relatively limited emphasis on digital competence may reflect challenges in aligning technology-based objectives with existing teaching emphases, with teachers possibly perceiving these goals as less immediate or essential than established communicative competencies. This raises important questions about whether and how digital tools are currently implemented in language classrooms and how teachers can be better supported in using them effectively to enhance students' Communicative Competence.

Figure 4.3

Importance of Language Teaching Objectives



4.3.2 Qualitative Insights: Additional Teaching Objectives Valued by Teachers

The structured survey items discussed in the previous section (Section 4.3.1) focused on five components of Communicative Competence, while this section presents teachers' responses to an open-ended survey question, which allowed them to express additional teaching objectives they perceived as important. Their responses revealed a strong emphasis on confidence-building, motivation, adaptability, and differentiation in language learning. Additionally, some participants used their responses to further elaborate on their perspectives regarding ICC and digital competence, expanding on the teaching objectives they had indicated in the structured survey. Although these data points are limited, they provide valuable insights into the broader trends observed, offering a more nuanced understanding of how teachers perceive and integrate these competencies in their teaching practices.

One of the clearest teaching objectives identified through analysis of the open-ended responses was the importance of **communicative confidence**. A small group of teachers (three out of 89) explicitly referred to helping students build confidence in using the target language in authentic communicative situations. They emphasised that language learning should go beyond mastering vocabulary and grammar, highlighting the need for students to feel comfortable taking risks and to communicate without excessive concern about making mistakes. As one teacher explained, "We mainly focus on communicating without worrying too much about making mistakes. At junior level we focus on building confidence and forming strategies to help us communicate, even if we don't necessarily have the exact words we need" (Participant 56). Another teacher described developing "confidence in communicating" as a core objective of their teaching (Participant 15). This confidence was also viewed as essential for engaging with people from different cultural backgrounds. One participant emphasised the importance of helping students feel "confident in their ability to interact with people from outside their culture" and in "using resources to support their interactions and their learning" (Participant 45).

Closely linked to confidence was the idea that language learning should be **enjoyable and motivating**. Four teachers recognised that when students enjoyed the process, they were more likely to stay engaged and succeed. One teacher expressed this emphatically, using capitalisation and punctuation to emphasise affective engagement: “Enjoyment!! Motivating students to LOVE language learning for their own intrinsic enjoyment and for accessing literature, films, songs in the target culture” (Participant 22). Another teacher underscored the importance of ensuring that students “enjoyed their language learning experience” (Participant 35), reinforcing the idea that positive emotional engagement was key to sustained learning.

Moreover, three teachers reiterated the importance of understanding cultural and contextual references in their open-ended responses. Having already rated ICC highly in the structured survey, these teachers placed strong emphasis on supporting students’ development in this area. As they commented, language was described as more than just words and grammar, as it is deeply embedded in social practices and shared cultural knowledge. Students needed to develop the ability to recognise references that were common in everyday conversations. One teacher highlighted the challenge of students who “aren’t sitting in a conversation understanding the language, but not knowing what is being talked about [or] referred to,” and emphasised the need “for students to understand references that the target language speakers regularly make” (Participant 9). Similarly, another teacher spoke of the need to build “a good basis for conversational level understanding around the niceties of societal norms and expectations” (Participant 87). These responses reinforced the idea that successful communication requires not only knowing what to say, but also how to say it appropriately in specific social settings. This emphasis on cultural and pragmatic knowledge closely aligns with the concept of ICC.

Another teaching objective identified in the responses was **the recognition of diverse learning needs**. Three teachers noted that students progressed at different rates and required flexible learning opportunities. One teacher emphasised the need for “access to self-paced learning and

differentiation of activities for students who need more time or [are] learning quickly to practise learnt or taught content” (Participant 11). Another simply stated that their approach “depends on the student” (Participant 25), highlighting the view that language teaching often needs to be adapted to individual learners rather than following a uniform approach. Some teachers also mentioned the importance of encouraging students to “competently self-assess how they’re going” (Participant 60), supporting learner autonomy and individual progress monitoring.

Additionally, two teachers expanded on their structured survey responses by further emphasising digital competence in their classroom practice. One teacher, for example, shared that they “positively teach students to use a range of online translators and accept their strengths and towering weaknesses,” adding that tools like Education Perfect offer “a form of practice of correct and useful interactions” in a private space where “students can fail and try again... when a more public environment in the class will be resisted and refused” (Participant 45). Another teacher reflected on how their approach shifted, stating, “I’ve been running traditional classes with limited digital technologies, but it’s changed since lockdown... We heavily rely on Education Perfect now” (Participant 80). While the context of pandemic-related shifts was mentioned, a more detailed discussion of these changes is provided in Section 4.7.

4.4 Teachers’ Overall Perceptions of Digital Technologies in Language Teaching

Figure 4.4 presents teachers’ overall perceptions of digital technologies in language teaching based on nine statements. The bar chart uses three colours to represent different levels of agreement. The data reveals strong overall support for digital technologies in language teaching, with the majority of teachers expressing positive perceptions across most statements, though some variation exists across different aspects.

Most teachers expressed **high interest, confidence and positive experiences in using digital**

technologies. These aspects represent distinct dimensions of engagement and were drawn from three separate survey statements (Statements 1, 2, and 4): interest reflects teachers' willingness to integrate digital tools, confidence refers to their perceived ability to use them, and positive experiences capture their prior encounters with such tools. An overwhelming 96.1% reported being interested in integrating digital tools into their teaching (Statement 1), and 94.8% shared positive experiences with these technologies in the past (Statement 2). Their confidence was also evident, with 92.1% agreeing that they felt confident using digital tools (Statement 4). These findings suggest that teachers generally feel capable of incorporating technology into their instructional practices, though the extent of their proficiency or the depth of their digital integration may vary.

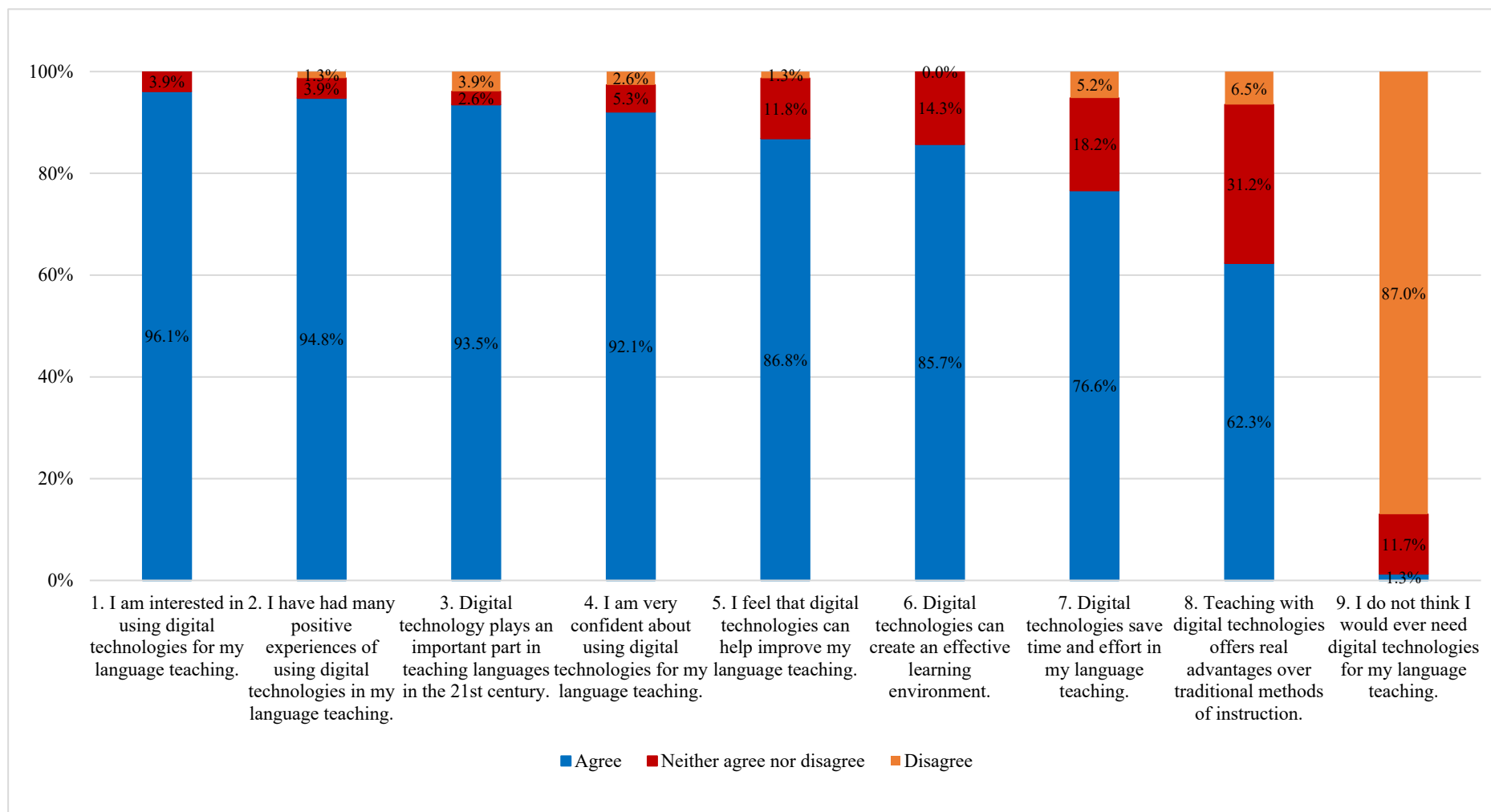
Beyond personal confidence, teachers also recognised the **pedagogical benefits** of digital technologies. Nearly all participants (93.5%) agreed that digital technologies play an important role in modern language education (Statement 3). Similarly, 86.8% believed that digital tools enhance their teaching effectiveness (Statement 5), and 85.7% agreed that technologies contribute to the creation of an effective learning environment (Statement 6). These responses indicate that a large majority of teachers recognise the value of digital technologies in enriching their teaching and fostering student engagement. In addition to pedagogical benefits, teachers also recognised the **practical advantages** of digital tools, particularly in terms of efficiency, though with slightly more variation in responses. While a strong majority (76.6%) agreed that digital technologies save time and effort in teaching (Statement 7), 18.2% remained neutral, and 5.2% disagreed. To further substantiate these findings, an opposing statement was included for contrast. Statement 9, which suggested that teachers “do not think they would ever need digital technologies for their language teaching,” was overwhelmingly rejected, with 87.0% of respondents disagreeing which reinforced the notion that outright rejection of digital technologies is rare.

One area where responses were more divided concerned **teachers' perceptions on the extent to which frequent use of digital technologies offers advantages in language teaching**. While 62.3% agreed that digital technologies offer real advantages when used frequently in their teaching (Statement 8), 31.2% remained neutral, and 6.5% disagreed. This suggests that while a majority of teachers recognise the advantages of more frequent or extensive use of digital technologies in language teaching, a considerable proportion remains uncertain, possibly viewing different levels of digital use as complementary rather than superior or inferior. Meanwhile, a very small minority disagrees, suggesting a preference for more limited use of digital tools in their teaching.

Overall, these findings highlight a strong endorsement of digital technologies among language teachers. Most teachers not only express interest and confidence in using digital tools but also see their clear pedagogical and practical value, though perceptions of efficiency varied. While outright rejection was rare, opinions were more divided regarding the extent to which digital tools should be used in language teaching. A majority saw advantages in more regular or extensive use of digital technologies, but a considerable proportion remained neutral, suggesting that many viewed different levels of digital use as complementary, while a small minority still preferred more limited integration.

Figure 4.4

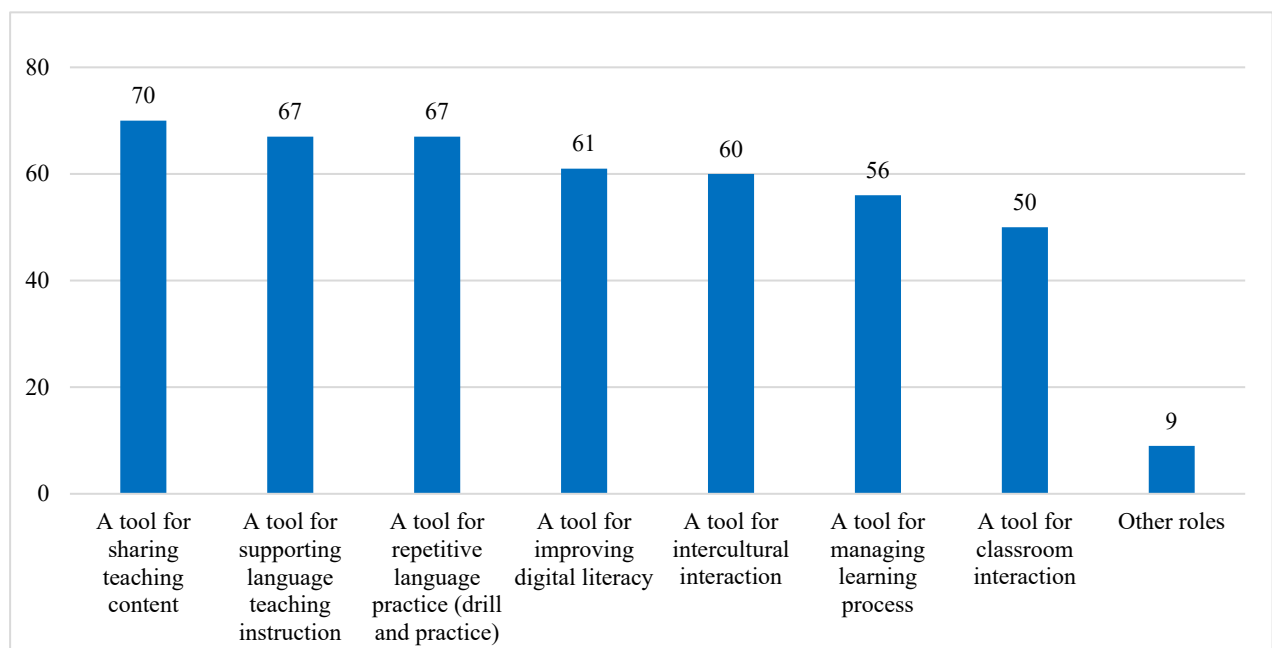
Nine Statements of Teachers' Perceptions of Using Digital Technologies in Language Teaching



4.5 Teachers' Perceived Roles of Digital Technologies in Language Teaching

Figure 4.5 presents teachers' perceptions of the roles that digital technologies play in language teaching and learning. The data originates from a survey question where teachers selected the roles they associate with digital tools. The bar chart highlights the diverse functions that teachers attribute to digital technologies, with some roles being more widely recognised than others.

Figure 4.5
Perceived Roles of Digital Technologies



The most frequently identified role of digital technologies is “a tool for sharing teaching content”, selected by 78.7% of teachers (70 out of 89). This suggests that many teachers view digital platforms primarily as **a means of distributing materials and resources to students**. Similarly, “a tool for supporting language teaching instruction” (75.3%) and “a tool for repetitive language practice (drill and practice)” (75.3%) were also highly endorsed, indicating

that teachers frequently associate digital tools with structured teaching support and reinforcement of language skills through repetition.

Beyond content delivery and structured practice, digital technologies were also seen as valuable for **enhancing digital competence** (68.5%) and **facilitating intercultural interaction** (67.4%). These findings suggested that teachers recognised the broader impact of digital tools beyond linguistic instruction, acknowledging their role in preparing students for digital competence and fostering cultural exchanges in language learning.

Further down the list, 62.9% of teachers viewed digital technologies as a tool for **managing the learning process**. Six teachers in the “Other roles” category elaborated on the diverse ways they used digital technologies in their teaching. Participant 5 described digital tools as “a way to improve the efficiency of learning and teaching,” while Participant 11 explained that they were used to “monitor student progress and learning via learner analytics ... with formative feedback embedded throughout every class and recorded.” Participant 18 viewed digital tools as a means to make language learning “more engaging” and to help scaffold students’ success and confidence. Participant 55 noted that digital technologies were “a tool for sharing learning and exemplars,” whereas Participant 60 highlighted their use for “assessment and collaboration.” In addition, Participant 88 mentioned using digital tools for “self-paced learning,” underscoring their potential to support learner autonomy. Collectively, these responses illustrate that teachers perceived digital technologies as serving multiple complementary functions—from improving efficiency and feedback to facilitating collaboration and independent learning.

Moreover, 56.2% of teachers associated digital tools with **classroom interaction**. This suggested that while many recognised their potential to facilitate engagement, their role in direct learner-to-learner interaction might be viewed as secondary compared to their function in

content delivery and structured practice. However, despite acknowledging these opportunities, one teacher expressed **concerns** in the “Other roles” category. This participant emphasised that digital technologies should “only be a part of the learning experience” and further noted, “I also have concerns about small screens, eye strain, ergonomics and general student health if only digital technologies are used” (Participant 83). This perspective indicated that while digital tools were widely accepted, some teachers remained cautious about their long-term impact on students’ learning habits and well-being.

These findings suggested that teachers perceived digital technologies as serving multiple roles in language teaching, with some functions more widely recognised than others. The most common roles involved content delivery, instructional support, and repetitive practice, highlighting their use in structuring and reinforcing learning. Beyond this, digital tools were valued for fostering digital competence, facilitating intercultural interaction, and supporting learning management. While some teachers associated them with classroom interaction, their role in direct learner-to-learner engagement appeared secondary. Despite these benefits, concerns remained about prolonged digital exposure and student well-being. This suggested that while digital technologies were widely accepted, some teachers remained cautious about their long-term impact and integration.

4.6 Teachers’ Use of Digital Technologies in Language Teaching

4.6.1 Distribution of Teaching Modes Across Demographic Groups

This section provides a descriptive overview of teaching modes reported by language teachers, presented alongside key demographic characteristics such as school decile levels, languages taught, teacher age, and teaching experience. The teaching modes indicate the extent to which digital technologies were integrated into classroom practice, ranging from classes with minimal use of digital tools to blended and fully online environments where technology played a central

role. Given the exploratory nature of the study and the size of the sample, this section focuses on descriptive patterns rather than inferential comparisons. Accordingly, teaching modes are presented across key demographic characteristics to provide contextual insight into how digital technologies were integrated into language teaching across different settings.

Teaching Modes and School Decile Levels

Table 4.3 presents the distribution of teaching modes across schools of different decile levels. Classes with very limited digital use were reported in all decile groups, with proportions ranging from 14% to 28%. The highest proportion of such classes occurred in low-decile schools, suggesting that, within this sample, teachers in more economically disadvantaged contexts were somewhat more likely to report minimal digital technology use than those in mid- or high-decile schools. Fully online teaching was comparatively uncommon and was reported only in mid- and high-decile schools. Although this pattern should be interpreted cautiously due to the small number of cases, a range of contextual factors may have influenced the reported teaching modes, including school-level policies, language-specific requirements, and teacher preferences. One further possible explanation is that, within this group of respondents, online delivery was more feasible or more commonly adopted in better-resourced schools. In this sense, the socioeconomic conditions reflected in school decile levels may represent one contributing factor among others (Jesson et al., 2015; Njeri & Taym, 2024).

Table 4.3
Distribution of Teachers by School Decile Level and Teaching Mode

	Class modes			Total
	Class with very limited use of digital technologies	Blended Class with regular digital use	Fully online class	
Count	7	7	0	14

Decile level of schools	Low decile	% within Decile level of schools	50.0%	50.0%	0.0%	100.0%
	Medium decile	Count	5	25	3	33
		% within Decile level of schools	15.2%	75.8%	9.1%	100.0%
	High decile	Count	5	30	2	37
		% within Decile level of schools	13.5%	81.1%	5.4%	100.0%
	Total	Count	17	62	5	84
% within Decile level of schools		20.2%	73.8%	6.0%	100.0%	

Teaching Modes and Language Subjects

Table 4.4 summarises the distribution of teachers across different languages and the three reported teaching modes. Within the sample, te reo Māori showed the highest proportion of classes with very limited digital use, with 41.2% of participating teachers reporting that they relied primarily on classes with minimal use of digital technologies. At the same time, just over half of the teachers (52.9%) reported teaching in blended classes, and a smaller proportion (5.9%) taught fully online, indicating that although low-technology environments were relatively common for te reo Māori in this dataset, digital tools were still present in a notable share of programmes. This pattern may reflect a combination of factors, including curriculum priorities, the availability of appropriate digital materials, and cultural considerations. As an indigenous language, te reo Māori has traditionally placed strong emphasis on oral transmission, relational pedagogy, and face-to-face interaction (Macfarlane et al., 2007), which may shape how digital tools are taken up in teaching.

Some languages—particularly French, ESOL (which sits outside the Learning Languages area), NZSL, and Latin—were taught almost entirely through blended or fully online modes within

this sample, with all participating teachers reporting some form of digital technology use. Because the sample sizes for NZSL, Latin, and ESOL were very small, these observations should be interpreted cautiously. For the larger international languages in the dataset, such as Spanish, Japanese, Chinese, and German, blended teaching was the most frequently reported mode, ranging from 66.7% among Spanish teachers to 84.6% among Chinese teachers. Fully online teaching appeared in only a minority of cases (7.7%–14.3%), while classes with limited use of digital technologies accounted for between 15% and 23% depending on the language. These patterns could reflect a range of contextual factors, including possible differences in the availability or development of digital learning resources across languages.

Table 4.4
Distribution of Teachers by Language Taught and Teaching Mode

Language taught		Three types of class modes			Total
		Class with very limited use of digital technologies	Blended Class with regular digital use	Fully online class	
Te Reo Māori	Count	7	9	1	17
	% within Language taught	41.2%	52.9%	5.9%	100.0%
French	Count	0	14	2	16
	% within Language taught	0.0%	87.5%	12.5%	100.0%
Spanish	Count	3	10	2	15
	% within Language taught	20.0%	66.7%	13.3%	100.0%
Japanese	Count	3	9	1	13
	% within Language taught	23.1%	69.2%	7.7%	100.0%
Chinese	Count	2	11	0	13
	% within Language taught	15.4%	84.6%	0.0%	100.0%
German	Count	1	5	1	7
	% within Language taught	14.3%	71.4%	14.3%	100.0%
	Count	0	2	0	2

	English as a second language	% within Language taught	0.0%	100.0%	0.0%	100.0%
	Samoan	Count	1	1	0	2
		% within Language taught	50.0%	50.0%	0.0%	100.0%
	Other language	Count	0	2	0	2
		% within Language taught	0.0%	100.0%	0.0%	100.0%
	Latin	Count	0	1	0	1
		% within Language taught	0.0%	100.0%	0.0%	100.0%
	New Zealand Sign Language	Count	0	1	0	1
		% within Language taught	0.0%	100.0%	0.0%	100.0%
Total		Count	17	65	7	89
		% within Language taught	19.1%	73.0%	7.9%	100.0%

Teaching Modes and Ages

As shown in Table 4.5, teachers across all three age groups most frequently reported teaching in blended classes with regular digital use. This pattern was especially noticeable among teachers aged over 50 years, more than three quarters of whom taught in blended classrooms. Fully online teaching was less common overall and was reported only among teachers aged 31–50 years and those over 50. The highest proportion of fully online teaching occurred among teachers aged over 50, whereas no teachers aged 30 years or younger reported teaching fully online. In contrast, classes with very limited use of digital technologies were more frequently reported by teachers aged 30 years or younger, representing one third of this age group. The proportion of teachers relying on minimal digital use decreased with age, from 33.3% among teachers aged 30 and under, to 27.9% among those aged 31 to 50, and 12.5% among teachers aged over 50.

The distribution suggests some variation in teaching modes across age groups within this

sample, with older teachers more frequently reporting blended and online teaching modes, and younger teachers more commonly indicating limited digital use. While the survey does not capture the underlying reasons, such patterns may relate to differences in teaching experience, professional development pathways, or institutional expectations. For example, more experienced teachers may have had greater opportunities over time to trial and refine technology-supported approaches, whereas younger teachers may still be navigating curriculum requirements or adapting to school practices that shape their initial teaching routines. However, these observations should be interpreted cautiously, as they reflect only the distribution within this respondent group and may be influenced by contextual and institutional factors not captured in the data.

Table 4.5
Distribution of Teachers by Age Group and Teaching Mode

		Class modes			Total	
		Class with very limited use of digital technologies	Blended Class with regular digital use	Fully online class		
Age groups	30 years old and younger	Count	2	4	0	6
		% within Age groups	33.3%	66.7%	0.0%	100.0%
	31-50 years old	Count	12	29	2	43
		% within Age groups	27.9%	67.4%	4.7%	100.0%
	Over 50 years old	Count	3	32	5	40
		% within Age groups	7.5%	80.0%	12.5%	100.0%
Total	Count	17	65	7	89	
	% within Age groups	19.1%	73.0%	7.9%	100.0%	

Teaching Modes and Teaching Experience

The distribution of teaching modes across different levels of teaching experience shows some variation in how teachers incorporate digital technologies into their language teaching. As

shown in Table 4.6, blended classes with regular digital use were the most commonly reported mode across all three experience groups. This mode accounted for 63.6% of teachers with ten years or less experience, 72.7% of those with 11–20 years of experience, and 81.8% of those with more than 20 years in the profession. In contrast, classes with very limited use of digital technologies were more frequently reported by teachers with fewer years of experience. Among teachers with ten years or less experience, 27.3% indicated minimal digital use, compared with 18.2% of teachers with 11–20 years and 9.1% of those with more than 20 years of experience. Fully online teaching was uncommon overall but was reported across all experience groups, ranging from 9.1% to 18.2%. Taken together, these patterns describe a gradual shift in the distribution of teaching modes across experience levels within this sample. Teachers with more years of experience were more often represented in blended teaching, whereas minimal digital use appeared more frequently among those with fewer years of experience.

Table 4.6
Distribution of Teachers by Teaching Experience and Teaching Mode

		Teaching modes			Total	
		Class with very limited use of digital technologies	Blended class with regular digital use	Fully online class		
Years of teaching experience	10 years and less	Count	9	31	2	42
		% within Years of teaching experience	21.4%	73.8%	4.8%	100.0%
	11-20 years	Count	6	16	3	25
		% within Years of teaching experience	24.0%	64.0%	12.0%	100.0%
	Over 20 years	Count	2	18	2	22
		% within Years of teaching experience	9.1%	81.8%	9.1%	100.0%

Total	Count	17	65	7	89
	% within Years of teaching experience	19.1%	73.0%	7.9%	100.0%

Overall, the analysis across the four demographic variables (school decile levels, language subjects, teacher age, and teaching experience) showed several consistent patterns in the use of digital technologies in language teaching. Blended classes with regular digital use were the most commonly reported mode across all groups, suggesting that, within this sample, technology-supported instruction had become a routine aspect of teaching across a range of school contexts and teacher profiles. Fully online teaching, by contrast, remained uncommon overall and appeared primarily among teachers working in mid- and high-decile schools, in some language subjects, and among older teachers or those with greater teaching experience. Classes with very limited use of digital technologies appeared in each demographic category but were more prominent in particular contexts. They were reported more frequently in low-decile schools, in te reo Māori classes, among younger teachers, and among those with fewer years of language teaching experience. Although the survey does not capture the reasons behind these patterns, they may reflect a range of contextual factors, such as access to digital resources, subject-specific traditions, or cultural preferences.

4.6.2 Digital Technologies Used in Language Class

This section examines patterns in teachers' reported use of digital technologies in language teaching. It first analyses the types of digital devices (hardware) used in language classrooms, before presenting findings on the software, applications, and online tools employed for teaching purposes. These technologies are categorised by their frequency of use and discussed in relation to the teaching activities they support.

Digital Devices Used in Language Classes

Table 4.7 presents the distribution of digital devices used in language teaching, illustrating teachers' preferences for different types of technology in their classrooms. These devices include not only those directly used by teachers but also those permitted for student use under teachers' guidance. The survey did not distinguish between school-provided and student-owned devices (e.g., BYOD arrangements), although all participating teachers indicated that their students had access to 'one student per device' in their classrooms. The table categorises devices based on how commonly they are used, ranging from the most frequently chosen tools to those that are least integrated into instruction.

Table 4.7
Digital Devices Used in Language Class

Devices	Total	Most commonly used	2 nd choice	3 rd choice	4 th choice	Least commonly used
Laptops	80	75.0%	12.5%	3.8%	6.3%	2.5%
Other devices	80	10.0%	2.5%	2.5%	7.5%	77.5%
Personal computers	80	6.3%	23.8%	30.0%	28.8%	11.3%
Tablets	80	6.3%	22.5%	36.3%	28.8%	6.3%
Smartphones	80	2.5%	38.8%	27.5%	28.8%	2.5%

Laptops were identified as the dominant digital device, with an overwhelming 75.0% of teachers selecting them as their most commonly used tool. This widespread use is likely influenced by practical factors, as most teachers are provided with laptops by their schools. In addition, very few teachers place laptops in lower preference categories, reinforcing their position as the primary device for digital-assisted instruction. While laptops dominate, **personal computers and tablets** appear to serve as important secondary devices. In this survey, 'personal computer' referred specifically to desktop computers, whereas 'laptop' referred to

portable notebook devices. Although only 6.3% of teachers reported using either as their primary tool, personal computers (23.8%) and tablets (22.5%) are frequently ranked as the second choice, with even higher percentages placing them in the third (30% and 36.3%, respectively) and fourth (28.8% each) positions. This suggests that while these devices are not the first choice for most teachers, they remain widely incorporated as supporting tools in language instruction.

Smartphones displayed a distinct usage pattern. While only 2.5% of teachers selected them as their most commonly used device, 38.8% ranked them as their second choice, making smartphones the most frequently selected secondary device in the distribution. This indicates that although smartphones are rarely used as the primary tool for instruction, they are incorporated in various supporting ways by a substantial proportion of teachers. The survey data do not specify how smartphones are used in practice, but the ranking patterns suggest that they occupy a supplementary role rather than serving as the main device for digital-supported language teaching. Moreover, ‘other devices’ received the lowest preference, with 77.5% of teachers ranking them as the least commonly used tool. The open-ended responses provide additional detail about what teachers included in this category. The most frequently mentioned device was Chromebooks, which appeared eight times across responses. Other items, each mentioned only once, included iPads, desktop computers, a school-loaned netbook, paper and pen, and access to a computer room.

Digital Technologies Used in Language Classes

To provide a clearer picture of how digital technologies were integrated into language class, this survey examined 12 types of digital tools. It investigated not only how frequently these tools were used (as shown in Table 4.8), but also the roles they played in different aspects of language teaching, drawing on teachers’ qualitative descriptions of their specific applications

(see Figure 4.6, Figure 4.7, Figure 4.8 and Figure 4.9). After selecting the technologies they used, teachers were asked to indicate how frequently they employed them for four predefined teaching activities: designing and presenting course content or sharing learning materials, improving students' language performance, supporting language skills practice, and enabling self-paced learning. Beyond these structured categories, teachers were also given the opportunity to elaborate on their use of digital technologies in an open-ended format, allowing them to describe additional ways they incorporated these tools into their teaching. To better analyse these responses, this subsection is organised into four categories based on the frequency of technology use in language teaching: widely used, moderately used, less commonly used, and rarely used technologies. Each part of this subsection presents not only the quantitative data on digital technology use but also teachers' qualitative insights into their practical applications.

Table 4.8
Digital Technologies Used in the Language Class

Digital Technologies Used in the Language Class	N	Percent
Presentation tools (PowerPoint, Google Slide, Prezi)	74	89.2%
Digital language reference tools (e.g. online dictionaries, translation tools or apps)	66	79.5%
Online video resources or platforms (e.g. YouTube, Vimeo, TED Talks)	66	79.5%
Document processors (e.g. Microsoft Office suite, Google Docs)	62	74.7%
Learning management systems (e.g. Moodle, Blackboard, Google Classroom, Canvas)	62	74.7%
Email	57	68.7%
Online games (e.g. Minecraft, Lord of the Rings, World of Warcraft, Second Life, Duolingo, Kahoot)	57	68.7%
Videoconferencing (e.g. Skype, Zoom)	49	59.0%
Blogs, wikis or websites	39	47.0%
Others	36	43.4%
Online audio resources or platforms (podcasts, radio, audiobook, Spotify, iTunes)	27	32.5%
Social networking tools (e.g. Facebook, Twitter, Instagram, Google Groups, WhatsApp)	12	14.5%

Extended reality (e.g. 3D virtual reality, augmented reality, mixed reality)	3	3.6%
Total	83	100.0%

Figure 4.6

Digital Technologies used for Designing and Presenting the Course Content or Uploading Learning Resources

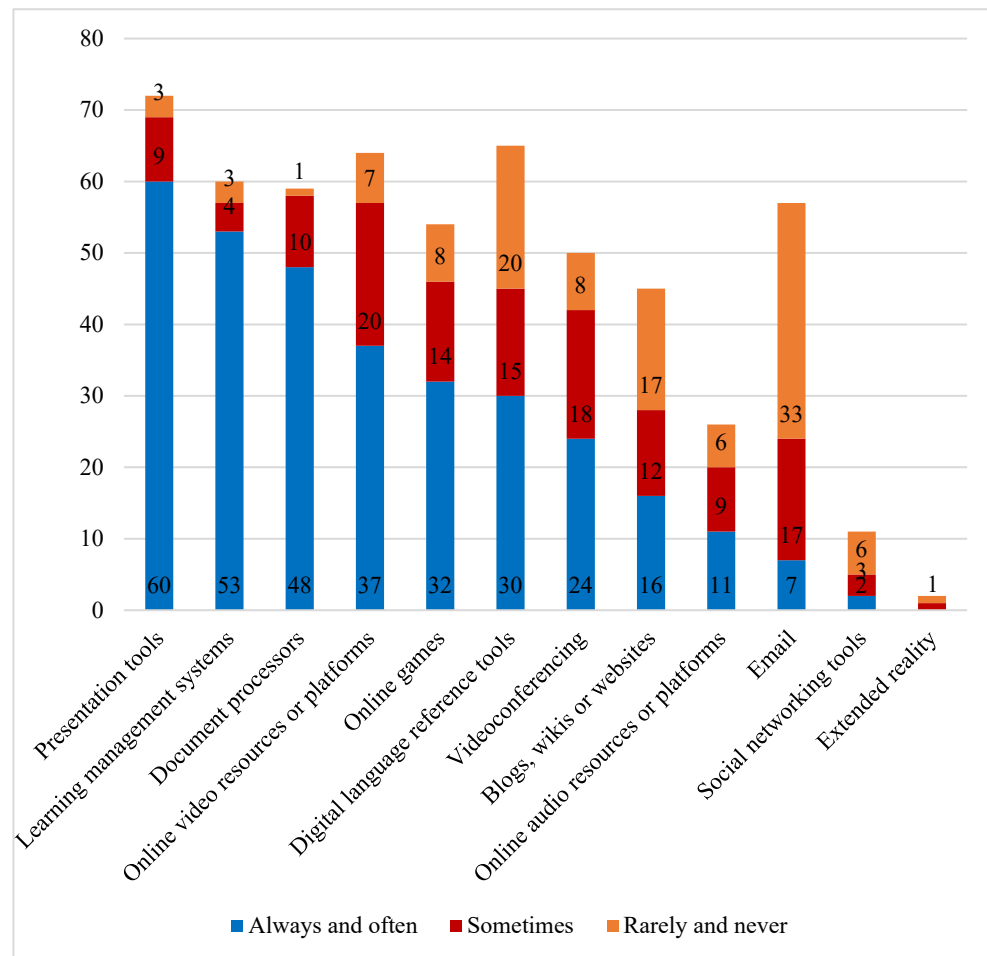


Figure 4.7

Digital Technologies Teachers Have Students Use for Improving Their Language Performance

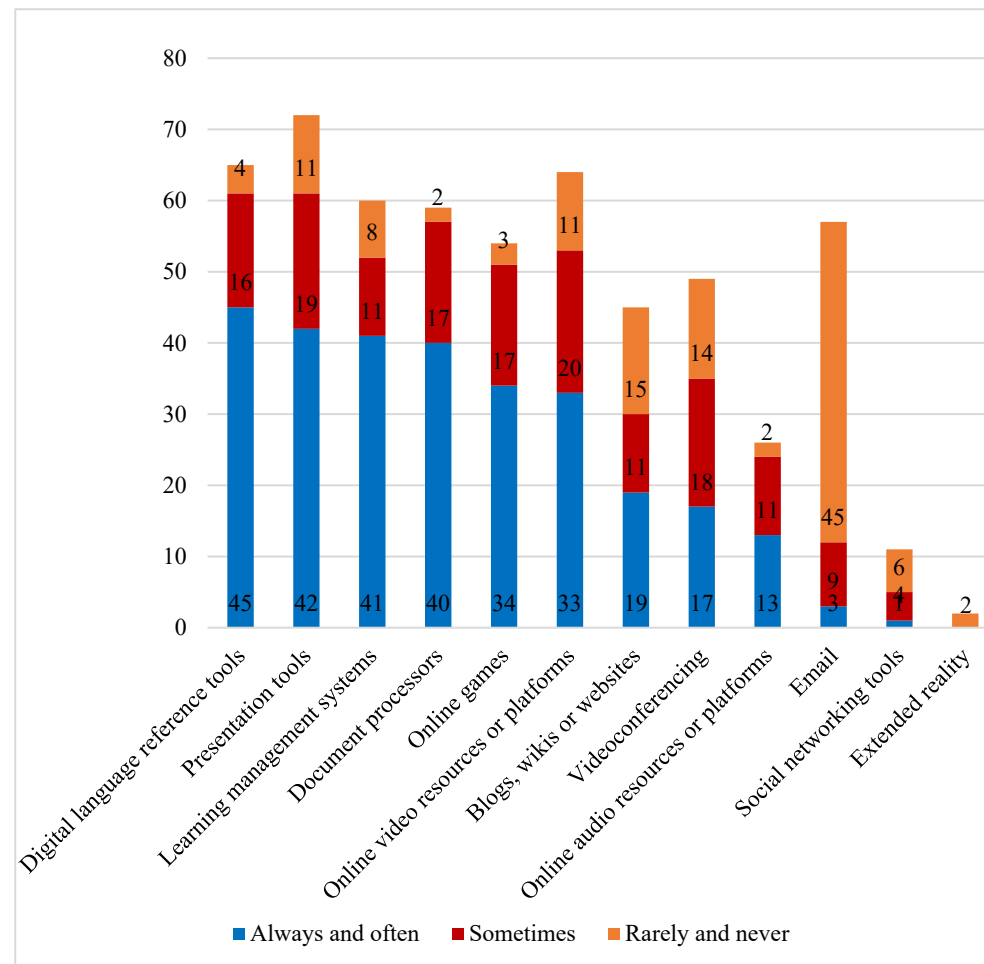


Figure 4.8

Teachers Encourage Students to Use Digital Technologies to Practice Their Language Skills

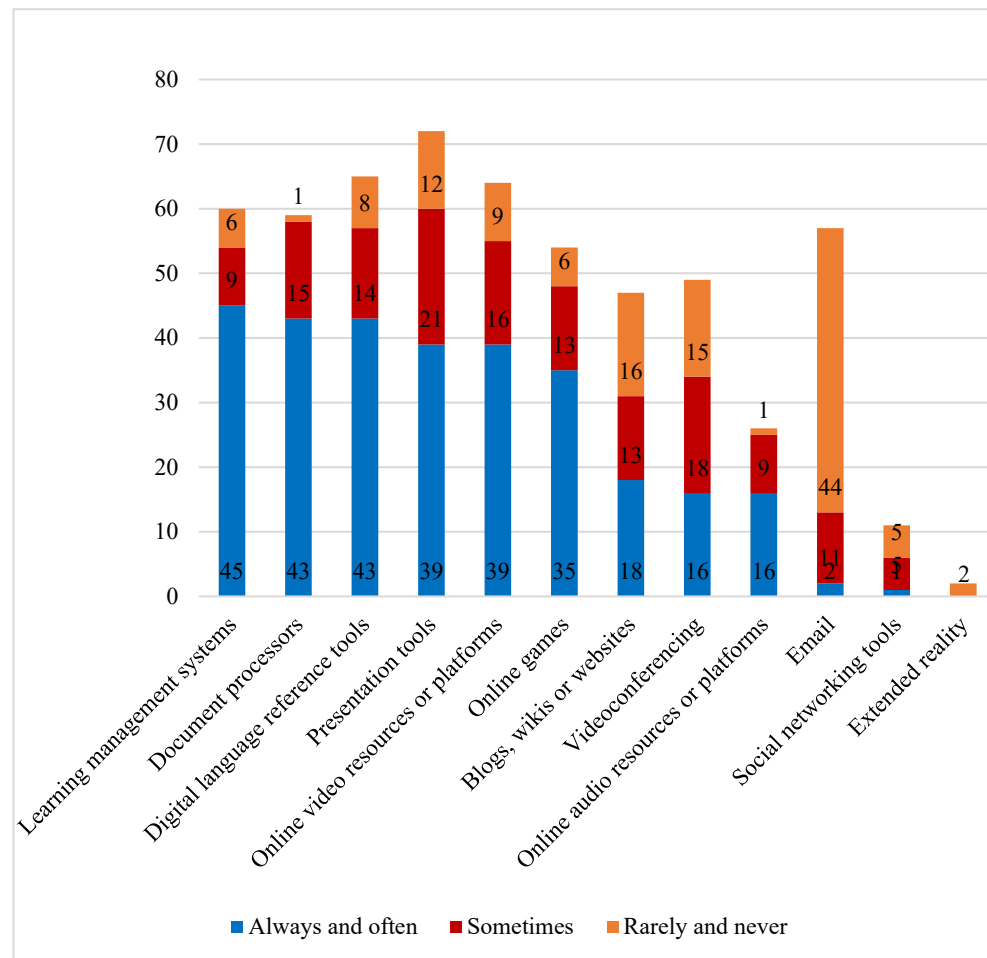
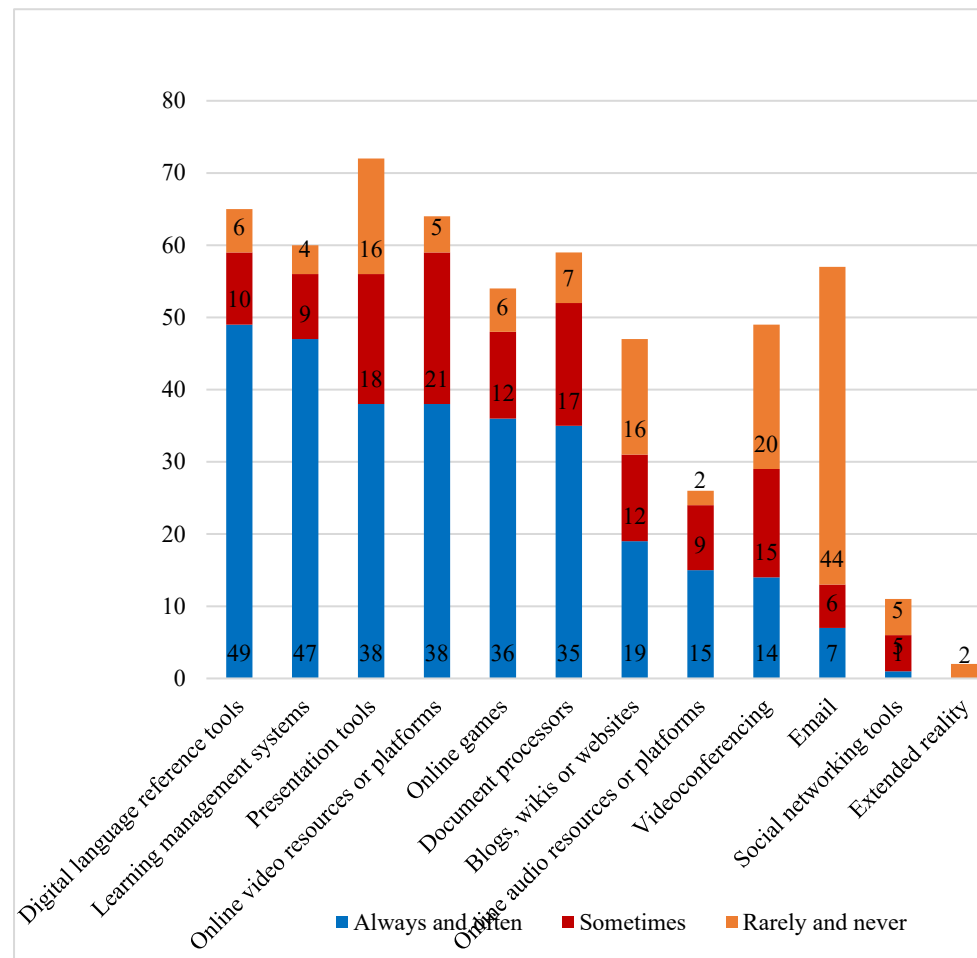


Figure 4.9

Teachers Encourage Students to Use Digital Technologies to Learn at Their Own Pace



(1) Widely Used Technologies

Presentation tools are the most commonly used digital technologies, with 89.2% of respondents incorporating them into their teaching. Similarly, digital language reference tools and online video resources are highly popular, with 79.5% of respondents using them. These tools are favoured for their ability to facilitate content delivery, provide rich multimedia resources, and enhance students' independent language exploration.

Presentation Tools

As shown in Table 4.8, presentation tools such as PowerPoint, Google Slides, and Prezi are widely used in language teaching, with 89.2% of participants reporting that they frequently incorporate them into language teaching. Figure 4.6 and teachers' qualitative responses indicated these tools were primarily used to design and deliver course content, particularly for introducing vocabulary, grammar, and cultural topics. For example, teachers reported that presentation tools help visualise new concepts without relying on English (Participant 41) and are useful for highlighting cultural elements like festivals and food (Participant 22). By engaging with culturally relevant content, students are not only exposed to linguistic structures but also gain insights into cultural practices, reinforcing aspects of ICC.

In addition to teacher-led instruction, some participants described using presentation tools to encourage student participation. Several teachers reported that students use them for developing writing, research skills and oral presentation, such as preparing visual-aided speeches with only the assistance of images and subheadings (Participant 26) or creating shared slides as collaborative class resources (Participant 56). A few teachers also mentioned combining use of presentation tools as recording tools to create tutorials or capture lessons for review (Participant 65). Some participants further noted that presentation tools support differentiation and flipped learning (Participant 11), reflecting their perceived versatility in both teacher-driven and student-centred learning.

Digital Language Reference Tools

Table 4.8 illustrates that digital language reference tools, such as online dictionaries, were widely used in language teaching, 79.5% of teachers reporting their use. As reflected in Figure 4.7 and Figure 4.8, for improving students' language performance and language skills, digital language reference tools are widely used by language teachers. Also, Figure 4.9 presented that digital language reference tools were the most widely used tools for fostering self-paced learning. As shown in teachers' qualitative responses, they valued these tools for promoting student independence and supporting language skills, particularly for vocabulary expansion (Participant 28), pronunciation practice (Participant 40), and providing pronunciation guides for large classes (Participant 56). Some participants reported using these tools for writing exercises and assessments (Participant 38) or listening activities (Participant 49). One teacher highlighted their frequent use, stating, "I use wordreference.com daily for myself but also encourage my students to use it, or similar programs, to improve their independence in their language learning" (Participant 35). By encouraging students to independently explore vocabulary and pronunciation, these tools contribute to linguistic competence, an essential component of Communicative Competence. Despite their benefits, teachers made clear distinctions between digital dictionaries and translation tools. While dictionaries were often seen as a means of fostering active language exploration, translation tools were viewed with more caution. Some teachers worried that overreliance on translation apps could hinder deeper language understanding. For example, Participant 40 strongly discouraged their use, stating, "Using Google Translate is cheating. I actively discourage its use." Others adopted a moderated approach, allowing students to use translation tools for checking work after peer assessments (Participant 56) rather than for direct translation.

Online Video Resources

Online video resources (e.g., YouTube, Vimeo, TED Talks) were frequently used by teachers to provide students with access to authentic cultural and linguistic content. Some teachers highlighted these tools as a way for students to be immersed in the living target culture (Participant 22) and to expose them to natural language patterns and cultural contexts through content such as dramas and anime (Participant 18). By

engaging with native speakers' interactions and culturally embedded media (e.g., dramas, anime, and films produced within the target language community), students have opportunities to develop both linguistic and sociolinguistic competence. These resources were also valued for supporting self-paced learning. Teachers noted the usefulness of “rewindable learning” where self-produced videos explaining grammar points allow students to review content at their own pace (Participant 42). This flexibility enables learners to engage with linguistic input multiple times, supporting comprehension and listening competence. Additionally, teachers curated playlists of educational content that students could access for listening practice, note-taking, or independent revision (Participant 56).

(2) Moderately Used Tools

Document processors and learning management systems (LMS) are each used by 74.7% of respondents. Email and online games are also relatively common, with 68.7% adoption rates. These tools are integral for communication, collaboration, content creation, and interactive learning activities.

Document Processors

Document processors, such as Microsoft Office and Google Docs, were widely integrated into language teaching, with 74.7% of teachers reporting that they “always” used them. These tools supported a range of instructional activities, allowing teachers to design, present, and facilitate interactive learning. Teachers frequently used document processors for creating course content (Q71) and reported various ways they incorporated these tools into their practice. One of the most commonly mentioned uses was collaborative learning. Teachers valued how platforms like Google Docs enabled students to work together in real-time, both in class and remotely, allowing for peer support and idea sharing (Participants 29, 56). By engaging in joint writing and editing activities, students actively use the target language to communicate ideas, negotiate meaning, and refine their expression, thereby developing their written Communicative Competence.

Another key advantage was immediate feedback. Teachers appreciated the ability to monitor and edit students' work live, providing real-time corrections and suggestions. This not only improved language accuracy but also encouraged active engagement as students refined their work based on teacher input (Participant 35). Portfolio and assessment management was another major application. Teachers reported that students used Google Docs to maintain digital portfolios, making it easier for teachers to review progress and provide feedback (Participant 44). Document processors also facilitated formative assessments, allowing students to revise their work based on teacher suggestions (Participant 22). Additionally, some teachers highlighted their use for language-specific tasks. For instance, students writing in Japanese script encountered challenges with features like Furigana, requiring manual adjustments (Participant 19). Teachers also frequently integrated document processors with other platforms to enhance functionality. Google Docs was used alongside Google Classroom for resource sharing, while Microsoft Word was paired with Teams and OneNote for communication and speech practice.

Learning Management Systems

As illustrated in Table 4.8, LMS platforms such as Google Classroom, Microsoft Teams, and Education Perfect were widely used by language teachers, with 74.7% of respondents indicating that they “always” use them. Figure 4.8 further illustrates that LMSs were commonly employed to support self-paced learning. Teachers reported in their qualitative responses that they primarily used LMSs to centralise course content, manage assignments, and facilitate self-paced learning. They noted that these platforms helped them organise instructional materials, provide resources, and handle assessments efficiently (Participant 35), making content accessible both inside and outside the classroom. Some teachers also described LMS as supporting independent learning, as students could review resources and complete tasks at their own pace (Participant 18). This was also evidenced by Figure 4.9 where LMS were preferred by teachers for this purpose. Others highlighted its role in reinforcement and extension activities, helping students with differentiated learning needs (Participant 41). Beyond these core uses, teachers reported leveraging LMS for collaboration and communication, using shared workspaces and messaging tools to facilitate group tasks and differentiated

instruction (Participants 26, 47). LMSs were also described as critical during lockdowns, allowing teachers to assign work, share resources, and provide feedback remotely (Participant 45). While some teachers identified challenges such as overlapping platforms and varying levels of familiarity, many still viewed LMS as a valuable tool for managing classroom activities and adapting to diverse learning needs.

Emails

Teachers' responses indicated that email plays a valuable role in communication, personalised learning, and intercultural exchanges, with 68.7% of respondents reporting its use for language teaching. Many teachers emphasised its effectiveness in providing detailed feedback, particularly for explaining grammar and vocabulary mistakes (Participant 3). Some also highlighted its use in intercultural communication, such as pen-pal exchanges, where students correspond with peers in different languages (Participant 56). One teacher described collaborating with a school in France, stating, "students write in French, and their pen pals respond in English," enabling practical language use and cultural exchange (Participant 56). Engaging in written interactions with native or proficient speakers could expose students to different linguistic and cultural norms, potentially fostering awareness of real-world communication styles. Beyond language learning, email was frequently used for administrative tasks and student support, including sending reminders about schedules, deadlines, and assignments (Participants 15, 18). Some teachers noted its role in individualised interaction, providing a private space for students to ask questions or discuss concerns (Participant 25). It was also valued in asynchronous learning environments, helping students stay organised and engaged (Participant 61).

Online Games

Teachers' responses highlight the moderate use of online games in language teaching, with 68.7% of respondents reporting their use, particularly for fostering student engagement and consolidating learning. These games often include gamified elements such as timed quizzes, scoring systems, and collaborative activities, which some teachers found effective in making lessons more interactive and enjoyable (Participants

35, 70). One teacher noted that games like Kahoot, Quizlet, and Booklet “engage students, particularly boys, and help build a deeper understanding of key vocabulary and concepts” (Participant 35). Beyond engagement, teachers reported using online games to support assessment and peer collaboration. Some encouraged students to create their own Kahoot quizzes, helping them identify key unit takeaways (Participant 56), while others valued tools like Quizlet Live for promoting teamwork (Participant 71). Teachers also noted the flexibility of online games in meeting diverse learning needs, with platforms like Wordwall and Duolingo serving as both motivational tools and extension activities (Participants 40, 65, 89).

(3) Less Commonly Used Technologies

Tools such as videoconferencing platforms, blogs, wikis, and websites show moderate adoption, with usage rates of 59.0% and 47.0%, respectively. Other tools, such as online audio platforms, are used less frequently (32.5%), indicating their more limited application in language teaching.

Videoconferencing Tools

Videoconferencing tools, such as Skype and Zoom, were used by 59.0% of teachers, particularly during lockdown periods, to support students and ensure continuity in education. As this data was collected post-pandemic, many teachers emphasised the role of videoconferencing tools during lockdowns. However, some also indicated that they used these tools only during that period, suggesting that videoconferencing was not integrated into their regular teaching practices after in-person learning resumed.

Videoconferencing tools were used to deliver remote lessons, with some teachers indicating that their classes were conducted entirely online. These tools can provide a platform for synchronous instruction, allowing teachers to conduct live lessons, interact with students in real time, and manage virtual classrooms effectively. Teachers also reported videoconferencing helpful for clarifying weekly tasks and providing teaching resources. Others highlighted its role in sustaining relationships and fostering student support in distance learning contexts (Participant 87). Although less commonly

reported, videoconferencing was also used for cultural exchanges, with one teacher setting up virtual collaborations with partner schools in Spanish-speaking countries (Participant 65): “To set up virtual exchange opportunities with schools in Spanish-speaking countries such as the Pacific NZ school in Buenos Aires or La Anunciata in León.” These exchanges may provide students with exposure to different communication styles, sociocultural norms, and authentic language use, which are essential aspects of ICC.

Blogs, Wikis or Websites

Blogs, wikis, and websites were not widely used in language teaching (47.0%), but some teachers reported incorporating them to support cultural learning. They described using these tools to provide access to authentic materials, such as cultural blogs and websites, allowing students to engage with real-world language contexts. As Participant 83 explained, these platforms helped “provide authentic examples of the culture and extend students’ horizons.” Some teachers also reported using them for creative tasks, such as student-generated content like infographics and blog posts (Participants 65, 89). Engaging with authentic digital content can help students develop an awareness of cultural perspectives and language use in different contexts. By interacting with real-world materials, students may enhance their ability to interpret and respond to culturally embedded meanings, which is a key component of ICC. Furthermore, the creation of digital content, such as blogs and infographics, encourages learners to communicate meaningfully for an audience beyond the classroom, supporting the development of Communicative Competence.

Online Audio Resources or Platforms

Online audio resources and platforms, such as podcasts, radio, Spotify, and audiobooks, were reported to be used by 32.5% of respondents, primarily for cultural engagement. Teachers who frequently used these tools highlighted their potential to support self-paced learning and expose students to authentic listening materials. As Participant 35 noted, “Spotify in particular is good to show students French music,” allowing learners to engage with language through cultural content. Others described using songs and lyrics to introduce cultural elements, explore language in context, and improve

pronunciation (Participants 56, 65). In some classrooms, curated playlists encouraged deeper engagement with music and lyrics (Participant 82). While not universally adopted, teachers valued these platforms for integrating language practice with cultural and real-world exposure. Their use of these audio technologies suggested that engaging with authentic audio materials could provide students with opportunities to encounter diverse accents, speech patterns, and cultural references, which might, to some extent, help them develop greater sensitivity to linguistic and cultural nuances in communication.

(4) Rarely Used Technologies

Social networking tools (e.g., Facebook, Twitter, WhatsApp) were used by only 14.5% of the teachers, suggesting that these platforms played a minor role in language teaching for young learners. Only two teachers mentioned using social networking tools for communication, with one stating, “Communicating within our kapahaka roopu [a Māori cultural performance group],” indicating that these tools were used for coordination, interaction, or sharing within a specific cultural or extracurricular setting. Beyond this, there were few other responses related to their use, suggesting that social networking tools were not widely integrated into instructional practices and remained largely supplementary.

Extended reality technologies, such as virtual reality, augmented reality, and mixed reality, were even less commonly used, with only three teachers reporting any application. One teacher (Participant 13) provided a brief example, stating, “We are just about to start using this for ‘trips’ to the target country,” highlighting the potential of extended reality for immersive cultural exploration. However, its adoption remained very limited.

4.7 Effect of the Pandemic on the Teachers’ Perceptions and Practices

Before presenting the findings, it is important to clarify the purpose of this section in relation to the research questions. Although the research questions do not explicitly

focus on the COVID-19 pandemic, the survey included an open-ended item inviting teachers to reflect on whether their perceptions and practices had changed as a result of the 2020–2021 lockdowns. This item was included to acknowledge the pandemic as a significant contextual factor underpinning teachers’ professional experiences at the time of data collection.

The responses revealed diverse perspectives regarding the effect of the pandemic on teachers’ perceptions and practices of technology integration. A large proportion of participants (over 40 teachers) reported that lockdowns led to a marked increase in their use of digital tools and significantly reshaped their views on technology-supported language teaching. Many described gaining confidence, improving organisational systems, and developing new digital skills. For example, one teacher reflected, “Previously I didn’t think I could teach remotely! But I have learnt, using Microsoft Teams to present lessons and OneNote to set work” (Participant 17). Others noted that the experience strengthened their digital capability and encouraged them to digitise materials or explore new platforms, as illustrated by Participant 66: “Yes, I have used them a lot more and they have been very useful, as I now know a lot about how to use Teams etc. I feel more confident and know more resources.” Similar reflections came from teachers who reported becoming more organised and learning to use Zoom or Google Meets effectively (e.g., Participant 89).

Alongside these changes, approximately 18 teachers indicated that they had developed a more balanced or selective approach to digital technology use following the pandemic. These teachers emphasised combining digital tools with face-to-face activities to maintain variety and support student engagement. As Participant 71 explained, “I always did like digital technologies and think that alongside other traditional learning methods they are fantastic.” They described integrating devices with hands-on activities such as using pen and paper, mini whiteboards, and movement-based tasks to maintain variety and engagement. Others discovered interactive platforms that helped increase student engagement. One participant shared, “I have discovered interactive apps ... They make the learning so much more fun!” (Participant 22).

At the same time, 20 teachers expressed concerns about the limitations of digital technologies, particularly regarding interaction, spontaneity, and the relational aspects of language learning. These participants emphasised that while digital tools were useful, they could not fully replicate the immediacy and social dynamics of in-person communication. As Participant 35 noted, “Online teaching limits opportunities for role play, group work, and conversation practice... learning languages is a sociable experience.” Similar views were echoed by those who felt that key classroom activities were “better without technology and in a real classroom situation” (Participant 67) or who stressed the irreplaceable value of face-to-face interaction (e.g., Participant 42). Several teachers also highlighted challenges related to sustaining student motivation or engagement on digital platforms, with one explaining, “I had resources, and I had skills, but the students just weren’t engaging with me there” (Participant 88).

Finally, a smaller subset of 12 teachers reported little or no change in their perceptions or practices. Some explained that they were already confident technology users prior to the pandemic (e.g., Participant 55), while others maintained a preference for low-technology, paper-based teaching routines and viewed digital tools as supplementary. As Participant 28 remarked, “Digital technologies are a good complement, but not a replacement in my classes... I still use a lot the pen and paper.” Together, these patterns show that while the pandemic accelerated digital uptake for many teachers, the degree and direction of change varied considerably, reflecting differing pedagogical beliefs, prior experience, and classroom contexts.

4.8 Chapter Summary

This chapter presented key findings from the online survey, which examined language teachers’ perceptions and reported practices regarding the integration of digital technologies to support Communicative Competence. The results revealed considerable variation in the importance teachers attributed to different components, with linguistic competence most frequently emphasised and authentic intercultural interaction or digital competence often positioned as secondary. Although many teachers expressed

confidence and interest in using digital tools, their views on the pedagogical value of technology, particularly for fostering interaction, remained mixed. Furthermore, the descriptive data also indicated patterns across the four demographic groups, including school decile levels, languages taught, teacher age, and teaching experience. Blended classes with regular digital use were identified as the most commonly reported teaching mode, whereas fully online teaching was relatively rare. Classes with very limited digital use were reported across all demographic categories but were more prominent in specific contexts, particularly low-decile schools, te reo Māori programmes, younger teachers, and those with fewer years of language teaching experience. Teachers predominantly used digital technologies for content delivery and structured practice, whereas more interactive or emergent forms of engagement were less commonly reported. In addition, reflections on the COVID-19 pandemic provided contextual insight into the conditions in which teachers' perceptions and practices were formed. While many noted increased exposure to digital tools during lockdowns, others emphasised the continued importance of face-to-face interaction for language learning.

Chapter 5: Case Study One

5.1 Introduction

This chapter presents the findings from Case Study One, which investigates the integration of digital technologies in a New Zealand Sign Language (NZSL) classroom. It begins by providing contextual information about the case, including the learning environment, participants, and class structure. The subsequent sections are structured to address the research questions by examining the teacher's teaching objectives, perceptions, and practices regarding digital technology use in language teaching. The first section explores the teacher's objectives in developing students' communicative competencies. The next section investigates the teacher's perceptions of digital technology, focusing on both its perceived potential and the challenges associated with its integration. This is followed by an in-depth analysis of the teacher's actual classroom practices, allowing for a comparison between perceptions and observed behaviours to identify alignments and discrepancies. To provide a comprehensive perspective, the final section presents students' experiences and perceptions of digital technologies in language learning. It explores how students engage with digital tools, their perceived benefits, and the challenges they encounter. These student perspectives are then compared with the teacher's views to highlight commonalities and divergences in their experiences of technology-supported language learning. By bringing together these different perspectives, this chapter offers a detailed examination of the role of digital technologies in NZSL teaching, providing insights into how technology is perceived, implemented, and experienced in this learning context.

Table 5.1 and Table 5.2 show the pseudonyms for the teachers and students in this case and types of data collected, along with their relevance for the research questions. Unless otherwise specified, all data excerpts presented in this chapter (and in the following two case study findings chapters) are drawn from the respective case being discussed.

Table 5.1
Teachers and Students' Pseudonyms in Case Study One

Teachers and students	Pseudonyms
Language teacher	Lisa
Classroom teacher	Olivia
Student 1	Noah
Student 2	Leo
Student 3	Jack
Student 4	George

Table 5.2
Correspondence Between Data Sources and Research Questions in Case Study One

Data sources	Research question(s) to address
CS1, lesson plan one	RQ1&3
CS1, lesson plan two	
CS1, lesson plan three	
CS1, classroom observation one	RQ3
CS1, classroom observation two	
CS1, classroom observation three	
CS1, interview with Lisa	RQ1& 2
CS1, focus group with students	RQ4

5.2 Context of Case Study One

This case study examines a NZSL class. NZSL is the primary language of the deaf community in Aotearoa New Zealand and has been recognised as one of the country's official languages since 2006, as mentioned in Section 2.2.1. As a visual-gestural language, it includes a two-handed manual alphabet for fingerspelling and has developed linguistic features shaped by the nation's social, cultural, and geographical context (Kennedy et al., 1997; McKee & Manning, 2015). In addition to its visual-gestural modality, NZSL also possesses distinctive discourse features. Unlike spoken languages, which rely on a linear vocal-auditory channel, NZSL is organised through the use of three-dimensional signing space, enabling signers to encode referents, relationships, and event structures spatially (Sandler & Lillo-Martin, 2006). Discourse coherence is frequently maintained through spatial indexing, role shift, and the use of constructed action and constructed dialogue, where signers visually represent the actions, thoughts, and perspectives of different characters (Fox et al., 2025; McKee, 2015). These multi-channel and simultaneous features mean that much of NZSL discourse is conveyed through combinations of handshapes, movement, orientation,

and non-manual signals such as facial expression and body posture.

These characteristics have important implications for language teaching. Because discourse in NZSL relies heavily on visual–spatial resources, students must attend to multiple layers of information simultaneously, and teachers must model these features clearly and accurately (Ngubane & Adigun, 2024). Digital technologies, particularly cameras, video platforms, and learning management systems, may not always capture these nuances effectively (Farooq et al., 2021), which in turn shapes how discourse competence can be taught and practised in classroom settings. Providing this background helps situate the findings of this case study and clarifies why NZSL presents unique opportunities and challenges compared with spoken languages.

The NZSL class investigated in this study was a fully online Level One programme delivered by a national deaf education organisation as part of the language curriculum at a public high school in Auckland. The school, rated decile 9, is considered one of the top public schools in Aotearoa New Zealand. The deaf education organisation serves as a resource centre for outreach students, referring to deaf and hard-of-hearing students who do not attend a specialised deaf school but instead receive support within mainstream educational settings. This organisation offers language teaching services and additional support to help students develop communication skills in both academic and everyday contexts.

This language programme consisted of two to three hours of live tutorials per week, delivered remotely by the NZSL teacher (pseudonym Lisa), together with up to one hour of supervised self-directed study at the students' local school. The on-site staff member (pseudonym Olivia) did not provide language instruction but supported students with access, organisation, and task completion as part of the fully online teaching arrangement. The online tutorials were delivered via Zoom, with the four students participating on individual laptops in a classroom. Olivia also joined the Zoom session and projected her screen onto a TV for whole-group viewing. Her laptop camera remained on as a backup visual channel to ensure that the teacher could maintain visual

oversight in the event that individual student devices failed.

This case study was distinctive not only because of NZSL's visual-spatial linguistic characteristics but also due to its mode of delivery. Unlike the Chinese and te reo Māori classes examined in the subsequent case studies, where teachers made deliberate decisions about when and how to integrate digital tools into face-to-face settings, the NZSL class relied entirely on digital technology. The teacher and students were located in different regions, making online delivery the only feasible format. As a result, digital technology functioned not as an optional pedagogical addition but as the essential medium through which teaching, interaction, and NZSL modelling occurred. This positions the NZSL case as extending beyond questions of integration, illustrating how technology can shift from being a supplementary tool to becoming the core modality of language teaching and learning.

This NZSL class involved four hearing students (pseudonyms: Noah, Leo, Jack, and George), all learning NZSL as a second language to meet their school's compulsory language learning requirement for Years 9 and 10. Their motivations for choosing NZSL varied. For instance, Jack had a family member who had learned sign language, while others considered NZSL to be a more accessible and engaging option compared to other available language courses. The teacher, Lisa, had extensive experience in deaf education and NZSL instruction, with roles spanning classroom teaching, curriculum development, and professional support within the national deaf education network over the previous decade. NZSL was her first and preferred language, though she also communicated fluently in spoken English and had adequate listening ability. Trained in Aotearoa New Zealand, and with a background in both special and language education, Lisa brought to the classroom a deep understanding of bilingual and multimodal pedagogy. As this study focuses on language teachers' perspectives and practices, and Olivia's role was primarily limited to classroom management rather than language instruction, the following analysis centres exclusively on Lisa's contributions.

5.3 Teacher's Objectives in Developing Students' Communicative Competencies

This section examines the importance Lisa places on these competencies in her teaching, drawing on interview data and supporting evidence from three lesson plans that reflect her stated teaching intentions and planned teaching activities.

5.3.1 Linguistic Competence

Lisa's views on linguistic competence in her sign language teaching reflect her strong emphasis on vocabulary acquisition and a flexible stance on grammar in the context of sign language. These emphases are evident in her interview responses and reinforced through her lesson plans, which highlight her teaching focus on vocabulary accuracy, the role of HOLM (handshape, orientation, location, and movement), and a pragmatic approach to grammar.

Lisa placed great emphasis on vocabulary development, stating that mastering vocabulary is even more critical than grammar in sign language learning. She underscored the importance of HOLM, explaining that each sign has a specific configuration of handshape, orientation, location, and movement. Errors in any of these elements could lead to misunderstandings or complete communication breakdowns. She illustrated this by providing examples of minimal pairs in sign language, such as "meat" versus "white" and "feed" versus "eat," where a minor difference in hand positioning could change the entire meaning of an utterance:

Every sign has a specific HOLM. If you have your hands shaping like this [raises index finger], depending on the location, it can be a completely different sign. [...] It's really important, really important, because if you don't get it right, someone else might interpret a completely different word and won't understand. (Interview with Lisa)

This perspective is strongly reflected in her lesson plans, which dedicate substantial attention to vocabulary instruction. Across multiple lessons, she planned activities explicitly targeting vocabulary acquisition, such as:

Reviewing and introducing new vocabulary items (Lesson Plan One,

two, three).

Teaching frequency-related vocabulary (Lesson Plan Two).

Expanding food-related vocabulary (Lesson Plan Two and Three).

Incorporating digital tools like PowerPoint and Nearpod to facilitate vocabulary learning (Lesson Plan Three).

In addition, Lisa structured her lessons with explicit success criteria related to vocabulary mastery, such as students being able to spontaneously invite someone to an event using NZSL vocabulary (Lesson Plan One) or correctly identifying and describing food items using sign language (Lesson Plan Two). These plans reinforce her interview statements, demonstrating that vocabulary development is central to her instructional approach.

While vocabulary was central to her teaching, Lisa approached grammar with a more flexible perspective. She recognised the importance of grammatical competence but regarded it as secondary to vocabulary in second language acquisition. In her interview, she described grammar as a differentiating factor between basic and proficient users rather than a strict requirement for communication:

Grammar is not a pass or fail factor, unlike vocabulary. If you can be understood, even if the grammar isn't perfect, that's acceptable. (Interview with Lisa)

However, she also recognised that students aiming for higher proficiency need to develop grammatical accuracy, particularly in WH-questions, facial expressions, and non-manual grammatical markers:

Grammar in sign language is different. In English, it's 'What is your name?' but in sign language, it's 'Your name what'. The grammar is different for WH questions. Eyebrows, facial expressions, and even simple gestures like nodding or negation change the whole meaning of a sentence. (Interview with Lisa)

This perspective is reflected in her lesson plans, where she included explicit teaching

of grammar related to:

Using NZSL grammatical structures correctly when signing email addresses and phone numbers (Lesson Plan One).

Practicing sentence structures within conversation exercises (Lesson Plan One).

Introducing grammar within communicative tasks rather than isolated drills (Lesson Plan Two and Three).

Lisa's pragmatic stance on grammar aligns with her primary goal of ensuring communicative effectiveness. While she integrated grammar instruction into her lessons, it was not emphasised as heavily as vocabulary.

5.3.2 Discourse Competence

Lisa's approach to linguistic competence placed visible emphasis on vocabulary learning and functional communication; however, discourse competence, particularly cohesion and coherence between utterances, was not foregrounded as an explicit teaching focus. While Lisa did not explicitly comment on discourse-level instruction, this interpretation represents an analytical effort to understand her practice in light of the linguistic nature of NZSL. In real NZSL communication contexts, discourse operates through spatial and visual structuring rather than through the linear sequencing and explicit discourse markers commonly associated with spoken and written language communication (Fox et al., 2025). As a visual–gestural language without a written form, NZSL achieves coherence through strategies such as spatial indexing, body orientation, eye gaze, and facial expression, which guide topic development and reference tracking (Farooq et al., 2021). Instead of linking ideas through conjunctions or formal cohesive devices, meaning progresses through the semantic development of ideas and the positioning and reactivation of referents within the signing space. In this sense, vocabulary and grammatical choices carry significant discourse functions, enabling signers to maintain communicative flow through interaction rather than through structurally planned discourse organisation.

Against this backdrop, Lisa's emphasis on foundational vocabulary and functional language tasks may reflect a pedagogical view that beginner learners require sufficient lexical and structural resources before engaging in more complex forms of discourse organisation. Lesson activities created opportunities for multi-utterance production, such as extending an interaction for over a minute (Lesson Plan One) or describing daily routines and simple recipes (Lesson Plans Two and Three). Yet there was little evidence of explicit instruction on how ideas might be linked across utterances beyond sustaining communicative interaction. These tasks primarily focused on generating content and functional communication, rather than explicitly developing skills for maintaining coherence between utterances. From this perspective, the limited explicit focus on cohesion and coherence should not simply be interpreted as a pedagogical gap but rather as a reflection of how discourse competence is conceptualised and developed in a visual-gestural language classroom, particularly at early stages of learning.

5.3.3 Strategic Competence

Lisa's lesson plans and classroom practices explicitly addressed compensatory strategies, particularly when students faced lexical gaps. In one lesson, she dedicated a substantial portion of class time to teaching three techniques for describing food items when they lacked the necessary vocabulary, reinforcing this learning through practice activities where students applied these strategies (Lesson Plan Three). This suggests that she recognised the importance of circumlocution and adaptation in NZSL communication, helping students describe, clarify, or negotiate meaning when encountering gaps in their vocabulary. While not a central focus, Lisa's teaching still provided structured opportunities for students to develop compensatory strategies in practical contexts.

5.3.4 Intercultural Communicative Competence

Lisa placed strong emphasis on cultural knowledge, sociolinguistic awareness, and real-world intercultural interactions in her sign language teaching. Her interview responses suggest that she viewed language and culture as inseparable, actively incorporating Deaf cultural knowledge and sociolinguistic norms into her instruction. She strongly

believed that understanding a language without its cultural context is incomplete, explaining:

Culture is very much a big part of the language itself in the community where you use the language. We got a very rich history and active community, and I think we have completely different views and ways with social norms and behaviours. I think it is really helpful if people learn about the culture. In fact, communication is not really possible without both language and culture. You can't get to know a Deaf person just by learning the language, you do have to learn the culture as well. (Interview with Lisa)

Lisa also incorporated cultural comparisons and sociolinguistic insights into her instruction. For example, when teaching food-related topics, she introduced Deaf cultural norms regarding how Deaf people communicate while eating and how to politely interrupt conversations in Deaf social settings (Interview with Lisa). This suggests that she viewed practical cultural knowledge as important for understanding how language is shaped by culture.

Beyond cultural knowledge, Lisa also facilitated cross-cultural communication by encouraging interactions between hearing students and Deaf peers. She attempted to combine some of her classes, allowing hearing students to engage with Deaf students of the same age and language level, providing real-world exposure to Deaf communication norms (Interview with Lisa). She observed that these interactions required adaptation from both groups, describing the process as “meeting each other halfway”. Hearing students, she noted, often had to adjust to the natural fluency and conversational speed of Deaf peers, while also becoming familiar with different cultural perspectives and interaction norms.

5.3.5 Digital Competence

Lisa recognised digital competence as highly important in her sign language teaching. Her interview responses and lesson plans indicate that she actively leveraged digital tools for both structured learning and fostering real-world communication opportunities, particularly by facilitating interactions between her students and Deaf peers through

digital platforms. As outlined in Section 5.2, this strong emphasis on digital competence cannot be understood merely as a pedagogical preference, but rather as a practical necessity shaped by the fully online nature of the class. Because teaching and learning could not have taken place without technological mediation, digital tools served not only as supplementary resources but as the essential medium through which instruction and interaction occurred.

In terms of using digital tools to enhance language learning, Lisa integrated various digital resources into her instruction. Her lesson plans included explicit tasks requiring students to watch instructional videos, complete assignments, and upload recorded interactions on Moodle (Lesson Plan Two). She regularly reminded students to engage with these materials, checking whether they had completed and uploaded their interaction tasks (Lesson Plan Two). This suggests that she saw digital tools as an integral part of the learning process, providing students with opportunities for reinforcement, practice, and feedback beyond live class interactions. In this sense, digital engagement functioned as both a logistical foundation and a pedagogical extension of live teaching.

Beyond class learning, Lisa also used digital platforms to facilitate authentic social interactions in the target language. In her interview, she reflected on the success of students who immersed themselves in NZSL digital spaces, stating that “the more you can interact with people from that target language and use it on a daily basis, the better your language and understanding of the culture” (Interview with Lisa). As noted in her discussion on ICC, she actively encouraged her students to engage with Deaf peers through digital means. She believed that real engagement with Deaf individuals online was essential for meaningful language acquisition. These efforts indicate that she valued online engagement not merely as a tool for class learning and independent practice, but as a bridge to authentic language participation, cultural immersion, and community connection. Such engagement presupposes that students possess sufficient digital competence to navigate these environments confidently and effectively.

5.4 The Teacher's Perceptions and Practices of Using Digital Technologies in Language Teaching

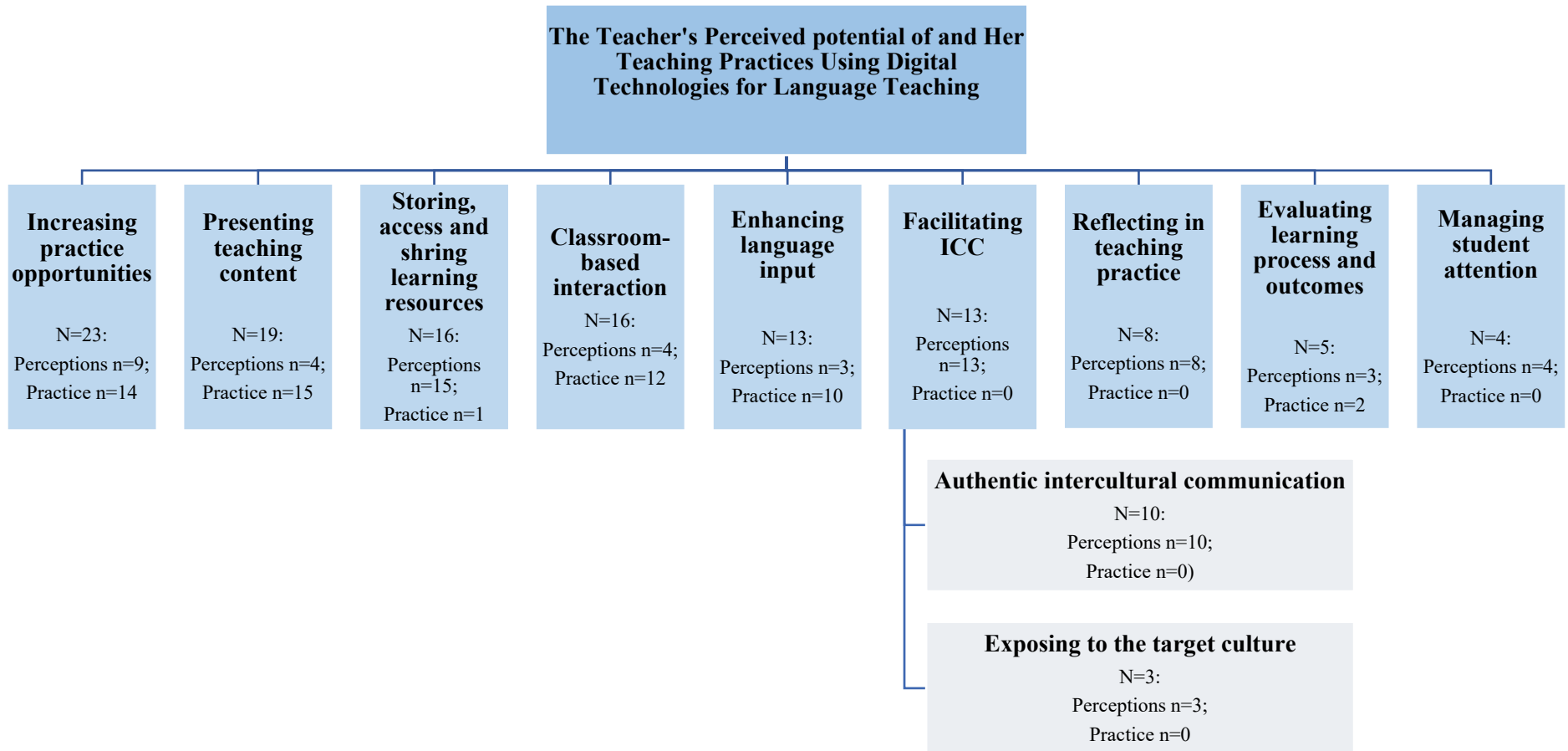
This section examines the teacher's perceptions of digital technologies in language teaching, focusing on both their perceived potential and the challenges associated with their integration. The first subsection explores how the teacher perceives and implements digital tools to enhance various aspects of teaching and learning. The second subsection shifts to the challenges the teacher identifies in adopting digital technologies, categorising them into teacher-related, technical, and student-related challenges. These two subsections also analyse the relationship between the teacher's perceptions and observed classroom practices, examining how she implements the perceived potential of digital tools and responds to the challenges in her teaching. By bringing together these perspectives, this section provides a comprehensive view of the teacher's perceptions and actual experiences in integrating digital technologies into language education.

5.4.1 How the Teacher Sees and Implements the Potential of Digital Technologies in Language Teaching and Learning

This section examines the teacher's perceptions of the potential of digital technologies in language teaching and how these perceptions are enacted in classroom practices. Figure 5.1 provides a thematic breakdown, with frequencies indicating the distribution of coded segments across teacher perceptions and classroom practices. In this section, all figures reporting coded frequencies follow the same format: N refers to the total number of coded excerpts for each theme or subtheme, while n shows how these excerpts were distributed between perception data and teaching practice data.

Figure 5.1

Breakdown of the Theme Concerning the Teacher's Perceived Potential of Using Digital Technologies in Language Teaching in Case Study One



Increasing Practice Opportunities

Lisa's NZSL classes were delivered entirely through Zoom, meaning that all instruction, interaction, and practice necessarily occurred through digital technologies. Within this setting, she used Zoom as the primary environment for teaching vocabulary and grammar. Classroom observations showed that she frequently demonstrated signs on camera while students followed in real time. For example, in one lesson she modelled signs for different foods, and students imitated her movements (Observation Three). She also provided immediate corrective feedback. When a student signed "meat" in a way that resembled "drinking," Lisa asked in sign language whether they meant "milk," and then helped the student refine their signing (Observation Three).

Lisa recognised that digital tools provided students with additional practice opportunities beyond the live sessions. She commented, "I think it's fine if they could only learn the words in class, but if they wanted to really excel, then online resources and technologies allowed them to practise, allowed them to refresh" (Interview with Lisa). The visual nature of NZSL meant that video was seen as an effective medium for capturing movement and facial expression. Lisa noted that Zoom was "a great platform for recording videos of students' work... much better for making videos while you were doing this kind of teaching" (Interview with Lisa).

She also used digital recording tools to support grammar practice. After teaching grammatical structures, she asked students to record their signing exercises using Flipgrid: "I would give them some activities... sometimes during the class, sometimes self-directed; they had to film themselves with Flipgrid" (Interview with Lisa). Lisa further observed that students on Zoom "even forgot they were being recorded," making video capture appear more natural to them (Interview with Lisa). In addition to structured demonstrations and recordings, Lisa incorporated interactive activities to extend signing practice. In one session she asked students, "How do you prepare and cook potatoes?" prompting them to sign cooking processes (Observation Three). She also used guessing and description tasks, where students signed different food items for peers to identify, reinforcing vocabulary use in context (Observation Three).

Digital recordings also supported differentiated learning. Lisa explained that some students were “dyslexic, quite severely dyslexic,” and required greater repetition; recording and reviewing their own signing helped meet these needs (Interview with Lisa). She contrasted this with her previous in-person teaching, noting that these students progressed “much faster” with the integration of digital tools (Interview with Lisa).

Presenting Teaching Content

Lisa recognised the importance of digital tools in presenting teaching content in an online classroom, particularly in structuring lessons and providing accessible learning materials. She viewed PowerPoint as an effective tool to help students anticipate lesson content and understand the overall structure of their learning: “I would like to use PowerPoint with students [...] so they can know what is coming” (Interview with Lisa). Her lesson plans reflected this emphasis, indicating a structured use of PowerPoint to introduce new vocabulary and grammatical concepts, such as “Go through the PowerPoint (Food and Wellbeing) ... Frequency signs ‘How Often’” (Lesson Plan Two).

In practice, Lisa effectively utilised PowerPoint alongside various teaching strategies to enhance student comprehension. For instance, in one lesson, she displayed a slide, circled an image with her cursor, then stopped sharing the screen and asked in sign language, “What was in the picture?” (Observation One). This approach encouraged students to focus on visual information while actively recalling and using new vocabulary. Similarly, she prompted students to describe images in real-time, such as “Jack was then selected to describe an image with friends chatting” (Observation One). Lisa also employed a step-by-step approach to introducing new vocabulary by using presentation tools. When teaching frequency adverbs, she displayed a slide featuring terms like “every (time), always, occasionally, sometimes, once, twice, three times a week, never, and how often” before briefly removing the slide to prompt students to refer to their worksheets (Observation Two). A similar method was applied when

teaching food-related vocabulary, where she systematically presented categories such as breakfast, lunch, and dinner, reinforcing learning through visual images (Observation Three).

Storing, Access, and Sharing Learning Resources

Lisa perceived digital tools as essential for organising, storing, and sharing learning resources in her teaching. She particularly valued Moodle as a centralised platform, describing it as “crucial for online learning, in particular, but I also use it for my face-to-face classes as well” (Interview with Lisa). She emphasised its role in providing students with easy access to course materials, explaining that “students can go and find all of the information that they need, also upload all of their practices” (Interview with Lisa). Additionally, she noted that Moodle supported various integrated tools, such as Nearpod and Flipgrid, allowing her to create interactive lessons without requiring students to switch between multiple platforms (Interview with Lisa). Lisa also highlighted the benefits of cloud-based storage for managing large video files, acknowledging that “one of the biggest challenges for dealing with mass video files is storage on your computer—so if you can keep all your videos stored on the internet, it is better” (Interview with Lisa). She believed that digital storage not only reduced the burden on personal devices but also facilitated resource sharing among teachers. She explained that “a lot of resources I make for teaching, I can quite easily share with the school library, and other teachers can access them, get them, change them for their own classes” (Interview with Lisa). This collaborative approach, in her view, enhanced teaching efficiency and reduced workload (Interview with Lisa).

In addition, Lisa emphasised the importance of minimising multiple logins to make digital platforms more user-friendly. She noted that students disliked managing too many passwords, so integrating tools like Nearpod and Flipgrid into Moodle allowed seamless access with a single login (Interview with Lisa). She highlighted that Nearpod’s integration of Flipgrid enabled students to complete video tasks without switching websites, reducing technical barriers (Interview with Lisa). Additionally, she used automated features, such as embedding Zoom links in the calendar, to simplify access (Interview with Lisa). This approach reflected Lisa’s commitment to reducing

technological obstacles and making digital learning environments more inclusive and efficient.

In her teaching practices, Lisa actively used Moodle to store and share learning materials with her students. During a lesson, she informed students that she would upload the lesson videos to Moodle and encouraged them to review and comment on their recordings (Observation One). This practice aligned with her perception that Moodle serves as a comprehensive learning hub, allowing students to revisit class content when needed.

Classroom-Based Interaction

Lisa regarded communication and interaction as one of the most challenging components of language teaching and assessment, noting that Zoom supported this aspect effectively: “Communication and interaction is [*sic*] one of our hardest things to teach or assess, particularly in level one, but I do find Zoom is really, really helpful because you just spotlight on people, and then start to talk, and that works quite well” (Interview with Lisa). She also indicated, consistent with her earlier comments, that digital platforms enabled a more natural way of capturing student interactions than in-person recordings (Interview with Lisa). Her lesson plans reflected this focus on interaction, as she structured activities that encouraged students to review and engage in conversational tasks: “Go through the interactions and check in if they have done a new interaction and uploaded into Moodle or they are happy with a completed interaction” (Lesson Plan Two).

Lisa’s teaching practices, as observed in the classroom, aligned with her emphasis on fostering natural and spontaneous student interactions. She frequently incorporated peer conversations into her lessons, ensuring that students engaged in unscripted dialogue using newly learned vocabulary: “Lisa randomly divided the students into pairs to have conversations using the vocabularies they had just reviewed without any scripts or prompts” (Observation One). These conversations were often recorded as part of the learning process and final assessment (Observation One). Zoom was observed as a

central tool in facilitating student interactions in the classroom, with Lisa leveraging features such as the spotlight function to enhance engagement in paired conversations. As each pair of students engaged in dialogue, they were spotlighted and shown in the main display area of Zoom, allowing them to focus on their peers without distractions (Observation One). This setup enabled students to sustain eye contact and engage in a manner that closely mimicked face-to-face communication.

Enhancing Language Input

Lisa's perceptions regarding the role of digital technologies in enhancing language input were reflected in her lesson plans and interview responses. She actively integrated digital tools to provide structured exposure to NZSL. In her lesson plans, she introduced specific digital resources, such as the Deaf Wellbeing website, to provide culturally relevant content for students learning NZSL (Lesson Plan Three). During the interview, she elaborated on this approach, stating, "I gave them a grammar video [that] showed them how to do the grammar, gave them some examples" (Interview with Lisa). This indicated her perception that digital videos served as effective tools for illustrating grammatical structures and usage in sign language learning.

Observations of Lisa's classroom practices demonstrated a consistent effort to enhance language input through digital technologies, aligning with her stated perceptions. A key strategy she employed was ensuring the clarity and accessibility of her signing, particularly in online settings. She consistently adjusted her positioning to make her signing gestures more visible (Observation One) and took care to keep her hands within the camera's view (Observation Two). This approach reflected her understanding of the importance of clear visual input in sign language instruction.

In addition to optimising the visibility of her signing, Lisa integrated multiple digital tools to reinforce language input in real time. She frequently used the chat function to provide written reinforcement of newly introduced vocabulary, typing words such as 'butter' and other food-related terms after demonstrating their signs (Observation Two). This practice not only supplemented the visual input but also supported students in

associating sign language with written English. Similarly, she embedded digital materials into her lessons by highlighting PowerPoint slides and recipe videos, encouraging students to engage with structured resources that reinforced vocabulary learning (Observation Three).

Lisa also encouraged students to take advantage of digital learning resources beyond the classroom. She regularly reminded them to watch instructional videos on Moodle, particularly those related to food and health topics, and provided additional website links with more complex recipes (Observation Three). This aligned with her stated perception that videos and other online resources could enhance students' understanding of grammar and vocabulary in NZSL (Interview with Lisa). Furthermore, she actively facilitated independent learning by recommending alternative videos when students encountered difficulties, such as suggesting a kitchen-related video after a student found a restaurant video challenging (Observation Two). This demonstrated her responsiveness to students' learning experiences and her effort to provide adaptive digital support.

Facilitating ICC

As discussed in Section 5.3.4, Lisa regarded ICC as integral to NZSL learning and viewed digital technologies as central to enabling students' engagement with Deaf cultural practices and communities (Interview with Lisa). Beyond providing cultural information, she emphasised the role of digitally supported interaction in supporting authentic intercultural communication, particularly for Deaf learners in mainstream settings who had limited opportunities for face-to-face contact with Deaf peers (Interview with Lisa). Through a combination of online resources and digitally supported interaction, Lisa described encouraging students to explore Deaf social norms, language registers, and modes of participation (Interview with Lisa), as well as to engage in mutual accommodation with peers at similar language levels. She highlighted that such interaction, whether synchronous or asynchronous, allowed learners to adapt to different communicative expectations and to develop confidence and identity as NZSL users within the Deaf community (Interview with Lisa). However, within the three observed lessons, ICC-oriented interactions with digital technologies

were not directly visible, which might suggest that much of this intercultural work was enacted through interactions and learning experiences beyond the classroom teaching.

Reflecting on Teaching Practice

Lisa viewed digital technologies as critical tools for ongoing reflection on her teaching practice, particularly in gathering and analysing student engagement data. She noted that digital platforms such as Nearpod and Moodle enabled her to collect valuable data over time, helping her evaluate which teaching strategies were effective and which needed adjustment (Interview with Lisa). She highlighted that this was a key advantage of online teaching compared to paper-based assessments, as digital tools allowed her to systematically capture student progress (Interview with Lisa).

To gain insights into student engagement and comprehension, Lisa actively used multiple sources of feedback. She mentioned that Nearpod provided formative feedback and engagement metrics, such as students' contributions and task completion rates, while Moodle primarily recorded attendance and frequency of participation (Interview with Lisa). Additionally, she valued student voice in the reflection process, conducting regular surveys to understand students' opinions on learning experiences, their challenges, and how she could better support them (Interview with Lisa). These surveys were typically administered through Moodle forums or Flipgrid, offering students asynchronous opportunities to provide feedback (Interview with Lisa). Lisa's reflective approach was strongly data driven. She described how analysing engagement metrics helped her identify patterns in student learning and adjust her teaching accordingly. She stated, "For a teacher, there are a lot of valuable data that you can capture over time, evidence to show students' progress in learning. This data helps me reflect on practice, which one is working or not working" (Interview with Lisa). She saw this process as integral to her professional development, allowing her to refine her instructional methods based on real-time feedback rather than relying solely on intuition or occasional student comments. Although Lisa's perspectives on using digital tools for reflection were well-documented, there was no direct evidence from classroom observations capturing these reflective practices in action. This suggests that most of her reflection occurred outside of immediate teaching sessions, as part of lesson

planning and post-lesson analysis. Nonetheless, her reliance on digital feedback mechanisms indicated a structured and intentional approach to reflective teaching, demonstrating how technology supported her continuous improvement.

Evaluating Learning Progress and Outcomes

Lisa viewed digital technology as an essential tool for assessing student learning in a way that was integrated into the learning process. She felt that digital platforms facilitated formative assessment, which supported learning as it unfolded rather than relying on a one-off test. In her view, assessment should be a regular and natural part of teaching, allowing her to track students' progress without making them feel pressured (Interview with Lisa). She noted that digital tools enabled her to collect and review student work efficiently. For instance, she used video-based assessments where students recorded their practice and submitted it for feedback. This method allowed her to monitor their development over time and ensure they demonstrated proficiency in key grammatical structures (Interview with Lisa). As Lisa shared, one of her strategies for assessment was using live video feedback. She described how she could play and pause student videos using Vidyard, providing real-time responses and targeted corrections (Interview with Lisa). This approach allowed her to move from explicit instruction to more implicit evaluation, gradually encouraging students to internalise linguistic structures and apply them naturally in their communication. In practice, Lisa implemented video assignments as both formative and summative assessments. Observations showed that she informed students she would upload videos to Moodle, encouraging them to review their own performance and provide peer feedback (Observation One). Additionally, she assigned video production tasks as a final assessment, reinforcing the importance of self-expression and fluency in sign language (Observation Three).

Managing Student Attention

Lisa believed digital technology helped manage student attention, especially in sign language teaching. She used strategies such as spotlighting, chat functions, video activation, and school coordination to maintain engagement and classroom order

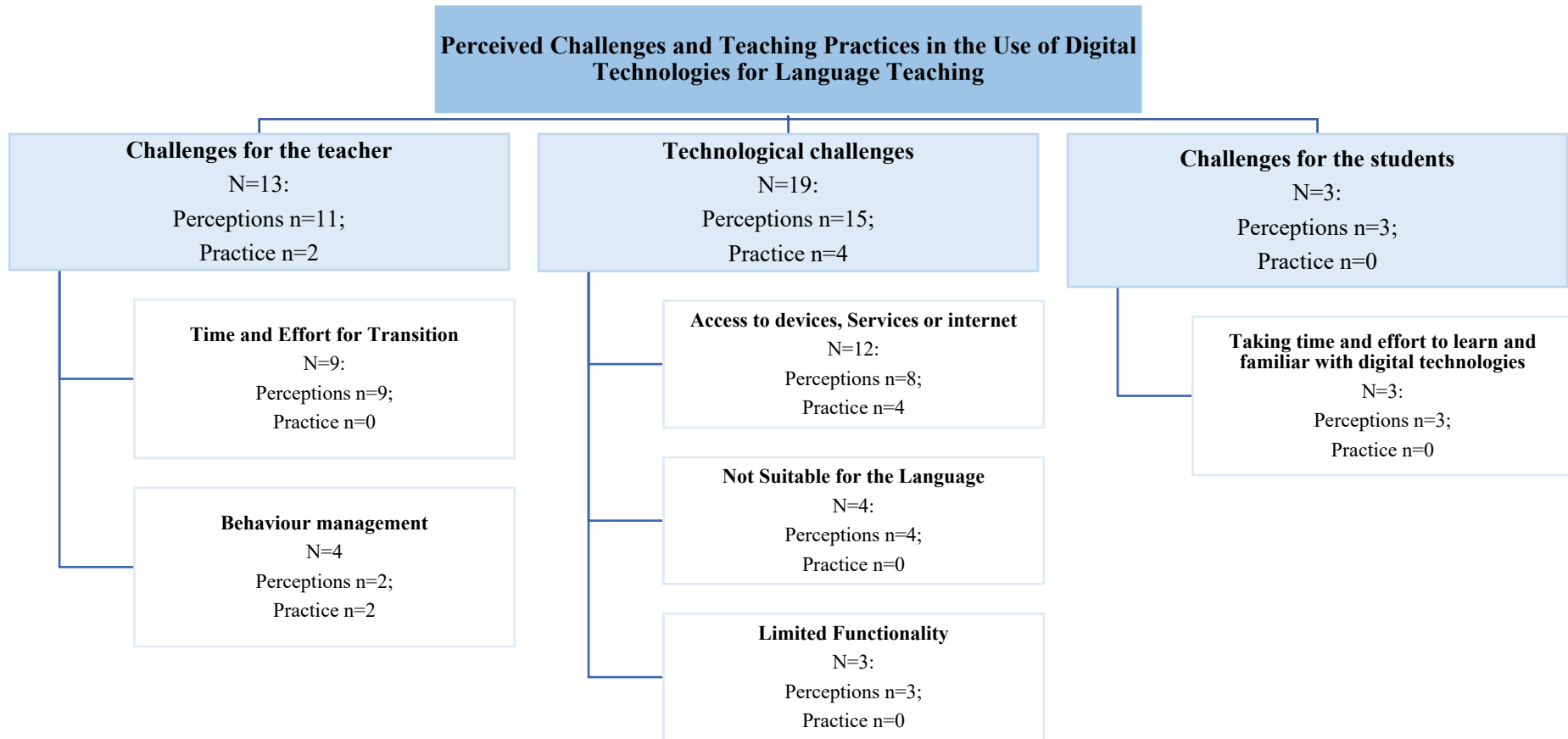
(Interview with Lisa). She observed that online learning sometimes led to better student behaviour and enjoyment compared to face-to-face settings. Once accustomed to the format, students tended to be more focused because she could also monitor distractions by observing eye movements from cameras and calling names to regain attention (Interview with Lisa). There was no direct data from classroom observations to verify the specific implementation of these strategies. However, overall, in the three classroom observations, students demonstrated a high level of engagement in learning activities, with no noticeable signs of distraction or inattentiveness. They actively responded to the teacher's instructions and participated in tasks as required, indicating that their attention was well-maintained for most of the lesson. While it is not possible to determine whether this was directly attributed to the digital strategies Lisa mentioned, the classroom environment appeared focused and orderly, reflecting a high level of student adaptation to the online learning format.

5.4.2 Challenges in Technology Integration and How the Teacher Responds in Language Teaching and Learning

This section examines the challenges perceived by the teacher in integrating digital technologies into language teaching and learning. These challenges are explored from three main aspects: teacher-related challenges, technical challenges, and student-related challenges (as shown in Figure 5.2). It also discusses how Lisa responded to these difficulties through pedagogical and technological adaptations to support both teaching and student engagement.

Figure 5.2

Breakdown of the Theme Concerning the Teacher's Perceived Challenges in Technology Integration in Language Teaching in Case Study One



Note. *N = total coded excerpts; n = subcounts from perceptions and teaching practices.*

Challenges for the Teacher

Lisa perceived the integration of digital technologies in language teaching as a **time-consuming and demanding process** that required extensive preparation and adaptation. She noted that both teachers and students needed considerable time to familiarise themselves with digital tools such as Nearpod, making navigation and engagement initially challenging (Interview with Lisa). Drawing on her own broader teaching experience, Lisa commented that the shift from face-to-face teaching to online or blended formats often felt for teachers like “starting over again,” requiring substantial professional development and experimentation to adapt teaching materials effectively (Interview with Lisa). She spoke generally about teachers’ experiences rather than referring specifically to the class observed, explaining that while some tasks could be easily transferred to a digital format, others, such as task-based language teaching, needed substantial adjustments to be effective in an online environment (Interview with Lisa). She highlighted that teachers had to go beyond merely substituting existing classroom practices with digital tools; instead, they needed to rethink how they orchestrated their pedagogy to fully utilise the potential of digital learning (Interview with Lisa). Overcoming these initial difficulties, in her view, required substantial time, energy, and professional learning development, as Lisa explained in the interview:

... some are struggling to keep up... It’s like going back to being a new teacher again, having to start from scratch, organize everything differently, and substitute face-to-face teaching with online or blended formats. There is a process... and many teachers are still at the substitution stage. It takes a huge amount of professional development to get through this hurdle. (Interview with Lisa)

Classroom observations did not capture specific instances of these challenges in Lisa’s teaching practices, likely because much of the preparation and adaptation occurred outside of the observed lessons. Nonetheless, her reflections indicate that the transition to digital teaching involves considerable behind-the-scenes effort, requiring continuous learning, adaptation, and professional development.

Lisa saw **behaviour management** as a challenge in online teaching. She noted that teachers have more natural authority in face-to-face settings, whereas online, they must

earn students' respect to maintain discipline. She believed that online teaching required healthier teacher-student relationships since students had more freedom to decide their level of engagement (Interview with Lisa). While managing behaviour took patience, she rarely needed strict interventions (Interview with Lisa). Classroom observations showed that Lisa primarily engaged students through structured content and activities, while the classroom teacher, Olivia, provided additional behavioural support. For example, when a student was rocking on his chair, Olivia reminded him to sit properly without disrupting the lesson (Observation One). This indicates that Lisa's approach to behaviour management focused on keeping students engaged in learning, with in-person support complementing her efforts. Despite Lisa's concerns, students generally followed appropriate online etiquette. In one session, they kept their microphones muted when not speaking, showing that they understood and adhered to online learning norms (Observation One). While behaviour management remains a challenge in online teaching, the observed students were mostly engaged and followed expected classroom behaviours.

Technological Challenges

Lisa identified **access to reliable devices, internet connectivity, and digital platforms** as ongoing challenges in online learning. She noted that some students had better internet connections than others, possibly due to differences in device quality. She also pointed out that Chromebooks, iPads, and phones were not suitable for Zoom for the online tutorial sessions, requiring students to use PCs or laptops less than three years old. These limitations gave rise to digital equity concerns, particularly for younger students who lacked consistent access to suitable devices (Interview with Lisa). Additionally, school Wi-Fi bandwidth limitations sometimes led to freezing issues, disrupting lessons (Interview with Lisa). To mitigate these challenges, Lisa and the school took steps to support students. The school provided laptops for those in need, and teachers adjusted teaching materials accordingly. For example, Lisa found Nearpod difficult to use in some schools due to connectivity issues, so she relied on PowerPoint and shared resources via email to ensure students could access materials more easily (Interview with Lisa). In practice, Lisa frequently addressed technical issues during lessons. Classroom observations showed that she noticed when students struggled with

slow or outdated laptops and suggested alternatives. For instance, when George's laptop caused video lag during a vocabulary review, Lisa recommended he borrow another student's device, which improved his experience (Observation One). Similarly, she suggested Jack use a different laptop, but his poor internet connection still affected his performance, demonstrating that device quality alone did not always resolve technical difficulties (Observation One).

Lisa observed that many existing language learning platforms and resources were **not designed for NZSL**. While such platforms worked well for spoken languages like German or Spanish, they were often unsuitable for sign language. She highlighted that NZSL, as a visual language, does not rely on audio resources, making listening-based materials irrelevant. Additionally, platforms that emphasised written language were not useful, as NZSL lacks a formal written system (Interview with Lisa). In practice, Lisa actively adapted her teaching approach by prioritising video-based resources. Classroom observations showed that she consistently used videos instead of audio recordings, ensuring that students had access to materials appropriate for NZSL learning. However, since teachers typically select suitable resources beforehand, there were no direct observations of Lisa rejecting unsuitable materials in the classroom (Interview with Lisa). Her preference for video-based teaching aligned with her perception that existing language platforms often failed to support the specific needs of sign language instruction.

Lisa also noted the limitations of digital platforms in supporting sign language teaching. She found that Moodle, while useful for storing resources, lacked interactive engagement features. For example, although she could upload videos, she was unable to provide direct responses to them, limiting real-time feedback opportunities (Interview with Lisa). Additionally, she recognised the challenge of teaching sign language through a 2D screen, as digital interfaces restricted the visibility of hand movements and spatial positioning, making it difficult for students to fully grasp certain signs (Interview with Lisa). These challenges were reflected in Lisa's teaching practices. In one observed lesson, Lisa misinterpreted a student's signing because his hands extended beyond the camera's display area. She then reminded him to keep his hands

visible on screen to ensure clear communication (Observation One). Similarly, she consciously adjusted her own body positioning to compensate for the limitations of a flat screen, ensuring that her signs were fully visible to students (Interview with Lisa).

Challenges for Students

Lisa recognised that transitioning to digital learning required **considerable time and effort for students**. She noted that those new to online learning needed time to familiarise themselves with the digital environment, including navigating learning platforms, managing their time effectively, and developing self-regulation skills (Interview with Lisa). She emphasised that self-management was a crucial skill that many students needed to acquire, particularly when completing tasks independently. Additionally, she highlighted the importance of students gaining confidence in providing peer feedback and understanding appropriate online language and behaviour (Interview with Lisa).

It takes a while to get familiar with the whole learning—getting to class on time, accessing and learning how to complete tasks, and self-management. Many of our students need to develop this skill, as well as gaining confidence in giving feedback and understanding appropriate online language and behaviour. (Interview with Lisa)

Although Lisa mentioned these student-related challenges in the interview, they were not directly observed in classroom interactions. On the one hand, this may be because students experienced more adaptation difficulties in the early stages of learning or outside the classroom. On the other hand, these challenges are primarily student internal psychological processes, which may not be easily captured through observable classroom behaviour. This also highlights the necessity of using a focus group to engage directly with students, allowing for a complementary perspective in understanding their adaptation and experiences in the digital learning environment.

5.4.3 Other Perceptions of Digital Language Learning

This subsection presents additional perspectives that did not align closely with the two preceding themes. While positioned separately, they provide further insight into the

teacher's views and practices regarding digital language learning.

Accessing Support and Professional Development

Beyond the perceived potentials and challenges of digital technologies in sign language teaching, Lisa also emphasised the importance of gaining resources, collaboration, and professional development in effectively integrating digital tools into her teaching. Lisa recognised that transitioning to digital teaching was not a solitary endeavour; she emphasised the need for collaboration with other teachers and external support networks. She noted that successfully adapting to online teaching required time, effort, and continuous professional development. She stated, “You need to get some support for that, collaborations with other teachers. It involves a lot of time and energy and PLD [professional learning and development]” (Interview with Lisa). This highlights her awareness that the integration of digital tools necessitates structured training and support to be effective. Her experience also underscored the significance of engaging with external organisations. She worked closely with Tui Tuia | Learning Circle, an organisation offering government-supported professional learning programmes for teachers, especially in the fields of language teaching and digital pedagogy. Reflecting on her engagement with these organisations, she shared, “Last year, my teacher inquiry was about online teaching, so I was working with Tui Tuia Learning Circle... I was working closely with the team over the past three years, particularly in teachers' professional development” (Interview with Lisa). These collaborations provided her with not only resources and readings but also direct mentorship and training when she encountered specific challenges.

As the Head of Department for NCEA NZSL under a national deaf education organisation, she played a key role not only in developing her own digital teaching strategies but also in guiding her team toward adopting online teaching practices. She viewed professional development as an ongoing process and valued the ability to access expert guidance when needed. She explained, “This year, I might work with them on leadership as a head of the department, and trying to get the whole team to move into this online teaching environment... If I am struggling in a particular area, I can just go to them, and they can either give me a PD [professional development session] or some

readings, or either have a conversation or forward me to the right person” (Interview with Lisa). Overall, Lisa’s perspective reflected an awareness that effective digital teaching required external expertise and continuous professional learning. Her proactive engagement with professional development opportunities and collaborative networks demonstrated her commitment to not only improving her own digital pedagogy but also supporting her team in integrating digital technologies into sign language teaching.

The Critical Role of Teachers in Digital Technologies Integration

Lisa recognised the role of teachers in shaping students’ confidence and engagement with digital learning. She shared that when teachers were more comfortable with online technologies, students also tended to engage more confidently in digital learning environments (Interview with Lisa). This suggests that a teacher’s digital proficiency is not only crucial for lesson delivery but also for shaping students’ perceptions of technology-assisted learning. Furthermore, Lisa noted that developing technological competence was an ongoing process. She reflected on her own experience, noting that the more she learned, the more she realised there was still much to explore, making confidence-building a continuous effort (Interview with Lisa). She emphasised that since digital tools should be accessible and user-friendly for students, it required teachers to develop a certain level of skill to ensure a seamless learning experience for students (Interview with Lisa). Her perspective reinforces the idea that teachers play a central role in bridging the gap between technological possibilities and effective educational implementation.

5.5 Students’ Perceptions and Experience of digital technologies in Language

Learning

This section explores how students engage with digital technologies in language learning, focusing on both their perceived benefits and challenges. The first subsection examines students’ views and learning experiences of the potential of digital tools, including their role in facilitating communication, supporting learning progress, enhancing language input, and organising resources. The second subsection shifts to

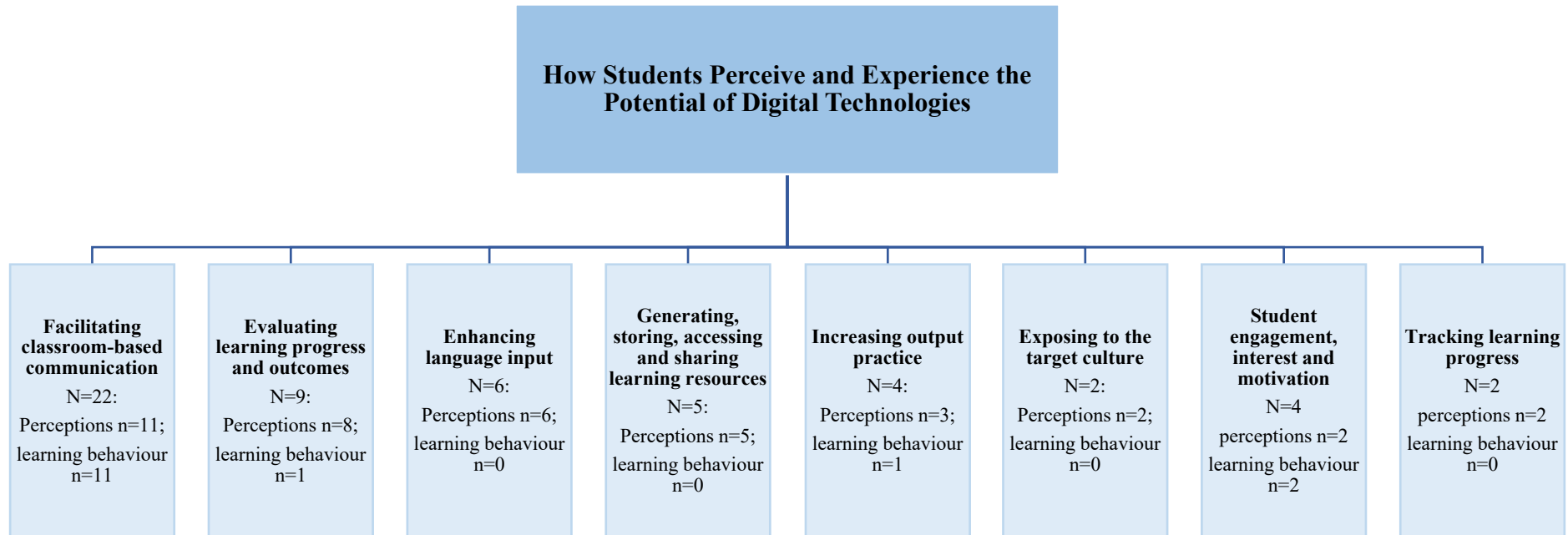
the challenges students encounter when using these technologies and their strategies for managing them. These two subsections also compare student perspectives with those of their teacher, highlighting areas of similarities and differences in their experiences and expectations regarding digital technology integration in sign language education.

5.5.1 How Students Perceive and Experience the Potential of Digital Technologies

This subsection explores how students perceive and experience the potential of digital technologies in language learning, including their role in facilitating communication, supporting learning progress, enhancing language input, and organising and accessing learning resources, as well as other perceived benefits. Figure 5.3 provides a breakdown of this key theme and its subthemes generated through analysis of the student data regarding these perceived potentials.

Figure 5.3

Breakdown of the Theme Concerning the Students' Perceived Potential of Using Digital Technologies in Language Learning in Case Study One



Facilitating Classroom-Based Communication

Students viewed digital tools as essential for communication in their sign language classroom, particularly in their interactions with their teachers, Lisa and Olivia, and with peers. Moodle, Zoom, and Microsoft Teams were identified as the main platforms supporting these exchanges. As one student explained, “Olivia created a Teams page so that allows her to post information for us, and we can also communicate with her. We can also communicate amongst each other” (Focus Group, Noah). Given that Lisa taught the class remotely via Zoom, students regarded digital tools as the only means through which communication with her could occur. One student noted, “If we didn’t have laptops or phones or digital stuff, we wouldn’t be able to communicate with Lisa” (Focus Group, Jack). Observations supported these views, showing that the teacher delivered the lesson fully online while students participated from the school classroom. Each student joined the Zoom meeting from their own device, providing Lisa with multiple visual perspectives of their signing and ensuring communication remained possible even when technical issues arose (Observation One).

Students also perceived digital tools as facilitating efficient multimodal communication, particularly when spoken interaction was unclear. They frequently used the chat box to clarify vocabulary, a practice that enabled immediate correction and supported their understanding of signed forms. For example, when Noah verbally asked for the sign for “nightclub” and Lisa misheard him, he typed the word in the chat, allowing her to identify the term and demonstrate the corresponding sign (Observation One). Similar instances occurred throughout the lessons, with students alternating between spoken, written, and signed modes to maintain understanding and ensure accurate communication.

Students further highlighted the value of shared or alternative devices in maintaining communication during technical difficulties. As one student commented, “As a backup, we have a big screen in the classroom... we still have full access to everything” (Focus Group, George). Observations showed that students adapted quickly by switching devices when needed; for instance, Leo moved from using his laptop to relying on the classroom camera when experiencing technical issues (Observation Three). These

practices helped sustain communication and minimise disruptions during lessons. Both students' perceptions and observed classroom interactions underscored the central role of digital technologies in facilitating communication in this fully online teaching arrangement. The integration of spoken, written, and signed modes was evident across lessons, demonstrating how digital tools supported efficient and continuous interaction even in the presence of technical challenges.

Evaluating Learning Progress and Outcomes

Students perceived digital tools as valuable for assessing their learning progress, particularly through video-based feedback and peer evaluation. Moodle and Vidyard were commonly mentioned as platforms that supported feedback in sign language (Focus Group, Noah). Peer feedback was typically provided through watching each other's recorded signing and offering comments, with "other students view[ing] the video and post[ing] positive feedback" such as reminders to "look at the camera more next time" (Focus Group, Noah). Teacher feedback was mainly delivered via video or Zoom interactions, and one student valued Lisa's explanations for helping them identify errors and understand correct grammatical forms: "It's a lot easier when Lisa reports feedback so you know what the signs are for it and like proper grammar to use" (Focus Group, George). Consistent with earlier findings, students also noted that receiving video feedback enabled them to see what needed improvement and plan for subsequent attempts: "I also saw the teacher—she also can do the video feedback to your video... Because we know what to do next time" (Focus Group, Noah). In addition to video comments, one student explained that teachers sometimes provided scripts for their signing, which helped them refine their performance over time (Focus Group, Noah).

Despite students' accounts of these practices, classroom observations offered limited direct evidence of evaluation-related activities. One observed instance involved students selecting which of their recorded videos to submit for final assessment (Observation One). The absence of further observational data likely reflects the fact that peer review, teacher feedback, and self-reflection often occurred outside regular class sessions, where students independently reviewed and responded to feedback.

Enhancing Language Input

Students generally perceived digital tools as highly beneficial for expanding their exposure to sign language input. A key resource frequently mentioned was the NZSL online dictionary, which provided video demonstrations of sign language vocabulary. Students appreciated the ability to search for unfamiliar words and immediately see how they were signed, with one student noting that it was “helpful and easy” to learn new signs through video demonstrations (Focus Group, Leo). The dynamic nature of video-based input was considered a major advantage over printed resources, as it allowed students to see the actual movements involved in signing rather than relying on static representations. As one student put it, “Digital is better than a book ‘cos you can see their motions while they sign while the page is motionless” (Focus Group, George). Additionally, students valued the accessibility of these digital resources, emphasising that they could independently look up words and practice outside of class time, which contributed to a more self-directed learning experience (Focus Group, Jack). While students highlighted these benefits, classroom observations did not capture direct instances of them engaging with digital resources for language input. As noted earlier, students frequently asked the teacher about vocabulary during classroom interactions, likely because direct inquiry allowed for more immediate and interactive communication. This suggests that, in the classroom setting, consulting the teacher was seen as a more convenient and effective way to receive answers. Nevertheless, students’ reflections indicate that digital tools played a key role in extending their access to sign language beyond the limitations of classroom instruction.

Generating, Storing, Accessing and Sharing Learning Resources

Students perceived digital tools as essential for organising and accessing learning materials efficiently. Microsoft Teams and Moodle were frequently mentioned as key platforms that structured resource management. One student explained that they used a digital notebook in Microsoft Teams to prepare scripts and store feedback from Lisa, keeping everything in one place for easy access (Focus Group, Noah). Similarly, Moodle was described as the primary platform where materials were organized by week, allowing students to track their progress (Focus Group, Noah). Students appreciated the

clarity and ease of use these platforms provided. The ability to store videos and feedback in designated locations helped reduce confusion about where to upload assignments and review past work. As one student noted, “It’s easy because we know where to put the videos” (Focus Group, Noah). Additionally, they found accessing and uploading content straightforward, which made managing learning resources more efficient (Focus Group, Noah). However, classroom observations did not capture direct instances of students accessing or sharing resources. Students’ reflections nevertheless indicate that digital tools played a crucial role in organizing materials, reinforcing their importance in supporting independent learning beyond the classroom.

Other Perceived Benefits of Digital Technologies in Language Learning

Students recognised the importance of practicing sign language beyond the classroom, mainly through **homework assignments** (Focus Group, Noah). They used digital platforms like Moodle to access additional practice resources, such as Kahoot (Focus Group, Leo). However, students did not frequently mention using digital tools to produce sign language output during class. In contrast, classroom observations showed frequent opportunities for structured output practice, where students engaged in paired dialogues, responded to teacher prompts, and adjusted their signing based on feedback. In one instance, Noah carefully followed Lisa’s demonstration, slightly adjusting his upper body to replicate the correct movement (Observation One). These interactions reinforced linguistic accuracy and motor coordination. While students recognised the importance of output practice, their reflections focused more on independent efforts outside the classroom. Classroom activities, however, provided structured opportunities for real-time signing practice, emphasising immediate feedback and interaction as essential components of their learning process.

Beyond structured language practice, students also noted **the cultural value of digital resources**. One student highlighted that these resources provided insight into the Deaf community and their communication practices, particularly in contexts where signing replaces spoken communication, such as during sports (Focus Group, Jack). Another student recognised videos as an important cultural resource, suggesting that visual materials played a role in conveying cultural aspects of sign language (Focus Group,

George). Students also appreciated digital tools for tracking progress and managing tasks. Moodle was seen as an effective platform for organising coursework, providing a clear structure that helped students navigate their assignments efficiently (Focus Group, Noah). Additionally, videos were noted as useful for clarifying both completed and upcoming tasks, reinforcing the structured support digital platforms offered in their learning process (Focus Group, George). Finally, one student described Kahoot as a fun and engaging learning tool. Although it was used infrequently, approximately once every couple of weeks, it was still recognised as a valuable way to make learning interactive and enjoyable (Focus Group, Noah). While students' reflections highlight these various benefits of digital tools, no direct classroom observations captured instances of cultural learning, digital task management, or the use of Kahoot during lessons.

5.5.2 Bridging Teacher and Student Perspectives on Benefits of Digital Technology Integration in Sign Language Education

Lisa's approach to integrating digital technology into sign language teaching was deliberate and structured, designed to enhance practice opportunities, improve language input, facilitate communication, and organise learning materials. Many of her perceptions were reflected in her teaching practices, as she consistently used video recordings, digital platforms, and interactive tools to support student learning. However, when comparing her views and classroom implementation with students' perceptions and learning experiences, both similarities and differences were identified, revealing the nuanced ways in which digital tools functioned in this language learning environment.

Both Lisa and her students valued digital tools as a means of reinforcing practice and developing signing skills, but their perspectives on how this should happen differed. Lisa saw video recordings as a powerful tool for structured learning and self-reflection, allowing students to record their signing, receive feedback, and refine their gestures over time. She encouraged them to use platforms like Flipgrid for this purpose, embedding video-based activities into her lessons and highlighting their benefits, particularly for students who needed extra support. Students, however, did not place the

same emphasis on these structured video tasks in their reflections. Instead, they spoke more about self-directed practice, often focusing on reviewing feedback or completing homework assignments rather than actively engaging with digital tools to record and refine their signing. While Lisa envisioned video as an essential practice tool, students seemed to use it more passively, suggesting that its role in their learning process was not always aligned with her expectations.

A similar contrast was found in the use of digital tools for evaluating progress and outcomes. Lisa believed that video-based assessments were integral to sign language learning, allowing her to track student development over time. She saw video as a way to make assessment less intrusive, integrating it naturally into classroom activities so that students could demonstrate their skills in a low-pressure environment. In her lessons, she frequently used live video feedback and recorded evaluations, helping students refine their accuracy in signing. Students, on the other hand, spoke about the use of video primarily as a feedback mechanism rather than an assessment tool. They valued teacher feedback on their recorded performances but did not frame these recordings as part of a structured evaluation process. Instead, students focused more on peer feedback, seeing value in reviewing their classmates' videos and exchanging comments. While Lisa prioritised teacher-led evaluation through digital platforms, students placed greater emphasis on peer interactions as a way of assessing and improving their performance.

One area where Lisa and her students were closely aligned was the role of digital tools in enhancing language input. Lisa was deliberate in using digital resources, videos, and online dictionaries to expose students to authentic sign language input. She often introduced grammar and vocabulary through video demonstrations, recognising that sign language, as a visual-gestural language, required clear, accessible input. Students also recognised the value of video-based dictionaries and online resources, appreciating the ability to search for unfamiliar words and immediately see them demonstrated. However, despite this shared appreciation for digital resources, students often defaulted to asking Lisa directly for vocabulary clarification in class rather than using digital tools. Classroom observations revealed that students frequently sought Lisa's immediate

input rather than relying on online dictionaries or videos during lessons. This suggests that while students valued digital resources in principle, they still preferred real-time teacher interaction when it came to language clarification.

Lisa also placed strong emphasis on digital tools as a means of facilitating communication, particularly in a remote learning environment. She designed activities that encouraged students to engage in structured conversations, often using Zoom's spotlight function and chat features to enhance interaction. She saw these tools as creating a more natural, interactive learning environment, where students could engage in conversations without feeling overly conscious of being recorded. Students also viewed digital tools as essential for communication, particularly in overcoming logistical barriers to interacting with Lisa, who was not physically present in the classroom. However, their focus was slightly different. While Lisa framed digital tools as a way of structuring interaction, students spoke more about them as a necessity for communication to happen at all. Their reflections often emphasised whether the technology worked smoothly, such as having a stable internet connection, clear audio, functioning microphones, and uninterrupted Zoom access, as well as the availability of alternative communication channels and backup solutions when these systems failed. This indicated that, for students, technical reliability primarily referred to the basic functioning of the tools needed for communication, rather than the interactional design Lisa prioritised. While Lisa viewed digital tools as a way of enhancing structured classroom interaction, students saw them as a practical requirement for ensuring communication was possible despite logistical challenges.

In contrast to Lisa's strong emphasis on intercultural learning, students rarely foregrounded cultural development when reflecting on their use of digital technologies. While some students briefly acknowledged videos as offering insight into Deaf community practices, cultural learning was not articulated as a central benefit of technology-supported learning. This divergence suggests that although ICC was embedded in Lisa's instructional intentions, its pedagogical purpose may not have been fully explicit to learners. Alternatively, students may have experienced language and culture as inseparable and therefore did not distinguish cultural learning as a discrete

outcome of digital technology use.

A similar difference in emphasis was identified in the use of digital tools for engagement and task management. Lisa saw Moodle as an essential platform for structuring lessons, providing access to materials, and streamlining the learning process. She valued its ability to integrate different tools and minimise technical barriers, ensuring that students had everything they needed in one place. Students, on the other hand, focused less on how Moodle structured their learning and more on its ease of use for accessing and uploading tasks. Their comments were primarily practical, describing Moodle as a convenient and straightforward tool for managing assignments. This contrast reflects the differing roles and priorities of teachers and learners. While teachers may view platforms like Moodle as central to lesson design and pedagogical coherence, students, particularly those in Years 9 and 10, are more likely to engage with such tools at a functional level, without necessarily recognising their underlying instructional design. Similarly, Lisa recognised the potential of interactive tools like Kahoot to increase student engagement, but classroom observations revealed that it was used infrequently. Students described Kahoot as a fun way to learn but noted that it was only used occasionally. This suggests that while both teachers and students saw its motivational value, it was not positioned as a core element of their regular learning experiences.

5.5.3 Students' Perspectives on Challenges and Strategies in Digital Technology Integration

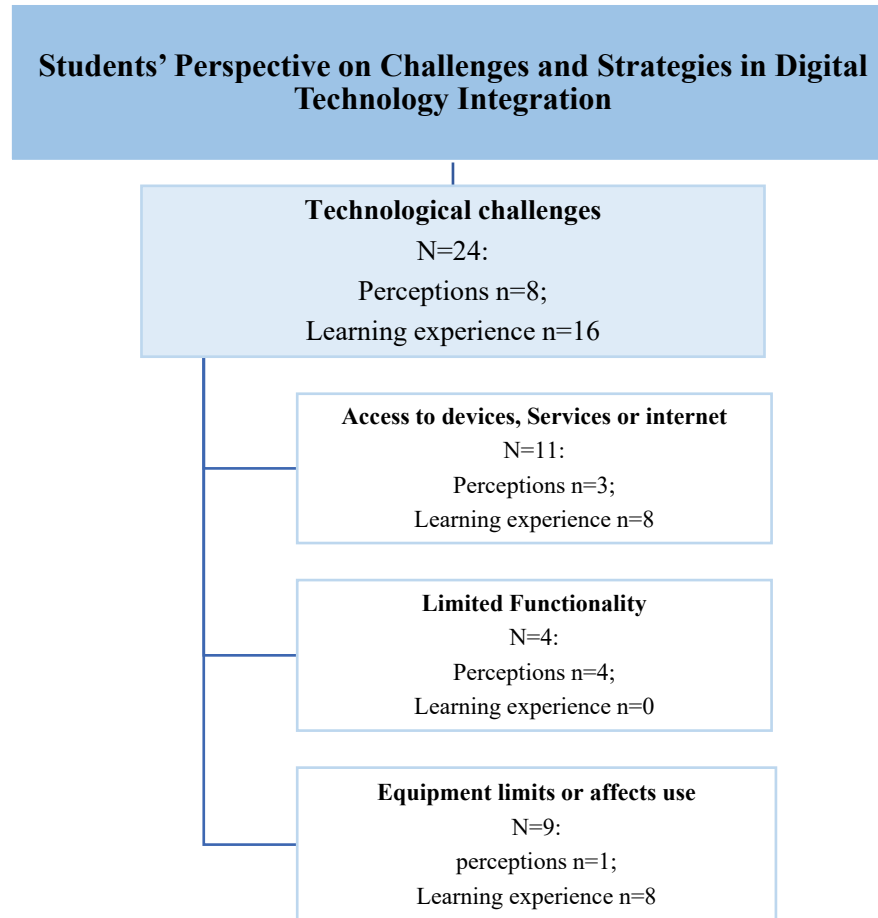
Students' perceptions did not reflect challenges related to their own abilities, which is also evident in their confidence in using digital technology for language learning. They expressed confidence in their ability to use digital tools effectively, describing them as "very easy to use" and noting that regular exposure had improved their proficiency (Focus Group, Noah). Their concerns primarily revolved around **external technological difficulties** rather than their own competence (as shown in Figure 5.4). Among these technical issues, one challenge arose with the NZSL online dictionary, where multiple sign options for a single word created confusion. In such cases, students preferred asking their teacher for clarification rather than relying solely on digital

resources (Focus Group, Noah). Another was the organisation of learning materials on Moodle. Students found it frustrating to scroll through large amounts of content to access current materials, describing the system as visually overwhelming. Some suggested archiving older content into term-based folders to improve navigation (Focus Group, Leo). However, these perceived challenges were not prominently observed in classroom interactions.

Connectivity and hardware problems were more tangible issues for this fully online class. Students reported video freezing and difficulties uploading assignments, particularly when the school's Wi-Fi was overloaded (Focus Group, Leo). Poor video quality persisted even when recordings were completed at home, limiting their ability to submit work effectively (Focus Group, Jack). These technical disruptions were outside their control and directly affected their engagement with learning. Classroom observations confirmed these challenges, as video delays and device malfunctions frequently interrupted communication. For instance, George's laptop often lagged, prompting Lisa to suggest he switch to another device (Observation One). Similarly, when Leo's video feed froze, he had to switch to the classroom camera (Observation Three). Although these adjustments were made quickly, they disrupted the flow of lessons. In addition, as previously mentioned, camera positioning and framing constraints also complicated sign language communication. In several instances, students' hand gestures moved out of frame, making interpretation difficult. While repositioning helped to some extent, such issues still affected classroom interaction (Observation One).

Figure 5.4

Breakdown of the Theme Concerning the Students' Perceived Challenges in Technology Integration in Language Learning in Case Study One



5.5.4 Comparing Student and Teacher Perspectives on Challenges

Lisa and the students approached technological challenges in language learning from different perspectives. While Lisa recognised challenges at multiple levels, including those affecting teachers, students, and digital infrastructure, students primarily perceived difficulties as external technical problems. Notably, students did not express concerns about their own digital competence, instead displaying confidence in their ability to use digital tools effectively. The absence of student comments on teacher-related or pedagogical challenges suggests that their focus was limited to their direct experiences as users or passive consumers of digital technologies, marking a key distinction between their perspectives and Lisa's.

Both Lisa and the students identified issues related to digital platforms and hardware, though their concerns differed in scope and depth. For example, students found the NZSL online dictionary problematic when multiple sign options for a single word created confusion. They preferred asking their teacher for clarification rather than relying solely on digital resources (Focus Group, Noah). Lisa, on the other hand, identified broader limitations in digital language learning tools, noting that many platforms were designed for spoken languages and lacked support for NZSL's unique visual nature. As a result, she adapted her teaching by placing greater emphasis on video-based resources in her classes (Interview with Lisa).

Both students and Lisa reported frustrations with Moodle, but their concerns differed. Students described the platform's layout as cumbersome, requiring excessive scrolling to locate current materials. Some suggested restructuring content into term-based folders for easier navigation (Focus Group, Leo). Lisa, however, identified Moodle's limited interactive features as a greater challenge, particularly the inability to provide direct responses to uploaded videos, restricting opportunities for real-time feedback (Interview with Lisa). These differences highlight how students focused on usability, while Lisa was concerned with the assessment constraints of Moodle.

Connectivity and hardware issues were another common challenge. Students frequently

experienced video freezing and difficulties uploading assignments, particularly when school-wide Wi-Fi was overloaded (Focus Group, Leo). Lisa also recognised disparities in students' access to reliable technology and took steps to address them. The school provided laptops to those in need, and Lisa adjusted teaching materials to accommodate connectivity issues. For instance, she switched from Nearpod to PowerPoint and email when necessary (Interview with Lisa). While classroom observations confirmed that device failures and poor internet connectivity disrupted learning, Lisa actively responded by suggesting alternative devices or adapting lesson delivery to minimise interruptions (Observation One). However, solutions such as switching laptops did not always resolve underlying connectivity problems (Observation One).

One notable limitation that Lisa highlighted, but students did not mention, was the challenge of teaching sign language through a digital interface. However, classroom observations showed that students were affected by this issue in practice. The 2D screen restricted the visibility of hand movements and spatial positioning, making it difficult to interpret some signs (Interview with Lisa). During lessons, Lisa reminded students to keep their hands within the camera's frame to ensure clear communication (Observation One). She also adjusted her own positioning to compensate for these limitations. While students did not explicitly identify this as a challenge, their need to reposition themselves suggests that it impacted their learning experiences (Observation One).

5.6 Chapter Summary

This chapter presents the findings from Case Study One, which explores how digital technologies are integrated into a NZSL classroom. It examines both teacher and student perspectives on the potential and challenges of using digital tools in language teaching and learning. The findings are structured around five key areas: the teacher's perceptions about the importance of different communicative competencies in students' language development, the teacher's perceptions of digital technologies, the teacher's actual classroom practices, the relationship between these perceptions and practices, and the students' perceptions and experiences with digital tools.

The teacher, Lisa, placed strong emphasis on developing students' communicative competencies, particularly grammatical competence and ICC. Her teaching approach reflected a strong focus on vocabulary acquisition and the use of NZSL's unique linguistic structures, while grammar was viewed as secondary to communicative clarity. In addition, Lisa strongly integrated cultural elements into her lessons, ensuring that students were exposed to Deaf community norms and practices. She also valued digital competence, leveraging various online platforms to facilitate both structured learning and real-world communication opportunities.

Lisa's perceptions of digital technologies were largely positive, as she recognised their potential to support teaching pedagogy, enhance learning experiences, and improve administrative efficiency. Digital tools were perceived as particularly beneficial in increasing language input and practice opportunities, facilitating classroom interaction, and allowing teachers to reflect on their practice. In her lessons, Lisa actively used tools such as Zoom, Moodle, and Flipgrid to reinforce these aspects of learning. She also valued PowerPoint for structuring lesson content and the LMS for organising and storing resources. Her perceptions were generally aligned with her teaching practices, as she systematically integrated digital technologies to enhance student engagement and participation.

However, Lisa also identified several challenges associated with digital integration, which were categorised into three main areas: teacher-related challenges, technical issues, and student-related difficulties. The transition to online teaching required considerable preparation, adaptation, and professional development, which Lisa actively sought through external training and collaboration. Technical barriers, such as access to devices and internet connectivity issues, also posed difficulties, particularly for students who lacked up-to-date technology. In response, Lisa adjusted her teaching materials and provided alternative solutions where possible. Additionally, students needed time to develop self-regulation skills and digital literacy, as navigating online learning environments required greater independence.

The final section of the chapter compared Lisa's perceptions and practices with students' experiences. Both teachers and students viewed digital tools as essential for communication and language practice, but their perspectives on their specific use differed. While Lisa emphasised structured video recording tasks as a tool for self-reflection and feedback, students tended to engage with digital resources more passively, often using them for self-directed learning rather than formal assessment. Similarly, both teachers and students recognised the value of digital tools in expanding language input, but students still relied heavily on direct teacher clarification in the classroom rather than digital dictionaries or pre-recorded materials. There was also a divergence in the perceived role of digital tools in cultural learning; while Lisa designed lessons to incorporate Deaf cultural norms, students did not explicitly mention cultural learning as a primary benefit of digital technologies.

Chapter 6: Case Study Two

6.1 Introduction

This chapter presents the findings of Case Study Two, which investigates the perceptions and practices of a Chinese language teacher and her students regarding the integration of digital technologies in language learning. The chapter first introduces the contextual background of the study, outlining the school setting, teacher profile, and student composition. It then explores the teacher's objectives in developing students' communicative competencies, highlighting her emphasis on linguistic, intercultural, discourse, strategic, and digital competencies. This is followed by an examination of the teacher's perceptions and practices in using digital technologies, assessing how her instructional decisions align with her perceptions. The chapter then shifts to students' experiences with digital tools, analysing their perceived benefits and challenges, as well as their strategies for overcoming difficulties. Finally, the study compares the teacher's and students' perspectives, offering insights into the similarities, differences, and tensions in their experiences of digital technology in the language classroom.

6.2 Context of Case Study Two

Case Study Two examined a Chinese language class in a decile 7 public school located in the Waikato District. The school had a dedicated language department that offered a range of language courses beyond English, catering to students from different linguistic backgrounds and learning needs. This department provided language classes in te reo Māori, French, Japanese, Spanish, and Mandarin Chinese, with each language course having its own designated classroom and teacher(s). The language department also allocated funding for each language class, and teachers were responsible for deciding how best to utilise these resources to enhance teaching quality. For Year 9 and Year 10 students, it was compulsory to choose at least one language class. If they did not make a selection themselves, they were randomly assigned to one of the available language courses.

The school had one Chinese language teacher, Fang (pseudonym), who was around 46

years old at the time of data collection and was the participating teacher in this case study. Born and raised in China, Fang moved to Aotearoa New Zealand before the age of 30 and had lived there for nearly two decades by the time of the study. She was highly proficient in both Chinese and English, with her command of English approaching native-like fluency. After receiving her teacher training in Aotearoa New Zealand, she obtained full registration and began teaching in local secondary schools, accumulating approximately ten years of teaching experience. Fang joined this school in 2015, initially tasked with establishing the Chinese language programme while also teaching one English class. In its first year, the programme enrolled only 20 to 30 students, but interest in the subject grew significantly under her leadership. By the time of the study, more than 150 students were learning Chinese across multiple year levels. As her role evolved, Fang began focusing exclusively on Chinese instruction for Years 9 to 12 and no longer taught English. In addition to her teaching responsibilities, she also served as the head of the language department.

Lessons took place in a blended classroom setting, incorporating both conventional and digital resources. Textbooks played a central role in teaching, and Fang allocated part of her teaching budget to purchase Happy Chinese, a textbook series published by People's Education Press in 2003. Designed for English-speaking secondary school students aged 11 to 16, these textbooks were considered essential materials for the course. However, Fang noted that they were quite expensive, costing approximately NZ\$40 per copy.

In addition to resources like whiteboards and textbooks, digital tools also played a role in this classroom, such as Schoology, an LMS promoted by the school. Another frequently used platform was Education Perfect in this class, which provided curriculum-aligned learning across multiple subjects, including languages, mathematics, and science. The language department funded access to this platform for both teachers and students. In addition, the school generally did not allow students to use smartphones in school, and Fang's Chinese class followed this policy.

The observed class consisted of a mixed Year 9 and Year 10 group with basic proficiency in Chinese. The majority of students were non-native speakers, although three students had Chinese cultural backgrounds. One of these students was Fang's son, a native Chinese speaker. The other two had parents from southern China and spoke Cantonese at home. Although Cantonese differs from Mandarin in pronunciation and vocabulary, the written language is largely shared between the two. Student recruitment for this case study took place in Term 3 of the 2022 academic year (July–September). Fang invited students to participate, and three agreed: two male students, Lucas and Robert (pseudonyms), and one female student, Mia (pseudonym). Their motivations for learning Chinese varied. Lucas (Fang's son) and Robert, both from Chinese expatriate families, were encouraged by their parents to improve their Chinese proficiency. Mia, in contrast, chose to study Chinese as a second language due to her interest in the language and her awareness of its growing global significance, including its relevance in university studies.

Data collection for this case study was conducted between September and November 2022 and included a unit plan, three classroom observations, a teacher interview, and a student focus group. Fang stated that she did not use specific lesson plans for her teaching. However, the unit plan covered four proficiency levels across four terms and functioned more as a broad curriculum guideline based on the New Zealand Curriculum standards (Ministry of Education, 2007), outlining general language learning principles rather than classroom-specific activities. Furthermore, the recommended teaching materials in the unit plan differed from what Fang actually used in class. The unit plan was not a concrete lesson plan and was too general to guide specific lessons or provide valid in-depth data for analysing Fang's instructional decisions. Therefore, this unit plan was excluded from the case study analysis as it did not accurately reflect Fang's actual teaching practices in the classroom. Table 6.1 and Table 6.2 list the pseudonyms of the teacher and students in Case Study Two, as well as the types of data collected and the research questions they responded to.

Table 6.1*Teachers and Students' Pseudonyms in Case Study Two*

Teachers and students	Pseudonyms
Language teacher	Fang
Student 1	Lucas
Student 2	Robert
Student 3	Mia

Table 6.2*Correspondence Between Data Sources and Research Questions in Case Study Two*

Data sources	Research question(s) to address
CS2, a unit plan	RQ1&3
CS2, classroom observation one	RQ3
CS2, classroom observation two	
CS2, classroom observation three	
CS2, interview with Fang	RQ1& 2
CS2, focus group with students	RQ4

6.3 Teacher's Objectives in Developing Students' Communicative Competencies

This section examines the teacher's objectives in developing students' communicative competencies, focusing on different aspects of language proficiency. It first explores her emphasis on linguistic competence, followed by the role of intercultural awareness in communication. The discussion then moves to discourse and strategic competence, highlighting how students develop coherence and problem-solving skills in communication. Finally, it considers digital competence, reflecting the teacher's cautious yet pragmatic approach to integrating technology into language learning.

6.3.1 Linguistic Competence

Fang places particular emphasis on vocabulary within her teaching of linguistic competence, giving it priority over pronunciation and grammar. She views vocabulary as the foundation of language learning and stresses that students need to acquire key phrases early in their study. Fang also highlights the structural nature of Chinese vocabulary, noting that meaning often depends on word order: "Vocabulary is

important in any language, especially Chinese later on when you learn the words, it's all about the permutation. So, in a way, you teach them individual words, and then you help them to put these words together" (Interview with Fang).

Regarding pronunciation, Fang recognises its importance but sees it as secondary to fluency and communicative effectiveness. She believes pronunciation matters at the word level but is less critical in full sentences where context aids comprehension: "Because if you learn individual words, yes, of course, pronunciation is important, but if you have a context, a sentence or a topic that you already know what you're talking about, then naturally we will make a much better connection" (Interview with Fang). She considers pronunciation a refining process rather than an initial priority, arguing that intelligibility is more important than perfect articulation. Fang's perspective on grammar aligns with her communicative approach. While she recognises its role in structuring language, she does not see it as essential in the early stages of learning. She believes grammatical accuracy develops naturally over time and that minor errors do not hinder comprehension: "It is important, but it's not essential, not as essential as vocabulary. For example, if you and I are having this conversation, I get my grammatical structure wrong, but you will know what I mean" (Interview with Fang). She describes grammar as the "glue" that holds vocabulary together, reinforcing the idea that meaning takes precedence over formal correctness.

6.3.2 Intercultural Communicative Competence

Fang perceived ICC as essential in language teaching, viewing language and culture as inseparable. She believed that cultural knowledge was as important as language itself: "It's almost as important as the language itself. These two are parallel lines. They cannot be dropped to any degree" (Interview with Fang). From her perspective, without cultural understanding, students might struggle to grasp why certain expressions existed and could find them amusing rather than meaningful. She also viewed cross-cultural comparison as a way to broaden students' perspectives. By pointing out similarities between English and Chinese practices, she suggested that students could make meaningful connections: "It's not just about culture between Chinese language and culture, but it's also about cross-cultures. You say to them, 'See, in English we do this

as well,’ and they go, ‘Oh yeah’” (Interview with Fang). In her view, making these connections helped students relate unfamiliar cultural concepts to their own experiences, making them easier to understand. Fang believed that authentic cultural experiences played a key role in connecting language and culture. She suggested that students who had visited Asian supermarkets in Aotearoa New Zealand were better able to relate to cultural concepts than those without such exposure (Interview with Fang).

Beyond cultural knowledge, Fang considered intercultural interaction crucial in fostering global citizenship. She argued that Aotearoa New Zealand students needed to move beyond an “island mentality” and become more aware of cultural diversity: “It’s what we’re teaching them to be global citizens. They need to be worldly... If people do things differently from you, there’s nothing wrong with it” (Interview with Fang). She believed that early exposure to diverse perspectives would help students develop openness and adaptability in communication.

6.3.3 Discourse Competence

Fang views discourse competence as essential but developing after vocabulary acquisition. She emphasises that students must move beyond isolated words to construct logical sequences: “You can’t always say, ‘Me know no English,’ and you have to explain, ‘I’m still learning,’ or, ‘I have been here for only two months as an exchange student’” (Interview with Fang). This highlights her perception that coherence reflects cognitive and intellectual growth. She also notes that teachers sometimes hinder coherence by focusing too much on small mistakes, as constant correction can disrupt students’ thought processes: “Many teachers, including me, try to stop students from making little mistakes and stop them coherently expressing what they want to say” (Interview with Fang). To counter this, she encourages students to repeat their ideas before correcting errors, allowing them to refine their thoughts naturally. Drawing an analogy to a child learning to bake, Fang advocates for a supportive approach to feedback, believing that constructive guidance, rather than immediate correction, is key to developing coherence over time (Interview with Fang). She emphasises that encouragement fosters confidence, ensuring that students feel safe to experiment with complex ideas before refining their structure.

6.3.4 Strategic Competence

Fang considers strategic competence essential in language teaching, particularly for managing communication difficulties. She highlights that meaning is conveyed not just through words but also intonation, facial expressions, and body language: “If I say, ‘Oh yeah, she’s nice’ (cheerful tone, happy expression), what does that mean to you? But if I say, ‘Yeah, she’s nice’ (reluctant expression, hesitant tone), that’s the body language and the facial expression” (Interview with Fang). This underscores her perception that communicative strategies are key to interpretation. She also stresses contextual inferencing in vocabulary learning, explaining that students may not immediately understand a new word but can deduce meaning from surrounding context: “Sometimes when you have a word, you throw a new word, new vocabulary there, you might not understand it. But if with a context before and after, then they can guess what [it] means” (Interview with Fang).

6.3.5 Digital Competence

Fang held a cautious yet pragmatic view on digital competence, acknowledging its usefulness in language learning while remaining sceptical about its broader application. She saw digital tools as valuable for fundamental language practice and cultural comparisons, as they provided more up-to-date content than printed textbooks: “The digital technology, the platform, they change way faster than textbooks do. So, if I’m using the textbook from 20 years ago, they will still be using the word ‘comrades’. What’s the point in that?” (Interview with Fang). However, Fang was sceptical about students’ independent use of digital tools. She believed their typical online activities lacked educational value and required careful guidance. Instead of allowing unrestricted digital exploration, she preferred a guided approach, offering specific keywords to direct students’ searches while acknowledging the influence of internet algorithms (Interview with Fang). Regarding digital communication, Fang expressed reservations. She raised concerns about misinformation, regional language variations, and limited critical thinking skills of students, making her hesitant to encourage online interaction in Chinese (Interview with Fang). While she did not want to restrict exposure, she felt students needed stronger evaluative skills before engaging in digital conversations. The

risks and challenges she associated with digital technology for communication will be discussed in detail in a later section.

6.4 The Teacher's Perceptions and Practices of Using Digital Technologies in Language Teaching

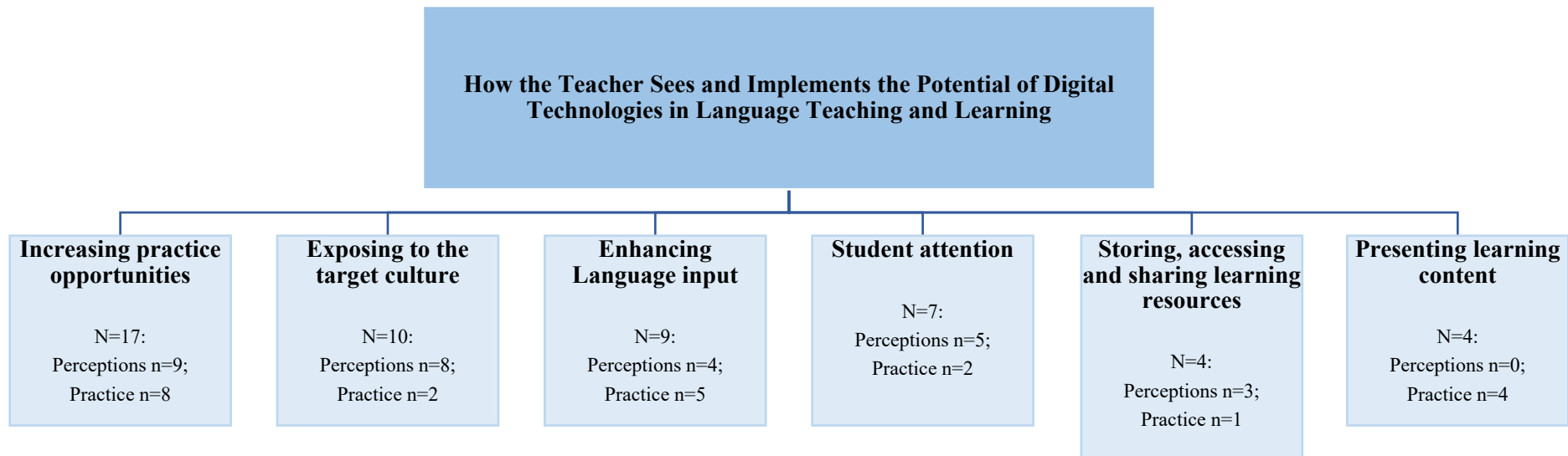
This section examines the teacher's perspectives and practices in integrating digital technologies into language teaching. It first explores how she perceived and implemented their potential, particularly in expanding practice opportunities, cultural exposure, and language input. It then discusses how she incorporated digital tools and selectively used technology for engagement, resource management, and content delivery. Finally, this section considers the challenges she faced in technology integration, including technical limitations, professional development, and student-related difficulties, shaping her overall approach to digital technology in the classroom.

6.4.1 How the Teacher Sees and Implements the Potential of Digital Technologies in Language Teaching and Learning

This section explores how Fang perceived and implemented the potential of digital technologies in her language teaching. It first examines how she used digital tools to expand practice opportunities, enhance cultural exposure, and support language input. It then considers her selective use of technology for student engagement, resource sharing, and content presentation, highlighting how digital tools complemented her existing teaching practices. The notation used in the figures (N and n) in this chapter follows the same format described in Chapter 5.

Figure 6.1

Breakdown of the Theme Concerning the Teacher's Perceived Potential of Using Digital Technologies in Language Teaching in Case Study Two



Increasing Practice Opportunities

Fang perceived digital tools as essential for expanding students' practice opportunities in language learning. In her view, language acquisition required consistent, incremental effort, something that digital platforms could effectively support through structured repetition. She particularly valued platforms that recycled vocabulary and sentence patterns until students reached mastery (Interview with Fang). She also emphasised digital tasks needed to align closely with classroom content in order to be experienced as meaningful extensions rather than disconnected tasks (Interview with Fang). Listening practice was another area where she saw digital resources as beneficial, drawing on levelled materials associated with standardised proficiency tests (e.g., YCT) to provide structured listening and reading activities. She also noted occasional student use of short video recordings (e.g., TikTok) for brief speech tasks, though this played only a minor role in their learning (Interview with Fang).

Classroom observations were consistent with Fang's emphasis on structured, repetitive practice. For example, she used YCT listening videos for comprehension tasks (e.g., true/false and multiple-choice questions), adjusting the difficulty when students reported the activity as too easy (Observation One and Two). She also set translation tasks through Education Perfect, where students listened to model pronunciations and worked with pinyin-supported sentences before producing English equivalents (Observation Two). These activities reinforced vocabulary and sentence structure while offering additional opportunities for independent practice. At the same time, Fang's core classroom routines remained strongly teacher-led. Vocabulary learning was typically conducted through board work and oral repetition, including explicit explanation of meanings and character components. Reading work similarly relied on textbook-based routines, teacher modelling, and choral practice. In this sense, digital tools extended practice opportunities but did not replace the board- and textbook-centred practices that formed the instructional core of the lessons.

Exposing Students to the Target Culture

Fang viewed digital technology as an important tool for providing students with broader

exposure to the target culture. She believed that digital resources enabled students to access cultural experiences that would otherwise be difficult to encounter, such as virtual tours of everyday life in China (Interview with Fang). Platforms such as YouTube and Netflix were seen as particularly useful for presenting cultural content in an engaging and accessible manner, with YouTube preferred for its short and lively format (Interview with Fang). Fang also emphasised the role of digital media in supporting cultural comparison, helping students connect familiar experiences in Aotearoa New Zealand, such as visiting Asian supermarkets, with cultural practices in China (Interview with Fang).

Classroom observations illustrated how these views were enacted in practice. In one lesson, Fang used a short segment from a Netflix documentary on the Shaolin Temple School to introduce students to an aspect of Chinese schooling characterised by discipline and physical training (Observation One). While students watched attentively, post-viewing interaction was brief, consisting mainly of short reactions before the lesson moved on to the next activity. At other times, cultural content was introduced through oral storytelling and direct explanation rather than digital media. For example, Fang discussed differences in popular sports between China and Aotearoa New Zealand (Observation One) and used the Butterfly Lovers story to illustrate gender roles in ancient China (Observation Two). When students encountered difficulty understanding concepts such as parental influence on marriage, these were attributed to cultural difference, but without extended discussion or guided exploration.

Enhancing Language Input

Fang viewed digital technology as a valuable tool for enhancing language input by exposing students to a broader range of voices, more authentic language use, and up-to-date expressions. She expressed concern that reliance on textbooks and teacher-led input could make students overly familiar with her own voice, leaving them less prepared to comprehend diverse speakers in real-world contexts (Interview with Fang). Digital resources were therefore seen as a way to reinforce classroom learning while extending students' exposure beyond a single speaker or register. Fang also noted that online media allowed language input to remain current, as digital platforms respond

quickly to contemporary usage. She illustrated this with the example of the meme bīng qí lín (ice cream), which circulated widely online before later appearing in NCEA assessments (Interview with Fang). In practice, digital resources were used to supplement rather than replace classroom input. Fang occasionally played short video clips featuring Chinese dialogue with English narration and subtitles, pausing at times to check students' comprehension. Some students were able to recognise familiar words and phrases, reinforcing connections between classroom learning and authentic use (Observation One). She also introduced an online stroke order resource to demonstrate character writing. However, these digital inputs were interwoven with non-digital practices, such as disconnecting the screen and writing key words on the whiteboard for students to copy and practise (Observation Three), underscoring the supplementary role of technology in shaping language input.

Other Perceived Potentials and Implementations

Fang viewed digital technology as a flexible tool for **maintaining student attention** in the classroom. She noted that her use of digital tools varied depending on student engagement levels. When students appeared disengaged, she would introduce alternative activities, including digital resources, to re-engage them. However, she emphasised that these digital activities were typically brief, used only as short interventions rather than extended tasks (Interview with Fang). She also valued YouTube videos that were short, dynamic, and engaging, which she found effective due to their brevity and liveliness (Interview with Fang). In the observed teaching practice, Fang used digital resources selectively and in short durations to support student attention. She incorporated videos from Netflix, choosing only brief segments to show in class, such as a 10-minute clip on the Shaolin Temple School in China rather than the full 25-minute documentary (Observation One). Similarly, in a listening activity, she used a 10-minute video with 20 comprehension questions, structuring the task into a focused session that did not overextend students' attention spans (Observation Two).

Fang saw digital technology as a useful platform for **organising resources and assessments** as well as **facilitating informal exchanges** among Chinese language teachers. She noted that her school used Schoology, where all teaching materials and

assessments could be uploaded and shared (Interview with Fang). In practice, she demonstrated this approach by immediately sharing an online stroke order tool on Schoology after class, making it accessible for students to review independently (Observation One). Beyond sharing resources with students, she also engaged with a wider network of New Zealand Chinese teachers, where teachers casually recommend and discuss useful digital tools (Interview with Fang). She described this as an informal but effective practice, where teachers would simply say, “Hey guys, try this” (Interview with Fang).

Classroom observations showed that Fang occasionally used digital technology to **present learning content**, but it was not a primary aspect of her teaching. The TV screen in the classroom was usually turned off, except when she used it to display instructional materials or videos (Observation One). At times, she connected her laptop to the TV to present a website or introduce a new video (Observation Two and Three). While she incorporated digital tools for content presentation, her frequent reliance on textbooks as primary teaching materials suggests that digital presentation was supplementary rather than central to her instruction. This also partly explains why she did not mention using digital technology for content presentation during her interview.

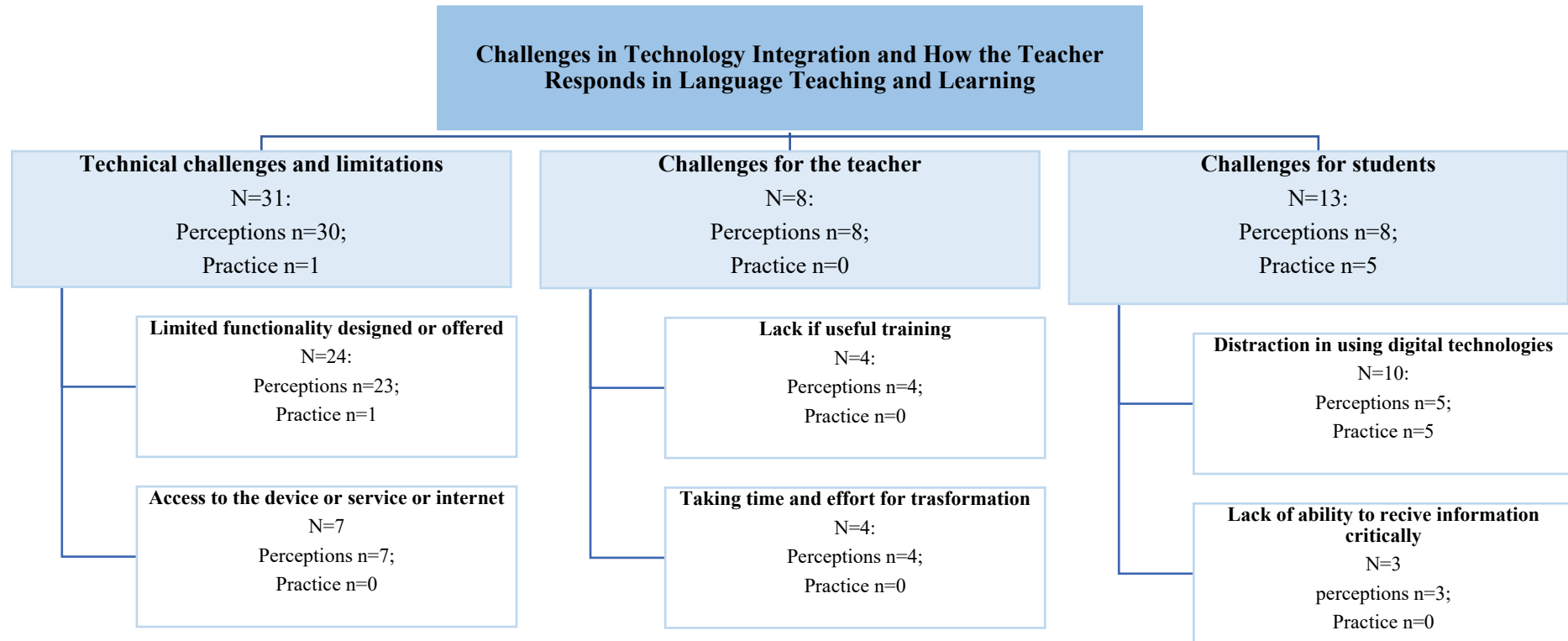
Neither Fang’s perceptions shared in the interview nor her teaching practices observed in the classroom addressed certain potential uses of digital technology. These included evaluating learning progress and outcomes, facilitating authentic intercultural communication, and reflecting on teaching practice. The absence of these aspects in both her stated views and observed practices suggests that she may not have recognised, valued, or endorsed these potentials in her teaching. One possible explanation for the lack of emphasis on these areas could be the challenges Fang faced in using digital technology, which may have led her to avoid or underutilise certain functions. These challenges and her responses to them will be further explored in Section 6.4.2: Challenges in Technology Integration and How the Teacher Responds in Language Teaching and Learning.

6.4.2 Challenges in Technology Integration and How the Teacher Responds in Language Teaching and Learning

Fang encountered multiple challenges in integrating digital technology into language teaching, which influenced her instructional decisions and responses. This section first examines technological limitations, followed by teacher-related challenges, including professional development and time constraints. It then explores student-related challenges, particularly issues with focus and critical engagement, highlighting how these factors shaped Fang's use of digital tools in the classroom.

Figure 6.2

Breakdown of the Theme Concerning the Teacher's Perceived Challenges in Technology Integration in Language Teaching in Case Study Two



Technological Challenges and Limitations

Fang perceived limited functionality in digital technologies as a key challenge in language teaching. She believed that existing digital tools were primarily designed for listening and reading, with limited capacity to address grammar instruction, communicative strategies, and nuanced language learning (Interview with Fang). She argued that Chinese grammar is highly flexible and fluid, often making it difficult even for language teachers to systematically define its rules, let alone for digital tools to effectively support grammar practice (Interview with Fang). She also questioned the ability of digital tools to provide meaningful feedback on student errors. Since students' mistakes often stemmed from social background, peer influence, or personal exposure to language, she believed that no current digital technology could automatically recognise and respond to these errors as effectively as a teacher could (Interview with Fang). However, her perspective focused specifically on computer-generated feedback and did not consider the potential for teachers to use digital platforms as a channel for providing feedback. This might reflect her reliance on face-to-face interaction as the primary mode of teacher feedback in the classroom.

She was also sceptical about AI-based conversation tools, stating that they were not intelligent enough to facilitate meaningful interactions. According to her, students needed to produce grammatically correct sentences for AI to respond appropriately, and if they made mistakes, AI failed to interpret their intended meaning, causing communication breakdowns (Interview with Fang). Furthermore, she observed that unsuccessful interactions with AI lowered students' confidence and made them doubt their own abilities (Interview with Fang). She contrasted AI with human teachers, explaining that teachers could use body language, emphasis, and contextual cues to help students clarify their thoughts, something digital technology could not yet replicate (Interview with Fang).

These perceptions were reflected in her teaching practices, as classroom observations showed no use of digital technology for grammar instruction or interactive communication. Instead, her teaching was heavily reliant on teacher-led explanations, aligning with her perception that digital tools were insufficient for these aspects of

language learning.

In addition, Fang identified access-related challenges as a limitation in using digital technology for language teaching. She noted that budget constraints influenced her decisions on digital tool usage, as textbooks were expensive and purchased using limited Chinese classroom funds. Given the high costs, she had to be strategic in allocating resources, balancing between textbooks and digital tools. However, she noted that the school's funding for Education Perfect memberships reduced financial pressure, ensuring that all students could access this platform without additional cost (Observation One). She also mentioned that certain social media platforms, such as Facebook and Twitter, were banned in the school, meaning they were simply not considered for classroom use (Interview with Fang). Additionally, she noted that occasional connectivity issues could affect lessons, as Wi-Fi was sometimes unreliable (Interview with Fang). These constraints were reflected in her classroom practices, where there was no observed use of digital tools that were restricted or difficult to access. She did not encourage students to use blocked platforms or unsupported devices, aligning with her view that school regulations and logistical factors naturally shaped the extent to which digital tools could be integrated into her teaching.

Challenges for the Teacher

Fang identified teacher-related challenges, particularly the lack of useful training and the time and effort required for integration, as barriers to effectively using digital technology in language teaching. She viewed learning to use technology as a continuous process, as she had to adapt to digital tools that her students, having grown up with technology, found more intuitive (Interview with Fang). She mentioned that she constantly explored new digital resources in her spare time, searching for valuable tools that could enhance teaching (Interview with Fang). However, she also expressed a pragmatic approach to technology use, stating that if a tool was too difficult to use, or not user-friendly, she would simply look for an alternative rather than investing too much effort in mastering it (Interview with Fang).

Regarding professional development, she noted that her school provided training on platforms such as Schoology and Education Perfect, covering areas like setting assessments, posting resources, and ensuring cyber safety (Interview with Fang). However, she found that much of the training focused on basic digital functions and game-based activities, which she did not consider particularly innovative or transformative for language teaching (Interview with Fang). Also, as mentioned before, she viewed digital technology as still fundamental rather than groundbreaking, and thus did not see much value in some of the training provided (Interview with Fang). Classroom observations did not capture any direct evidence of Fang engaging with digital tools in a way that reflected ongoing training or experimentation, possibly because these activities typically occurred outside of class time.

Challenges for Students

Fang identified student-related challenges as a key factor affecting the use of digital technology in language teaching. One of her primary concerns was students' ability to stay focused when using digital resources. She noted in the interview that students often became distracted by unrelated content, especially when websites featured advertisements or recommendation algorithms that directed them toward other topics (Interview with Fang). She emphasised the importance of guiding students, providing specific keywords for online searches to keep their learning focused. Additionally, she observed that students' attention spans were shrinking, with many finding videos longer than three minutes too long and preferring to watch content at double speed (Interview with Fang). Classroom observations reflected some of these concerns. When using a free online stroke order tool, Fang was frustrated by the excessive advertisements and took the opportunity to warn students about privacy risks and the hidden costs of free digital products (Observation One). She also maintained classroom discipline regarding digital distractions, instructing students to put away mobile phones at the start of class and intervening when a student was off-task on a laptop during a listening activity (Observation Two). These instances aligned with her view that students required structured guidance when engaging with digital content to ensure productive learning experiences.

She also expressed concerns about students engaging with digital content critically. She was cautious about encouraging online interactions with native speakers, as language use varies widely across regions, age groups, and social backgrounds, which could lead to confusion. She worried that students might misinterpret online exchanges or struggle to assess the credibility of the information they encountered (Interview with Fang). To address this, she emphasised the importance of critical thinking, though she felt that many students had not yet developed the necessary skills to evaluate different perspectives independently (Interview with Fang). As a result, she did not support social media for student interactions online, nor was there any observed instance of her encouraging students to explore using online tools. Beyond concerns about information reliability and language variation, she felt that online intercultural exchange was unnecessary, as her students were already in a multicultural school environment with over 50 languages spoken, providing ample opportunities for intercultural communication in daily life (Interview with Fang).

6.4.3 Other Perceptions

Fang believed that teachers played a central role in selecting, evaluating, and guiding the use of digital technology in language teaching. She saw teachers as evaluators and gatekeepers, responsible for ensuring that students engaged with relevant, high-quality content rather than being passively influenced by unfiltered online information and algorithm-driven recommendations (Interview with Fang). Since anyone could post content online without quality control, she argued that students lacked the ability to critically assess information and could easily be misled or distracted. As a result, she viewed it as the teacher's responsibility to actively guide students, teaching them to evaluate resources, identify authenticity, and make informed choices about their digital learning materials (Interview with Fang).

At the same time, Fang acknowledged that digital technology was an unavoidable trend in education. However, rather than embracing it unconditionally, she saw its integration as a necessity driven by external expectations and sought to make the most of its advantages while maintaining teacher control (Interview with Fang). She recognised that technology was fundamentally shaping students' learning habits, and resisting it

would be impractical. However, she maintained that technology should be a tool, not a replacement for teachers, and that effective integration required teacher oversight and careful implementation (Interview with Fang). Classroom observations did not explicitly capture Fang discussing the teacher's role in technology integration, but her selective use of digital tools reflected her perspective. She made deliberate choices about which resources to use, ensuring alignment with lesson content and avoiding uncontrolled exposure to online information.

6.5 Students' Perceptions and Experience of Digital Technologies in Language

Learning

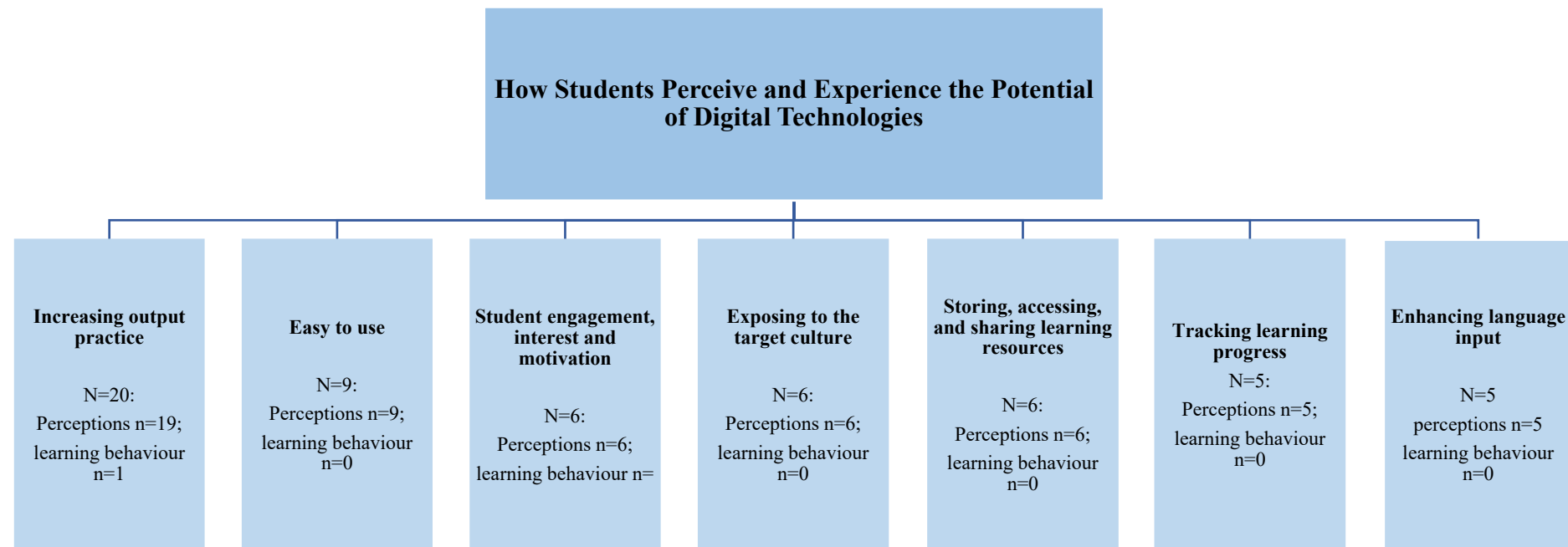
This section explores students' perceptions and experiences of digital technologies in language learning, starting with their views on the benefits of digital technology, such as language practice, engagement, and accessibility. It then examines how their perspectives align with and differ from the teacher's, providing insight into how digital tools are perceived and utilised from both instructional and learning standpoints. Finally, it discusses the challenges students encountered, their coping strategies, and how these challenges relate to the teacher's concerns, offering a comprehensive view of the role of digital technology in their learning.

6.5.1 How Students Perceived and Experienced the Potential of Digital Technologies

Students viewed digital technologies as useful for language practice, engagement, and accessibility. This section also explores their experiences with output practice, ease of use, motivation, and additional benefits, such as cultural learning and progress tracking, providing insights into how digital tools supported their language learning (see Figure 6.3).

Figure 6.3

Breakdown of the Theme Concerning the Students' Perceived Potential of Using Digital Technologies in Language Learning in Case Study Two



Output Practice

Students in Case Study Two recognised digital technologies as useful for supporting controlled output practice, particularly through Education Perfect. A feature they valued was the platform's incremental progression in task difficulty, moving from English translation of individual words to typing Chinese without pinyin support and, for more advanced tasks, producing full Chinese characters (Focus Group, Lucas). Students also emphasised accessibility: because they were not allowed to take textbooks home, Education Perfect became an important means of practising beyond the classroom (Focus Group, Robert). In addition, they mentioned occasional speaking tasks, such as recording short oral submissions via Schoology, although these appeared to occur less frequently (Focus Group, Mia). Overall, students' accounts aligned with Fang's emphasis on structured practice opportunities (see Section 6.4.1 Increasing Practice Opportunities), while also indicating that such digital tasks were experienced primarily as guided, accuracy-oriented production rather than open-ended communicative output.

Easy to Use

Fang's students generally perceived Education Perfect as an easy-to-use and accessible learning platform. They described it as straightforward and intuitive, with clear instructions and self-guided resources that made learning more manageable (Focus Group, Lucas). Several students found it easier to understand compared to other learning methods, stating that they could grasp the content more effectively when completing tasks on the platform (Focus Group, Mia). Others noted that it did not require much effort to learn how to navigate, as most functions were clear and user-friendly (Focus Group, Robert). When asked about their experience using digital technologies in general, students responded that they did not find them difficult to use, reinforcing the idea that Education Perfect aligned well with their familiarity with digital tools (Focus Group, Lucas; Robert). Additionally, students mentioned that the teacher provided some instructions on how to use the platform, which they found helpful in getting started (Focus Group, Robert). Classroom observations did not capture explicit behaviours related to students' perceptions of ease of use. However, students' ability to work independently on translation and listening exercises without

evident confusion suggests that they were comfortable using the tool (Observation One). This aligns with their perception that Education Perfect was intuitive and did not require extensive guidance.

Student Engagement, Interest and Motivation

Fang's students identified several ways in which digital technologies contributed to their engagement and interest in language learning, though opinions varied regarding specific features. One aspect they highlighted was the interactive and competitive nature of digital platforms. Several students found the leaderboard system and point-based rewards on Education Perfect engaging, as they could track their progress relative to classmates and cheer each other on by sending virtual gifts (Focus Group, Lucas; Robert). As Lucas commented, "The competitive part of it is cool." Similarly, Kahoot's game-like design was described as enjoyable and motivating. However, not all students responded positively to the competitive aspect. In a moment of reflection, Lucas also noted, "It could be demotivating if you see yourself at the bottom of the leaderboard, but I don't know." This comment suggested an ambivalent stance, acknowledging that competition can both motivate and discourage, depending on individual experiences.

Another factor that contributed to engagement was the use of videos. Students generally did not find classroom videos boring, possibly because they were used infrequently (Focus Group, Lucas). Beyond classroom use, some students also drew on digital media for independent learning. For instance, Mia shared, "I'd say watching movies in Chinese, because that's actually how I learnt most of it. I don't focus very well, so watching a Jackie Chan movie and then I ended up learning a lot more." While not part of formal classroom activities, such practices reflected how students used digital content to support their own learning preferences.

However, direct peer-to-peer digital interactions or gamified elements such as leaderboards and point-sharing were not explicitly observed in class (Observation One). Additionally, observations of students watching cultural videos suggested limited engagement, as there were no visible reactions or follow-up discussions after the

viewing (Observation One).

Other Perceived Benefits and Experience

Fang's students identified digital video resources as an important means of **learning about Chinese culture**, particularly because they perceived few alternative opportunities to engage with cultural content in their learning (Focus Group, Lucas). They described watching documentaries and videos about life in China, including schooling and traditional activities, as engaging and informative (Focus Group, Lucas; Mia). Several students noted that such videos made cultural learning more enjoyable, while others highlighted that watching films in Chinese allowed them to absorb language more naturally by encountering words and phrases in context (Focus Group, Mia; Lucas). Since the use of digital video for cultural input has already been examined in relation to Fang's instructional practices (Section 6.4.1), it is sufficient here to note that students' reflections confirmed the perceived value of these resources for expanding their cultural understanding.

Fang's students described digital platforms as playing a role in **storing and accessing learning resources**, although their engagement with these functions appeared limited. Schoology was primarily perceived as a space for receiving materials shared by the teacher, rather than as a platform that students actively navigated or managed (Focus Group, Robert). While students appreciated being able to revisit materials when needed, they noted that locating previously shared resources often required scrolling through earlier posts, which reduced the ease of retrieval (Focus Group, Lucas; Mia). Students also mentioned that Fang occasionally shared links to external resources, such as websites supporting stroke order and character recognition (Focus Group, Lucas). In contrast, platforms such as Education Perfect were used more frequently and more independently, particularly by students who were newer to learning Chinese and relied on these structured resources for out-of-class study (Focus Group, Robert).

Regarding **tracking learning progress**, students noted that Education Perfect allowed them to monitor completed tasks and track their achievements through a point system

and leaderboard (Focus Group, Mia; Lucas). While they noted that the point system resets each year, they still found it useful to see which tasks they had completed (Focus Group, Lucas). Some students mentioned that comparing scores with classmates could serve as motivation, as it allowed them to gauge how far they had progressed in the class (Focus Group, Robert). Additionally, students observed that digital tools made it easier for teachers to track their learning progress, compared to paper-based methods (Focus Group, Lucas). However, classroom observations did not explicitly capture students using digital tools to track progress, as the focus was on completing tasks rather than reviewing personal achievement records. Based on their descriptions, their engagement with progress-tracking features seemed more passive than intentional.

In relation to **language input**, students highlighted the value of digital media for hearing a wider range of voices and speech patterns. Some noted that watching films in Chinese helped them absorb language more naturally, as they could pick up words and phrases while remaining engaged with the content (Focus Group, Mia). Others emphasised the importance of voice diversity in listening exercises, explaining that reliance on a single recorded voice made it more difficult to recognise accents and variations in speech (Focus Group, Lucas). YCT listening activities were cited as particularly helpful because they incorporated both male and female speakers, supporting students' listening comprehension across different vocal qualities (Focus Group, Robert).

6.5.2 Bridging Teacher and Student Perspectives on Benefits of Digital Technology Integration in Language Education

Practice opportunities were a clear point of convergence. As outlined in Sections 6.4.1 and 6.5.1, Fang used digital tools to extend curriculum-aligned, repetitive practice, and students likewise valued Education Perfect for providing structured progression. However, their emphases differed in ways that reflect their roles. Fang framed structured practice as a means of maintaining alignment, pace, and accuracy within a planned sequence of learning, whereas students framed it as a matter of accessibility and self-paced revision, particularly under constraints such as limited access to physical materials outside class. This distinction suggests that the perceived benefit of digital

practice in this case lay less in transforming classroom interaction and more in reinforcing core linguistic routines beyond the lesson.

Cultural exposure represented another area of convergence, but with some differences in orientation. As discussed earlier (see Section 6.4.1), Fang positioned digital video primarily as a resource for introducing cultural topics and supporting teacher-guided comparison. Students, by contrast, described such videos as one of the few accessible and engaging ways to learn about Chinese culture, often valuing them for their immediacy and entertainment as much as for their informational content (see Section 6.5.1). Across both perspectives, however, cultural engagement tended to remain at the level of exposure rather than extended dialogue. While videos provided vivid representations of cultural practices, they were not consistently followed by sustained discussion or student-led reflection. This pattern suggests that, in this case, digital video functioned more as a means of cultural display than as a platform for deeper intercultural exploration and interaction.

A notable difference was in their views on digital technology for enhancing language input. Fang saw digital resources as a way to increase exposure to different voices and real-world language usage, addressing the limitations of textbooks (Interview with Fang). She believed that students became too familiar with her voice, which made external listening practice essential. Her students also recognised and experienced voice diversity primarily as a practical support for developing sensitivity to accents and speech variation (Focus Group, Lucas; Robert).

In terms of student engagement and motivation, students found gamification features, such as leaderboards and point-based rewards in Education Perfect, motivating, whereas Fang did not explicitly emphasise these aspects (Focus Group, Lucas; Robert). Some students found these elements enjoyable, while others felt discouraged when seeing low rankings (Focus Group, Lucas). Fang's approach to maintaining engagement was more focused on adjusting tasks based on student response, such as increasing listening task difficulty if students found it too easy (Observation Two).

Students also mentioned that movies and digital content helped sustain their interest, though this was more of an individual learning preference than a structured classroom practice (Focus Group, Mia).

With regard to the organisation of learning resources, both Fang and her students recognised the value of digital platforms for storage and access. However, the function of these platforms remained largely distributive. Schoology was primarily used to circulate materials selected by the teacher, while students engaged with it in a largely receptive manner. Although resources were technically available for review, limited student navigation and retrieval suggest that the platform supported access rather than active resource management or collaborative engagement for students.

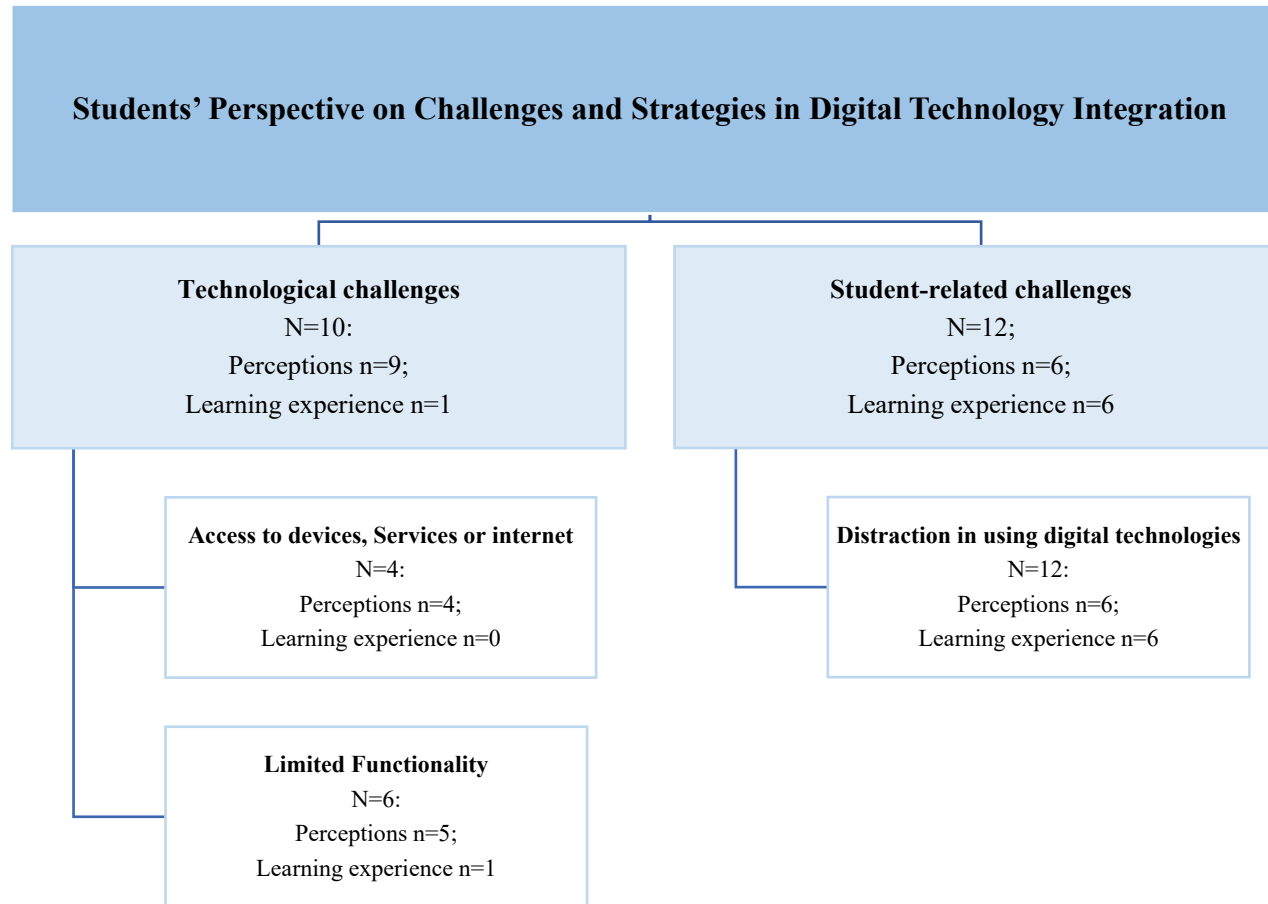
Finally, some potential uses of digital technology remained underexplored in both Fang's teaching and her students' experiences. Areas such as evaluating learning progress beyond point-based tracking, fostering authentic intercultural communication, and engaging in reflective learning practices were largely absent from their discussions and observed behaviours. While students used Education Perfect to track completed tasks and compare scores, their engagement with progress tracking appeared more passive than intentional (Focus Group, Mia; Lucas). Similarly, neither Fang nor her students emphasised the role of digital technology in facilitating real-time intercultural exchanges. This may reflect Fang's preference for face-to-face communication or her perception that her students were already in a multicultural environment (Interview with Fang).

6.5.3 Students' Perspective on Challenges and Strategies in Digital Technology Integration

Students faced both technological and personal challenges in using digital tools for language learning (as shown in Figure 6.4). This section first discusses technological limitations, followed by issues related to concentration, motivation, and distractions, offering insights into their experiences and the impact of digital technology on their learning process.

Figure 6.4

Breakdown of the Theme Concerning the Students' Perceived Challenges in Technology Integration in Language Learning in Case Study Two



Technological Challenges

Fang's students encountered several technological challenges while using digital tools for language learning, ranging from limitations in handwriting practice to issues with automated assessment systems. One notable challenge was the lack of effective digital support for Chinese handwriting practice. While students used digital tools primarily for recognising characters, they reported that there were no useful online resources to help them develop handwriting skills (Focus Group, Mia). Instead, they relied on methods such as copying characters on paper and learning from the teacher. One student described handwriting as "quite hard to learn," especially in terms of stroke patterns (Focus Group, Robert). This reflects the distinction between recognising characters on screen and physically producing them by hand, which are related but distinct skills. It also highlights an area where students felt digital tools did not adequately support their learning needs.

Another issue students highlighted was the strict response recognition in platforms like Education Perfect. They found that small errors in spelling, grammar, or punctuation often led to answers being marked as incorrect, even if their response was conceptually accurate (Focus Group, Lucas; Mia). This challenge was also observed in the classroom when students completed translation exercises. Sometimes their English translations conveyed the correct meaning but did not match the exact phrasing required by the system, leading to incorrect marking (Observation Three).

Students also noted accessibility issues related to internet restrictions and platform costs. They mentioned that Education Perfect required a paid membership, and while the school covered this cost, they recognised that access could be a barrier for independent learners (Focus Group, Robert). Additionally, school internet limitations prevented access to certain websites and social media platforms, with students acknowledging that such restrictions were partly to prevent distractions in class (Focus Group, Robert; Mia). However, slow internet speed in the school sometimes led students to use mobile data instead of relying on the school's network (Focus Group, Robert).

Student-related Challenges

Students encountered several personal challenges when using digital technologies for language learning, including difficulties with concentration, fluctuating motivation, and external distractions from using digital tools. Maintaining focus was a key challenge. Some students admitted that they struggled to concentrate when using online resources, as they were easily distracted by other websites, social media, or games (Focus Group, Robert; Mia). Mia specifically mentioned that while working online, she would often get sidetracked by unrelated content, leading to significant time loss before returning to her tasks (Focus Group, Mia). Also, distractions from digital environments further impacted student engagement. Some students noted that platforms like Duolingo contained frequent advertisements, which interrupted their learning flow (Focus Group, Lucas). Others mentioned that school restrictions on social media access were understandable, as mobile phones often led to in-class distractions (Focus Group, Robert).

Observed classroom behaviours reflected these issues. Some students engaged in off-task activities during digital learning tasks, such as working on assignments from other subjects, using calculators, or watching unrelated videos (Observation One). Instances were noted during listening practice where students were physically present in the lesson but disengaged, either whispering to peers, doodling in their notebooks, or playing on their phones (Observation Three). In one case, despite digital content being used in the lesson, Fang did not actively intervene when some students became distracted, possibly due to recognising their fatigue after an exam (Observation Three). These observations support students' reports that digital learning tools, while beneficial, did not always guarantee engagement and could sometimes contribute to reduced focus.

6.5.4 Comparing Student and Teacher Perspectives on Challenges

Fang and her students shared some common views on the challenges of integrating digital technology into language teaching, yet their specific concerns and approaches differed. Additionally, certain challenges were mentioned by Fang but not by the students, and vice versa, reflecting their distinct roles and perspectives in the classroom.

Both Fang and her students recognised the limitations of digital tools in supporting various aspects of language learning. Fang believed that existing digital tools were primarily designed for listening and reading, offering little support for grammar instruction, communicative strategies, and more nuanced language learning. She was particularly critical of computer-generated feedback, arguing that it could not effectively address the root causes of students' errors, which were often influenced by social background, peer influence, or personal language exposure. Similarly, students expressed frustration with automated assessment systems, especially in platforms like Education Perfect, where small spelling, grammar, or punctuation errors often led to incorrect marking, even when their responses conveyed the correct meaning. This similarity in their perspectives suggests that while digital tools provided some support for learning, their rigid structures and limitations often created obstacles rather than facilitating deeper understanding.

Both Fang and her students also highlighted accessibility constraints as a factor shaping the use of digital technology in language learning. Fang pointed out that financial considerations influenced her decisions regarding digital tool usage, as the budget for Chinese language teaching was limited. Although the school covered the cost of Education Perfect subscriptions, she still needed to manage her resources strategically due to budget constraints. Students, too, recognised that platform costs could be a barrier for independent learners. Additionally, both sides noted that school regulations restricted access to certain websites and social media platforms, though students seemed more accepting of these limitations, understanding that such measures were in place to prevent distractions in class. However, they also noted that slow internet speed sometimes forced them to use mobile data instead of relying on the school's network, adding another layer of difficulty to technology integration.

Across teacher and student accounts, managing attention and distraction emerged as a shared concern in digitally supported learning. While Fang emphasised structured guidance and classroom regulation as necessary conditions for productive digital engagement, students described distraction as an ongoing challenge requiring

individual self-control. This alignment highlights a convergence in recognising the risks of algorithm-driven and advertisement-rich digital environments, even as responsibility for managing these risks was understood differently by teachers and learners.

While Fang and her students shared concerns about technological limitations, accessibility issues, and digital distractions, there were also notable differences in the challenges each group highlighted. One key issue mentioned by Fang but not explicitly raised by students was the inadequacy of digital tools for grammar instruction. She believed that Chinese grammar, being highly flexible and complex, was difficult to systematically define, making it challenging for digital tools to support its instruction effectively. In contrast, students focused more on the shortcomings of automated assessment rather than the broader limitations of digital tools in teaching grammar.

Fang also discussed the challenges teachers faced in integrating technology, particularly the time and effort required to master new tools. She noted that learning to use technology was an ongoing process and that her students, having grown up with digital devices, often found these tools more intuitive than she did. Although she actively explored new digital resources in her spare time, she took a pragmatic approach, choosing to abandon tools that were too complicated rather than investing significant effort in mastering them. Furthermore, she was critical of the professional development training provided by her school, arguing that it mostly covered basic digital functions and game-based activities, which she did not see as particularly innovative or transformative for language teaching. Her students, however, did not mention teacher training at all, likely because their focus was on the effectiveness of digital tools from a learner's perspective rather than the preparation required for teachers to implement them.

Another distinction was Fang's cautious stance on online interaction and intercultural exchange, which she viewed with scepticism. She worried that students might struggle to interpret online conversations due to variations in language use across different regions, age groups, and social backgrounds. Furthermore, she was concerned about

their ability to critically evaluate the credibility of information encountered online. As a result, she did not encourage students to use social media for language practice and saw little need for online intercultural exchange, arguing that her students already attended a multicultural school where they had daily opportunities for cross-cultural communication. In contrast, students discussed social media restrictions in terms of access rather than questioning the appropriateness of online interactions for language learning.

There were also challenges that students raised but were not particularly emphasised by Fang. One notable issue was the lack of digital support for handwriting practice. While digital tools were useful for character recognition, students reported that they did not find any effective online resources to help them develop their handwriting skills. As a result, they relied on paper-based handwriting practice. This issue did not appear in Fang's discussion, possibly because she assumed handwriting practice was inherently a manual process rather than something that could be effectively supported by digital tools.

6.6 Chapter Summary

The findings from Case Study Two illustrate the interplay between the teacher's objectives, instructional practices, and students' experiences in the use of digital technologies for language learning. Fang's teaching objectives centred on developing students' communicative competencies, with a strong emphasis on linguistic competence. She viewed vocabulary acquisition as foundational to language learning, while placing less immediate emphasis on pronunciation and grammar, believing that these aspects would naturally refine over time. ICC was another key focus, as she considered language and culture inseparable. She encouraged cross-cultural comparisons and real-world cultural exposure to help students develop a broader perspective. However, discourse and strategic competence were less explicitly addressed in her teaching. While she recognised the importance of coherence and communication strategies, she was more concerned with ensuring students could convey meaning effectively rather than perfecting their discourse structure. This

emphasis aligns with the priorities of beginner-level language instruction. Her views on digital competence were characterised by caution. While she recognised the usefulness of digital tools in facilitating language learning, she was sceptical about students' ability to critically engage with online content and remained hesitant about encouraging digital interactions for communication.

Fang's use of digital technology in language teaching reflected a preference for structured, teacher-guided learning. Digital tools were integrated primarily to reinforce routine practice, provide supplementary exposure to cultural content, and diversify language input in controlled ways. However, teaching remained board- and textbook-centred, with teacher modelling, oral repetition, and tightly sequenced activities forming the dominant pedagogical pattern. In this sense, technology functioned as an adjunct that extended and consolidated learning rather than replacing conventional routines. Challenges in technology integration, including technical limitations, access constraints, and professional development gaps, further shaped this cautious and selective approach.

From the students' perspective, digital technologies were valued for their accessibility and perceptual support, particularly in relation to listening comprehension, while broader opportunities for interaction and communicative expansion remained limited. At the same time, students reported constraints such as limited support for handwriting, rigid automated marking, and difficulties sustaining concentration, which shaped their overall experience of digital learning.

A key theme generated through the analysis of this case study is the similarities and differences between the teacher's and students' experiences. Both recognised the benefits of digital technology for structured learning, yet their priorities reflected their respective roles: Fang emphasised control and structured reinforcement, whereas students valued accessibility and motivation. These differing perspectives are understandable, given the distinct purposes for which teachers and students engage with technology in the classroom. Additionally, challenges such as digital distractions and

the lack of meaningful online interaction were perceived in different ways, further illustrating their role-specific experiences within the learning process.

Chapter 7: Case Study Three

7.1 Introduction

In this final case study, the focus turns to a te reo Māori language teacher and her students, exploring their experiences and perceptions of digital technology in language learning. The chapter begins by setting the scene, offering contextual insights into the teaching environment and the role of digital tools in the classroom. It then delves into the teacher's perspectives, examining her goals for developing Communicative Competence, intercultural awareness, and digital competence, alongside her stance on the effectiveness of technology in language education.

Moving forward, attention shifts to the teacher's practical use of digital tools, highlighting both the opportunities she sees in technology and the challenges she faces in integrating it into her teaching. This section not only uncovers how she implements digital resources to support learning but also reveals the tensions between her pedagogical perceptions and classroom realities.

Finally, the chapter turns to the students' voices, shedding light on their experiences with digital learning. It explores their perceptions of the benefits and limitations of technology, their engagement with digital tools, and how their views align with, or sometimes diverge from, their teacher's. By bringing together these perspectives, the chapter paints a comprehensive picture of how digital technology shapes language learning in this particular classroom.

7.2 Context of Case Study Three

Case Study Three was conducted in a te reo Māori class at a public secondary school in Auckland. This high-decile (10) school operated on a six-day timetable cycle, during which Marama taught this class three times. Language learning was compulsory for all Year 9 and 10 students, and the school offered four options: German, Spanish, Chinese,

and te reo Māori, each taught in a dedicated classroom. Te reo Māori across Years 9 to 13 was taught by a single teacher, here referred to as Marama. At the time of data collection, Marama was in her fifties and had been teaching at the school for approximately four years. A native speaker of te reo Māori, she was of Māori descent and brought to her teaching a strong cultural and linguistic foundation, shaped by her Māori identity and professional experience. Prior to entering the secondary sector, she had spent around eight years teaching te reo Māori at the primary level.

Marama's Year 10 te reo Māori class was the focus of this case study. She had created a learning environment that was both visually rich and culturally immersive. Around the room, cards and decorations adorned the walls, showcasing Māori language and cultural symbols. In one corner, a bookshelf housed a collection of books related to te reo Māori and its cultural heritage. At the front of the classroom, a whiteboard and projector served as essential teaching tools. The projector remained permanently connected to Marama's laptop, enabling her to display lesson content seamlessly. Moreover, textbooks were absent from the learning space. Instead, Marama designed digital slide presentations, ensuring that students had access to materials via Google Classroom, the primary platform for storing and retrieving resources. Education Perfect, another widely used learning management system, further supplemented their learning experience.

Regarding Marama's teaching plan, she structured her Year 10 curriculum around four holistic, year-long themes designed to develop both language proficiency and cultural understanding. She viewed language learning as a pathway to global citizenship, encouraging students to interpret their local experiences within a broader international context. One of the key overarching themes was Tōku Papatūānuku (My World, My Planet, My Earth), through which students progressively explored their environment, beginning with the immediate surroundings and gradually expanding their focus outward. In Term One, the focus was on the school community. By acquiring relevant te reo Māori vocabulary and sentence patterns, students described their classrooms, teachers, peers, and daily routines, thereby articulating a sense of place and belonging. Marama's thematic approach, which wove together language, culture, and identity,

closely reflected the principles underpinning the national curriculum guidelines for te reo Māori in English-medium schools (Ministry of Education, 2009), which emphasise culturally grounded, context-rich, and personally meaningful learning experiences.

As the year progressed into Term Two, the lens shifted to the students' local communities. They learned to discuss modes of transport, describe their journeys to and from school, and talk about after-school activities. Marama also encouraged them to share what their whānau (family) did on weekends, reinforcing connections between language and everyday experiences. By Term Three, the focus extended beyond the local community to Tāmaki Makaurau (Auckland), their city. The students embarked on a discovery of notable landmarks, historical events, and cultural sites unique to Auckland. To deepen their engagement, they took a virtual journey across Aotearoa New Zealand, exploring different regions and their cultural significance. Their final task was to write about their 'travels' across the country in te reo Māori, reflecting on the landscapes, people, and traditions they encountered along the way.

Finally, in Term Four, which coincided with the observation period of this case study, Marama and her students turned their attention to My World. This theme invited students to explore the seven continents, examining geography, cultures, and traditions from a global perspective. Marama was particularly excited about this term, as it marked her first time implementing this teaching plan. To tailor the lessons to student interests, she collaborated with them at the beginning of the term, identifying the topics that intrigued them most about different parts of the world.

The Year 10 te reo Māori class had an enrolment of approximately 23 students, some of whom had previously learned te reo Māori in Year 9, while others came from Māori cultural backgrounds. To recruit participants for this study, Marama invited students to take part between August and September 2022, ultimately resulting in six students volunteering for the research. These students' motivations for learning te reo Māori centred around cultural connection, national identity, and personal interest, all of which were closely tied to the unique status of te reo Māori in Aotearoa New Zealand. Kaia

and Hunu, both of Māori descent, viewed learning the language as a means of connecting with their Māori identity. Aroha, encouraged by her mother, also expressed a desire to better understand her ancestral roots. Zoe and Anna emphasised the importance of learning an official language of Aotearoa, recognising its role in shaping national identity. Zoe, who had previously learned te reo Māori in primary school, described her return to the language as a way to rekindle an earlier connection. Grace, along with her parents, saw it as an opportunity to explore something new and enriching.

Between September and October 2022, data collection took place, capturing multiple aspects of classroom practice and student experiences. The research data incorporated two-unit teaching plans, one in-depth teacher interview, three classroom observations, and one focus group discussion with the participating students. Regarding the unit teaching plan, Marama had carefully designed a five-week inquiry-based teaching plan that encouraged students to take charge of their own learning through collaborative exploration. The unit was built around the central theme: “Population and demography inform diversity in global interactions.” As Marama planned, rather than simply receiving information, students worked together in groups, each focusing on a different continent. Their task was to investigate various aspects of their chosen continent, uncover key insights, and ultimately present their findings in te reo Māori. All of this data contributed to a comprehensive understanding of how te reo Māori was taught and learned within this particular school setting. Table 7.1 and 7.2 summarise the pseudonyms of the teacher and students, along with the types of data collected and their relevance to the research questions.

Table 7.1
Teachers and Students' Pseudonyms in Case Study Three

Teachers and students	Pseudonyms
Language teacher	Marama
Student 1	Zoe
Student 2	Hunu
Student 3	Kaia
Student 4	Aroha
Student 5	Anna
Student 6	Grace

Table 7.2
Correspondence Between Data Sources and Research Questions in Case Study Three

Data sources	Research question(s) to address
CS3, lesson plan one	RQ1&3
CS3, lesson plan two	
CS3, classroom observation one	RQ3
CS3, classroom observation two	
CS3, classroom observation three	
CS3, interview with Marama	RQ1& 2
CS3, focus group with students	RQ4

7.3 Teacher's Objectives in Developing Students' Communicative Competencies

This section examines Marama's objectives in developing different components of students' Communicative Competence in her language teaching. It draws on interview data and her teaching plans that illustrate how these objectives are reflected in her teaching.

7.3.1 Linguistic Competence

Marama placed strong emphasis on linguistic competence in her language teaching, particularly regarding pronunciation, vocabulary, and grammar. Her responses in interviews demonstrated a strong commitment to ensuring students developed these aspects of language accurately and meaningfully. Pronunciation was an essential component of Marama's teaching philosophy. She repeatedly highlighted its importance, stating that it was "really important, really important" for students to get their pronunciation right (Interview with Marama). However, she noted that with limited class time, as she saw her students only three times per cycle, she sometimes lost sight of the importance of pronunciation practice. Nevertheless, when she actively

incorporated it into her lessons, she observed immediate improvements. She believed that students must “take some care around the language and how they use it” (Interview with Marama), reinforcing the idea that pronunciation was not only about accuracy but also about fostering respect for the language.

Similarly, Marama viewed vocabulary and grammar as inseparable and of utmost importance in language teaching. She asserted that learning and using vocabulary correctly was fundamental, stating, “It’s everything, they have to do. It’s not even an option” (Interview with Marama). However, she recognised a challenge: most students did not engage with vocabulary learning outside of class. Out of a class of 23, she estimated that only two or three students would independently study vocabulary at home, while the rest avoided it. This led her to stop creating vocabulary lists, as she found them ineffective and noted that students “weren’t accessing it, the kids weren’t using it, they wouldn’t look at it, they wouldn’t learn it or anything like that” (Interview with Marama). Instead, she incorporated vocabulary practice directly into classroom activities, ensuring that students encountered words in meaningful contexts. She also intertwined vocabulary learning with grammar instruction, making sure students used words correctly within sentence structures. For example, when teaching the word “blue,” she provided varied sentence contexts like “She has blue eyes,” “She has blue hair,” and “That tree is blue,” ensuring students grasped both lexical meaning and grammatical function (Interview with Marama). Marama also stressed the significance of grammar, unequivocally stating that “it’s everything. If they’re not doing it, they’re not talking the language, and they’re not using it properly” (Interview with Marama). She believed that while students could make mistakes, self-correction and proper usage were integral to language learning. She reinforced this through assessment, ensuring that students were evaluated on their ability to construct grammatically correct sentences and use vocabulary accurately. Her perspective underscored her view that grammatical accuracy was not just an academic requirement but a fundamental part of effective communication in the language.

7.3.2 Intercultural Communicative Competence

Marama placed a strong emphasis on ICC in her teaching, recognising that language

learning must be accompanied by cultural understanding. Both her interviews and teaching plans demonstrated a consistent effort to develop students' awareness of cultural differences and their ability to engage respectfully in diverse linguistic contexts. For Marama, understanding the target culture was fundamental to language learning. She believed, "To know the language, you need to know the culture" (Interview with Marama), a perspective that shaped her curriculum. Her lessons incorporated discussions on global interactions and diversity, encouraging students to explore demographic and cultural characteristics beyond their immediate environment (Lesson Plan One). She saw cultural awareness not as an abstract concept but as an essential skill for fostering global citizenship (Lesson Plan Two).

She also stressed the importance of cultural appropriateness in language use, arguing that language must be used in an authentic and contextually appropriate way. "You need to use it in the appropriate way that it's authentic" (Interview with Marama). For her, failing to adapt to cultural norms when speaking a language was a sign of disrespect: "I think it's rude when you impose your own behaviours and thoughts in their spaces when you're speaking the language" (Interview with Marama). Additionally, rather than comparing culture, Marama encouraged acceptance, stating, "I don't think 'compare'; I think 'accept' would be the word I would use" (Interview with Marama). She integrated this philosophy into her teaching by designing activities that focused on recognising and respecting cultural differences rather than judging them (Lesson Plan One). A notable example of Marama's ICC approach occurred during a cross-cultural food activity, where her students joined a Mandarin class in making mooncakes. She later realised she had not adequately prepared them, leading to some behaving disrespectfully when trying the food. She addressed this directly. This incident reinforced her perception of the importance of guided cultural experiences and reflection: "You don't have to like it, but you don't need to behave like that... You need to think about why you don't like it and express that appropriately" (Interview with Marama). In addition, Marama also valued direct engagement with people from different backgrounds, believing that genuine intercultural understanding comes from personal interaction. "I've learnt far more about who I am and who the world is when I'm with people that don't look like me" (Interview with Marama).

7.3.3 Discourse Competence

Marama placed considerable importance on discourse competence in her language teaching, recognising that students must develop coherence and structure in both spoken and written communication. Her interviews revealed a clear focus on guiding students to construct well-organised narratives, ensuring that their ideas flow logically and meaningfully. She believed that coherence was built upon a strong foundation of grammar and vocabulary and that this competence was not just about linguistic accuracy but also about telling a compelling story. She stressed that students needed to ensure their writing was clear, concise, and to the point, incorporating the sentence structures they had learned. “At the end of the day, is it telling a good story? Is the audience interested in what you’re writing about? It’s important, it’s everything” (Interview with Marama).

Her teaching approach focused on structured writing development, where she guided students through the process of organising their texts step by step. “Everything I do is to set them up so they can write clearly and write a really good story. We do it step by step from the beginning to the middle to the end and how to wrap it up” (Interview with Marama). She stated that, as Year 10 students, their writing was not yet refined, but she prioritised ensuring that it had a logical flow. One of her key strategies was teaching students to write with a clear sequence of events, reinforcing the connection between discourse competence and tense usage.

To support students in structuring their writing, she introduced a three-part framework that required them to describe past events, narrate present actions, and anticipate future plans. They began by recounting where they travelled, with whom, and how, before shifting to describing their experiences at the location in the present tense. Finally, they projected their future activities using appropriate grammatical structures. This method helped students develop a coherent narrative flow, ensuring that their writing did not become a random collection of disconnected sentences but instead formed a structured and engaging story (Interview with Marama).

7.3.4 Strategic Competence

Marama did not explicitly teach strategic competence in the conventional sense; however, her approach allowed for a flexible use of language that arguably reflected an implicit form of communicative strategy. When students encountered vocabulary gaps, she accepted their tendency to insert English words into otherwise te reo Māori sentence structures. Rather than insisting on full te reo Māori language production, she prioritised grammatical accuracy and encouraged students to maintain correct sentence patterns, even if this meant drawing on English vocabulary. As she explained: “What I don’t mind them doing is just inserting English words in the words that they don’t know, so I would prefer them to get the sentence structure correct and insert the English word in those little spaces” (Interview with Marama). This form of translanguaging could enable students to draw on their full linguistic repertoire to sustain communication. Within the bilingual context of Aotearoa New Zealand, where most te reo Māori learners are also fluent English speakers, this practice may be seen as a pragmatic and culturally situated strategy that supports communication and reduces affective barriers.

7.3.5 Digital Competence

Marama held mixed perceptions of digital competence in language learning, recognising its necessity while questioning its actual effectiveness. On the one hand, she acknowledged that digital technologies were “the way of the future” and accepted that she needed to use them to support students’ learning: “I have to do it... I need to be more technologically savvy as a teacher” (Interview with Marama). Although initially reluctant, she recognised the need to adapt in order to remain effective and to meet students’ learning needs. Her lesson design reflected this pragmatic stance. While sceptical about the depth of learning afforded by digital tools, she nevertheless incorporated information literacy skills into her curriculum, including “finding, interpreting, judging and creating information” and “evaluating and selecting information sources and digital tools” (Lesson Plan One).

However, Marama personally favoured face-to-face learning and maintained a clear

preference for bookwork. She stated firmly, “There’s nothing better than face-to-face. Nothing can beat face-to-face,” and emphasised that it was “very important” for students to write in their books (Interview with Marama). This preference shaped how she balanced core learning goals with digital requirements, particularly given her limited contact time with students—“three times a cycle... sometimes one week and not again for another two weeks.” While she “100%” encouraged students to use digital technologies, she did not promote digital interaction in te reo Māori: “I don’t. No, I don’t at all,” a reluctance partly tied to her own non-use of social media (Interview with Marama). Her emphasis on *kanohi ki te kanohi* (face-to-face engagement) also reflected Māori cultural values of relationality and embodied learning (Macfarlane et al., 2007).

Ultimately, Marama viewed digital competence as something she needed to adopt rather than actively embrace. As she explained, “If I want to be an effective teacher... that’s something I need to move toward.” Yet her reservations remained evident, particularly in her comment: “It’s not for the love, I actually don’t like it... can we just put our laptops away for one class and not rely on it?” (Interview with Marama). This mixed stance encapsulated her efforts to balance the demands of modern education with her preference for face-to-face, relationship-centred approaches.

7.4 Teacher’s Perceptions and Practices of Using Digital Technologies in

Language Teaching

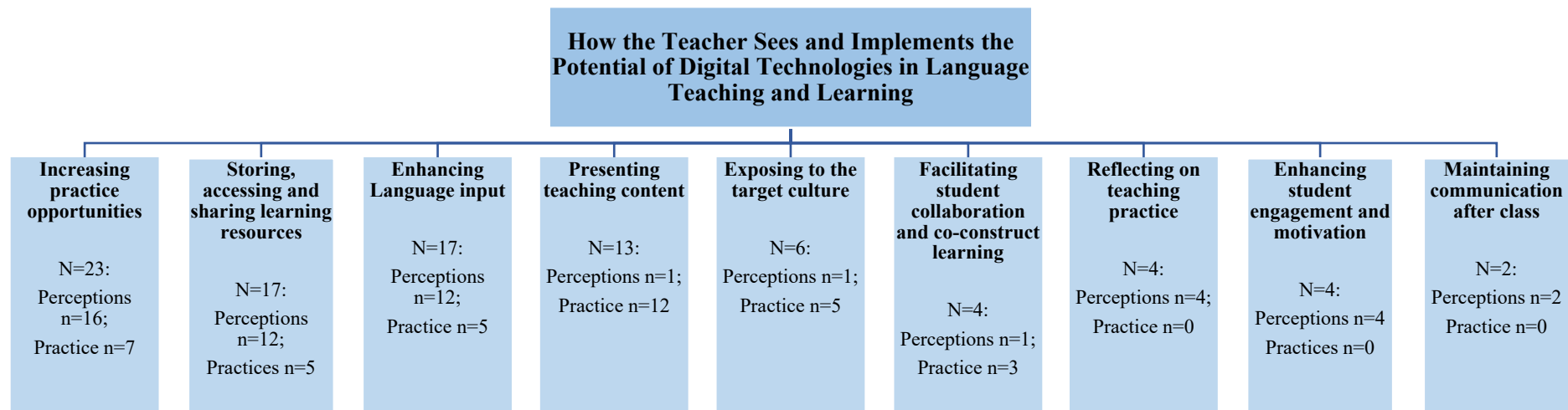
This section explores Marama’s perceptions and practices regarding digital technologies in language teaching, examining both the opportunities she identified and the challenges she encountered. While she saw digital tools as beneficial for reinforcing learning, facilitating cultural exploration, and supporting collaboration, she also faced difficulties related to teacher workload, student engagement, and technological constraints. By comparing her stated views with observed classroom practices, this section provides insights into how digital technologies were implemented in her teaching and the extent to which they aligned with her intended teaching goals.

7.4.1 How the Teacher Sees and Implements the Potential of Digital Technologies in Language Teaching and Learning

Marama viewed digital technologies as valuable tools for supporting language learning, with a focus on reinforcing prior knowledge, facilitating cultural exposure, and enhancing resource management. She integrated digital tools selectively, using them for structured practice, research, and collaborative tasks. This subsection examines how she perceived and applied the potential of digital technologies in her teaching, highlighting the alignment between her stated views and observed classroom practices (see Figure 7.1).

Figure 7.1

Breakdown of the Theme Concerning the Teacher's Perceived Potential of Using Digital Technologies in Language Teaching in Case Study Three



Increasing Practice Opportunities

Marama viewed digital technologies as supportive tools to reinforce prior learning rather than core teaching resources for practice. She explained that platforms like Education Perfect were used “as a consolidation tool” rather than for direct instruction, adding that she limited its use to “maybe five times a term, not a lot, and it’s only short and sharp” (Interview with Marama). She preferred brief, structured activities over prolonged digital exercises to avoid student frustration (Interview with Marama). For oral practice, she integrated Padlet, requiring students to record themselves reading their written work aloud. She used Padlet to have students upload videos of their speech, allowing her to assess pronunciation and intonation (Interview with Marama). She described this as a quick and efficient way to monitor student progress and provide immediate feedback (Interview with Marama). Additionally, she encouraged students to use Quizlet at the beginning of a term to store and review vocabulary, emphasizing that all digital tools she used, including Wakelet, Padlet, Quizlet, and Education Perfect, were meant to reinforce sentence structure and grammar accuracy (Interview with Marama).

Despite Marama’s emphasis on practice in interviews, no explicit digital oral or vocabulary practice was recorded in the observed lessons. Instead, the focus was on content exploration and presentation, and digital tools were primarily used for information retrieval and presentation rather than structured language practice. Marama organised the research process in a sequence of three stages, which she named Rangahau (search online), Reo (translating), and Tuku (presentation). Each of these stages aimed to reinforce both content exploration and language integration. While students engaged in translation and presentation tasks using template sentences in te reo Māori, the primary objective was to help them communicate their research findings through accurate sentence construction.

Exposure to the Target Culture

Marama viewed digital technologies as a valuable resource in supporting cultural learning through online research and multimodal resources, rather than through direct

intercultural interaction. She drew extensively on videos and online materials to introduce students to historical and cultural narratives, including topics such as the New Zealand Wars and the Treaty of Waitangi, explaining that “it’s all online resources. We’ll watch videos to help to learn a story and all those sorts of things” (Interview with Marama). Beyond Aotearoa New Zealand, her unit plan extended students’ inquiry to a global scale. Across the second and third weeks, students researched continents, major cities, population statistics, and economic indicators, before shifting their focus to cultural landmarks, traditions, food, and language in later weeks (Lesson Plan Two). These activities positioned cultural learning within a broader global frame, requiring students to synthesise information and reflect on Aotearoa New Zealand’s place in the wider world.

Classroom observations confirmed that digital tools were primarily used to facilitate online research and cultural exploration. Students engaged in self-directed research using Google Chrome, recording findings in Google Docs, and later presenting their research through Google Slides or Canva (Observation One, Two, and Three). The classroom activities focused on retrieving and synthesising cultural information. She also played te reo Māori music in the background, subtly reinforcing cultural exposure during class activities (Observation One). In addition, Marama emphasised information literacy skills by guiding students to organise findings, evaluate sources, and reference materials appropriately, aligning cultural inquiry with broader digital competence goals (Observation Two).

Additionally, classroom observations indicated that Marama emphasised students’ information literacy skills. She guided them in organising findings, evaluating sources, and citing references in Google Docs, aligning with her broader perspective on digital competence as an essential skill (Observation Two). This reflects her awareness of the necessity for students to navigate digital information effectively while engaging with cultural topics.

Storing, Accessing and Sharing Learning Resources

Marama perceived digital platforms as essential tools for storing and accessing learning materials, particularly through Google Classroom, which she described as “the go-to” platform where “everything goes for students to access” (Interview with Marama). She regularly uploaded class materials such as lesson slides and templates, highlighting that digital storage prevented the common issue of students misplacing work kept only in notebooks. As she explained, “so many times we’ve done a whole lot of work in their book, and they forgot it” (Interview with Marama). In this sense, digital archiving supported continuity, enabling students to resume tasks across lessons using shared documents and presentation tools such as Google Docs, Canva, or Wakelet.

From a teacher’s perspective, she valued digital platforms for monitoring student progress. She highlighted that being able to view student work in one place was more efficient than checking physical notebooks: “I don’t go anywhere, but I can see all their work is up there” (Interview with Marama). This allowed her to ensure students were following instructions and to use strong student examples as models for others, as it provided a single shared space where the whole class could upload and review videos (Interview with Marama).

Classroom observations aligned with these accounts. Marama consistently directed students to access newly uploaded materials and, when access issues emerged (e.g., incorrect sharing settings), she adjusted permissions and re-uploaded files in real time (Observation Two). She also edited and re-posted slides during lessons (e.g., adding Māori place names), indicating ongoing resource refinement alongside instruction (Observation Two). Across the observed sessions, students relied on shared documents to store research notes and continue work over time, reinforcing the role of digital storage in maintaining task progression (Observation Three).

Presenting Teaching Content

Although Marama did not explicitly discuss her views on using digital tools for content presentation in interviews, she shared insights during classroom observations. She expressed a preference for Canva over Google Slides, highlighting two key advantages:

better graphic integration and flexibility in expanding content. She explained that Canva provided more visual elements and made it easier to insert images into slides, enhancing her lesson presentations. Also, she appreciated the Canva Whiteboard feature, which allowed unlimited space for expanding lesson content, enabling her to stay in the flow of teaching without restrictions (Observation One).

Marama's preference for Canva and her appreciation of its graphic and layout flexibility were strongly reflected in her teaching practices, where she consistently used digital slides to support instruction. The observed lessons demonstrated a clear reliance on visual aids for structuring content, facilitating classroom interactions, and guiding students through tasks. Throughout lessons, a projector was continuously connected to her laptop, displaying lesson content via slides (Observation One). Slides were integral to daily classroom routines, such as displaying and letting students read Karakia (ritual opening or closing prayer in te reo Māori) at the beginning and end of lessons (Observation One, Two, and Three). Beyond content delivery, Marama used slides to guide classroom interactions, posing questions like "Kei te pēhea koe?" ("How are you? / How was your holiday?") in te reo Māori, followed by suggested responses (Observation One). Additionally, slides facilitated structured lesson progression. For example, when introducing a research project, Marama presented a sequence of slides outlining the three research stages: Rangahau (online search), Reo (translating), and Tuku (presentation), ensuring students clearly understood the process (Observation One).

Other Perceived Potentials and Implementations

Marama's lesson plans and observed classroom practices demonstrated her intentional use of digital technologies to facilitate **student collaboration and co-construct learning**. The unit plan explicitly described the learning process as a co-constructed learning journey, encouraging students to work together on research and presentation tasks (Lesson Plan One). In practice, this approach was evident in group-based research activities, where students had to make collective decisions, such as choosing continents to study, assigning group roles, and selecting presentation platforms (Observation One). During the Tuku (presentation) stage, students collaborated on digital platforms like

Google Slides and Canva, promoting shared responsibility in presenting their research (Observation One).

In her interview, Marama highlighted the role of digital tools in **evaluating her own teaching effectiveness**. She used Education Perfect to analyse student responses, which helped her identify patterns of misunderstanding and adjust her teaching accordingly. She noted, “I can see if there’s a pattern, I can see what everyone’s missing, so I can come and revisit it again” (Interview with Marama). She also described how she would provide short, focused reteaching sessions based on common errors identified through digital assessment tools (Interview with Marama). However, such practices were not observed in the three classroom observations, likely because these assessment-based adjustments primarily occurred outside of lesson time.

Marama believed that digital technologies supported **student engagement and motivation**, particularly by offering alternative modes of learning beyond handwriting and speaking. She stated, “technologies improve engagement... because kids are more likely to complete the work and be engaged in the work rather than just writing all the time” (Interview with Marama). While this suggests that digital tools introduced novelty to classroom activities, it remains unclear how long this engagement was sustained. She also pointed out that digital tools helped sustain student focus by incorporating problem-solving elements and holding students accountable, as she monitored their progress in real time (Interview with Marama). Specifically, she noted that students were more likely to stay on task when they knew she was actively tracking their work and waiting for submissions via digital platforms.

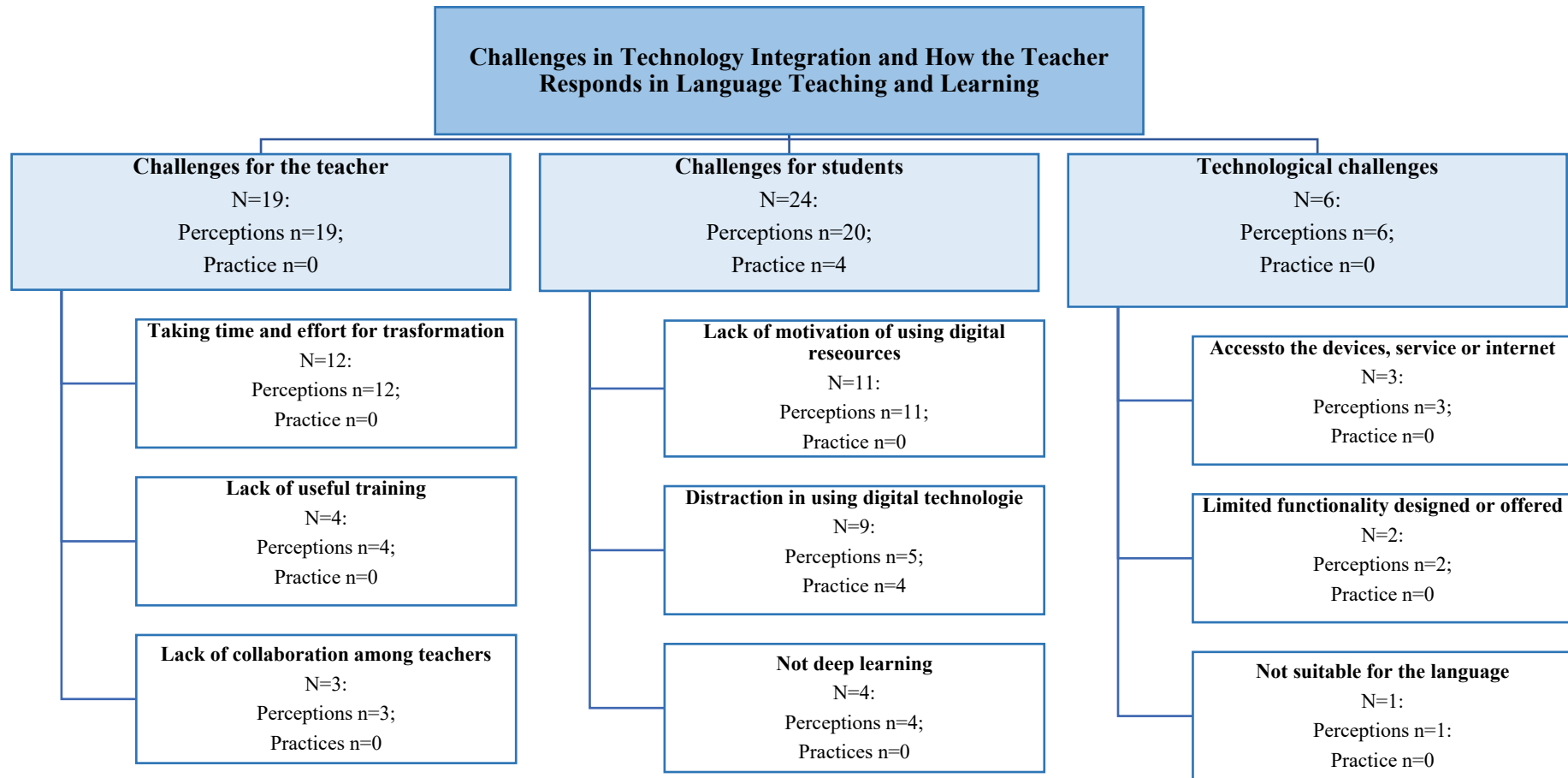
Marama further noted that digital platforms, particularly Google Classroom, were essential for **teacher-student communication beyond the classroom**. She explained that when she was absent, Google Classroom served as the primary means of interaction, ensuring students had access to instructions and resources (Interview with Marama). However, such communication activities were not observed during classroom sessions, as they primarily took place outside of lesson time.

7.4.2 Challenges in Technology Integration and How the Teacher Responds in Language Teaching and Learning

Marama faced challenges in integrating digital technologies into language teaching, mainly related to teacher workload, student engagement, and technological limitations. This section explores these challenges in detail (as shown in Figure 7.2), examining how Marama navigated them in her teaching and how her experiences were reflected in classroom practice.

Figure 7.2

Breakdown of the Theme Concerning the Teacher's Perceived Challenges in Technology Integration in Language Teaching in Case Study Three



Challenges for the Teacher

Marama noted that one of the biggest challenges she faced with digital technologies was **the time and effort** required to learn, implement, and troubleshoot new tools. She observed that many teachers were reluctant to adopt new technologies, often feeling overburdened by their existing workload. She described her experience with technology as a continuous learning process, stating, “I have to force myself to learn it, and I make a lot of mistakes along the way” (Interview with Marama). She also noted that figuring out how to effectively integrate technology into her teaching required significant motivation and effort (Interview with Marama).

Even after dedicating time to exploring digital tools, she often encountered unexpected technical limitations, such as platforms restricting the number of users, which disrupted classroom implementation (Interview with Marama). She reflected on the unpredictability of digital tools, stating that no matter how much preparation she did, issues only became apparent when an entire class was using the tool simultaneously (Interview with Marama). This trial-and-error approach meant that students often became “guinea pigs” as she experimented with different technologies in real-time (Interview with Marama). These experiences highlight the hidden workload associated with digital integration, as teachers not only need to prepare content but also anticipate and resolve technical difficulties. Furthermore, as evidenced in one lesson, students were unable to access a document on Google Classroom due to incorrect sharing settings, requiring Marama to adjust the privacy settings and re-upload the file (Observation Two). This reflects the need for teachers to constantly manage unexpected technical issues and make real-time adjustments to ensure smooth lesson delivery.

Marama’s experience with **professional development** in digital teaching was very limited. She explicitly stated that she had never attended any formal training or workshops on using digital technologies in language teaching, apart from a few sessions related to Education Perfect (Interview with Marama). When asked about training for Google Classroom, which she frequently used, she admitted, “I haven’t done any technology workshops at all” (Interview with Marama). While she recognised the value of training, she approached it selectively. She noted that she would only participate in

workshops if they provided new, relevant knowledge, stating, “If it’s something that I’m already doing, then I obviously won’t, can’t be bothered wasting my time” (Interview with Marama). However, she also expressed interest in learning how to create better teaching videos, indicating that she actively sought out self-directed learning opportunities when she saw a clear benefit (Interview with Marama).

Another challenge Marama highlighted was the **lack of collaboration among teachers** when it came to digital integration. She noted that, as the only Māori language teacher in her school, she lacked a subject-specific professional learning community. Unlike other departments that collaborated on lesson planning and resource development, she had to design her lesson plans independently, limiting opportunities for peer support and shared digital teaching strategies (Interview with Marama).

While Marama’s interview data revealed significant challenges related to time, training, and collaboration, these struggles were not directly observed in her classroom practice. The preparation work, technical troubleshooting, and professional isolation she described all took place outside of lesson time, making them less visible during classroom observations. However, some indirect evidence of these challenges emerged in lesson delivery.

In addition, Marama’s reflections demonstrated a strong tendency toward self-reliance. She primarily relied on independent learning to acquire digital skills, experimented with technologies through trial and error, and lacked a collaborative network to exchange best practices. This further compounded the challenges of self-directed learning and made the trial-and-error process even more demanding. This self-reliant approach meant that while her classroom teaching appeared structured and well-organised, these smoothly delivered lessons often came at the cost of significant behind-the-scenes effort, self-learning, and continuous problem-solving.

Challenges for Students

Marama identified several student-related challenges in using digital technologies for language learning, particularly lack of motivation, distraction, and superficial engagement with learning tasks. One major challenge Marama faced was keeping students on task, particularly preventing them from being distracted by unrelated digital activities. She expressed frustration that students, especially boys, frequently used their devices for gaming rather than completing assigned tasks, describing it as “a daily mission to keep them on task” (Interview with Marama). She stressed that this was not unique to her class but was “the biggest challenge for every teacher” (Interview with Marama). She explained that constantly monitoring students and redirecting their attention consumed a significant portion of lesson time, making digital integration more challenging (Interview with Marama). During observed lessons, students were seen playing games on their laptops rather than focusing on assigned tasks, particularly when Marama remained seated rather than moving around the room (Observation Two). In some cases, distraction seemed to spread among students; when one student started gaming, others nearby also lost focus (Observation Two). To mitigate this, Marama implemented classroom management strategies, such as instructing students to put their laptops down to regain their attention (Observation One). She also reminded students to close their laptops when she was explaining tasks, ensuring they listened to instructions rather than being preoccupied with their screens (Observation One).

Marama also observed that many students were initially resistant to using new digital tools, often preferring familiar platforms like Google Docs. “They were very reluctant, ‘Why can’t we just use Google Docs?’” she recalled (Interview with Marama). Although students eventually became more comfortable with other platforms, their understanding of the tools’ purposes remained limited. Marama also noted inconsistencies in student motivation and engagement, commenting that “a lot of kids are resistant to giving these new digital technologies a go” (Interview with Marama). She expressed concern that students often failed to make meaningful connections between digital content and their broader learning goals. This led her to emphasise the importance of explicit teacher guidance in helping students recognise the relevance of digital learning activities.

A lot of times the students can’t put one and one together. They don’t think it’s useful for them. They’re just doing what they’re told, but to

me, I think the more they do it, and the more I talk to them about the purpose of doing it and how it's going to support them... hopefully, it gets in there eventually (Interview with Marama).

Marama further explained that students often did not take advantage of digital resources beyond classroom requirements. She provided examples where she had created instructional videos, but “no one watches it. NO ONE, NO ONE will look at it” (Interview with Marama). Similarly, while online dictionaries were available for pronunciation support, she noted that students rarely used them, preferring instead to ask her directly (Interview with Marama). These experiences led her to conclude that students would only engage with digital tools when required to do so in class but would not voluntarily return to them later (Interview with Marama).

Additionally, Marama questioned the depth of learning facilitated by digital technology. She argued that digital learning often resulted in passive engagement, with students merely completing assigned tasks without fully internalising the content. Reflecting on remote learning experiences, she stated, “Kids were doing tick boxes, but when you came back to school and talked about what they had completed, they didn't complete it. They can't remember anything” (Interview with Marama). She believed that face-to-face interaction was superior for deeper learning, especially for younger students (Interview with Marama). However, challenges related to student motivation and deep learning were not explicitly observed during classroom sessions, possibly because these aspects involve students' internal cognitive and emotional processes, which may not be fully captured through teacher interviews and classroom observations alone. This highlights the necessity of incorporating students' perspectives to gain a more comprehensive understanding of their experiences with digital learning.

Technological Challenges

Marama identified several technological challenges that affected her use of digital tools in language teaching. One key concern was the availability and reliability of digital tools for te reo Māori instruction. She noted that mainstream language-learning applications such as Duolingo were not particularly useful for her students, leading her

to avoid their use altogether (Interview with Marama). Similarly, she strongly discouraged students from using Google Translate, as she found the algorithm produced inaccurate translations for te reo Māori (Interview with Marama). These limitations restricted the range of digital resources she could integrate effectively into her teaching. In addition, in terms of selecting digital tools, Marama prioritised ease of use, accessibility, effectiveness, and cost.

Another challenge was technical limitations affecting classroom activities. While she observed that the school's Wi-Fi network generally functioned well despite supporting nearly 1300 simultaneous users, occasional connectivity issues were inevitable (Interview with Marama). However, she adopted a pragmatic approach, stating that “we just roll with it” and relied on the school's onsite technicians for quick resolutions (Interview with Marama).

Classroom observations did not reveal significant technological disruptions. Students generally had access to personal or loaned laptops from the school library, ensuring that device availability was not a major issue (Interview with Marama). While occasional technical difficulties were mentioned in the interview, they were not visibly disruptive to observed lessons. This suggests that while technological constraints shaped Marama's teaching decisions and resource selection, they did not significantly hinder day-to-day classroom activities. Instead, the primary impact of these challenges was on the feasibility and effectiveness of certain digital practices, leading her to adjust her instructional methods accordingly.

7.5 Students' Perceptions and Experience of Digital Technologies in Language

Learning

Students' perceptions of digital technologies in language learning highlight both their benefits and challenges. Their experiences provide insight into how these tools function in their learning environment and how their perspectives align with or differ from their teacher's approach. This section first explores students' perceptions of digital

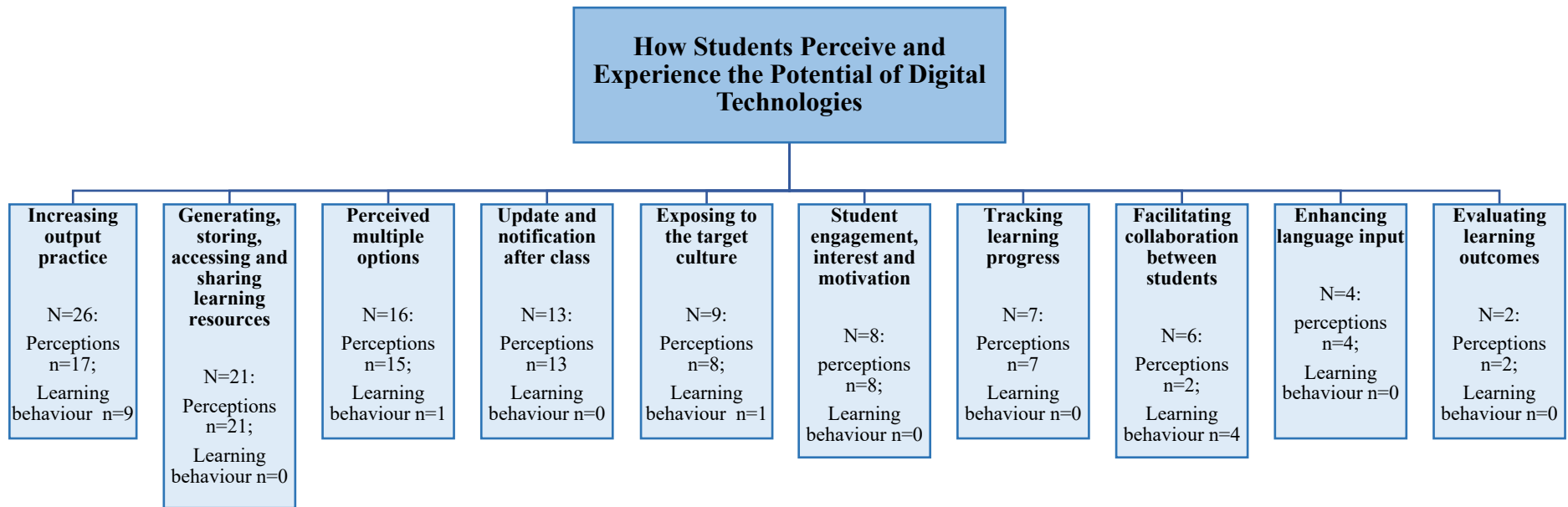
technologies and how they engaged with them in practice. It then examines the similarities and differences between teacher and student perspectives on the benefits of digital tools. The discussion then shifts to the challenges students encountered, including both personal and technological barriers, before concluding with a broader comparison of teacher and student experiences in integrating digital technologies into language learning.

7.5.1 How Students Perceive and Experience the Potential of Digital Technologies

Students in the focus group recognised a range of potential benefits in using digital technologies for language learning (see Figure 7.3). Their perspectives highlighted how digital tools facilitated resource management, enhanced structured language practice, and provided opportunities for engagement, motivation, and cultural learning. While some digital tools were perceived as central to their learning routines, students also valued the flexibility to choose different platforms based on their preferences. The following subsection explores how students perceived and experienced these potentials, considering both their stated views and their observed use of digital tools in the classroom.

Figure 7.3

Breakdown of the Theme Concerning the Students' Perceived Potential of Using Digital Technologies in Language Learning in Case Study Three



Increasing Output Practice

Students in the focus group perceived digital tools as supporting structured language output, particularly through Google Docs, Quizlet, and Education Perfect. These tools were mainly used for writing, speaking, and translation exercises. Zoe noted that Education Perfect was used for sentence-level writing, such as translating from English to Māori, reinforcing structured language production (Focus Group, Zoe). Students also valued teacher-provided resources for structuring their language practice. Aroha described how Google Docs templates supported structured translation exercises, often with side-by-side tables for English and Māori, making it easier to compare and memorise linguistic structures (Focus Group, Aroha). Grace highlighted that the teacher projected Google Docs onto the screen, allowing students to follow along as she wrote, helping to guide their written output (Focus Group, Grace). Additionally, some students mentioned gamified digital tools like Quizlet and Kahoot for vocabulary recall and memorisation. However, as these relate more to engagement and motivation, they will be discussed in the section on student participation and interest.

Classroom observations partially supported students' perceptions. Google Docs was indeed used for translation-related tasks, but the kind of translation work students described was not consistently observed. Instead, students primarily engaged in research-driven and project-based tasks, using Google Docs to compile information, structure translations, and integrate them into their project work (Observation Two). The use of teacher-provided translation tables and teacher-led projection for guided writing mirrored students' descriptions, indicating some similarities between perception and practice. However, rather than being standalone structured drills, translation activities were embedded within project work, functioning as a preparatory step for content production rather than as an explicit language drill. This suggests that the way digital tools supported translation was more integrated into inquiry-based learning rather than isolated language practice.

Beyond written output, students did engage in some spoken production, mainly in presentation-based activities and classroom routines. In one lesson, students prepared group presentations and read their research findings in Māori (Observation Three).

Additionally, students were observed reciting Karakia at the beginning or end of the lesson and engaging in brief Māori greetings with the teacher at the start of class. While these oral activities were limited in duration, they provided authentic opportunities for spoken Māori use within the classroom setting.

In addition, students also valued digital resources for language input, particularly tools that facilitated listening and pronunciation. Zoe pointed out that watching videos of their teacher speaking Māori helped them understand pronunciation more effectively than simply reading words on a page. Similarly, students found online Māori dictionaries useful for checking word meanings and spellings, though they noted the limitation that full sentences could not be translated. However, this was not observed in classroom settings, as students did not appear to use online dictionaries during lessons. Instead, when encountering language difficulties, they directly asked the teacher, suggesting that the teacher, as a native speaker, was their most accessible language resource in class.

Generating, Storing, Accessing and Sharing Learning Resources

Students framed Google Classroom as the default place to locate ongoing class requirements and retrieve past materials. Zoe noted that “we’re all on it, and she uploads notices, homework, and slides” (Focus Group, Zoe), while Grace highlighted that submitting work through the platform made teacher review more straightforward (Focus Group, Grace). Anna further valued the ability to revisit resources from earlier terms, which supported revision and helped students keep track of learning over time (Focus Group, Anna).

Several students linked this reliance on online storage to post-Covid schooling routines. Grace commented that keeping materials online made learning more accessible when students were absent due to illness or isolation (Focus Group, Grace). Zoe similarly appreciated that learning resources were no longer confined to physical notebooks, reducing the risk of losing key content (Focus Group, Zoe). Students also emphasised the organisational and communicative potential associated with these platforms. Zoe

described email notifications for new tasks and due dates as helpful prompts for managing workload (Focus Group, Zoe). Peer support was also enabled through digital sharing: Aroha and Hunu reported forwarding slides or emails to classmates who had missed them, suggesting that digital tools facilitated informal peer-to-peer assistance alongside teacher communication (Focus Group, Aroha; Hunu). These perceptions were broadly consistent with observations. During lessons, students routinely accessed teacher-provided materials and stored ongoing work in shared documents, allowing them to continue collaborative tasks across sessions (Observation One, Two, and Three).

Multiple Options

Students in the focus group generally appreciated having multiple digital tools available, seeing them as a way to accommodate different learning preferences and enhance creativity. Grace noted that their teacher provided “a lot of resources,” allowing students to choose what worked best for them (Focus Group, Grace). This was particularly evident in presentation tools, where students could select between Google Slides and Canva, with some preferring the familiarity of Google Slides and others valuing the greater design flexibility offered by Canva (Focus Group, Kaia). Anna also highlighted the benefit of having alternatives when a particular resource was not effective (Focus Group, Anna).

However, the introduction of multiple new technologies was not universally welcomed. While some students embraced the variety, others felt overwhelmed or preferred to stick with familiar tools. Zoe recalled feeling stressed at the start of the year when learning several new platforms but later settled into a manageable routine, primarily using Google Classroom, Google Docs, Google Slides, and Canva (Focus Group, Zoe). Kaia also found the number of tools daunting initially but became more comfortable with them through repeated use (Focus Group, Kaia). Still, some students, like Anna, preferred to continue using Google Slides, viewing it as simpler and more efficient (Focus Group, Anna).

Classroom observations confirmed that students had the freedom to choose digital tools,

particularly for presentations. Some opted to experiment with Canva, while others stuck with Google Slides for its familiarity (Observation Three). For instance, Kaia introduced Canva to Anna, who initially planned to use Google Slides but became curious about its features. After briefly exploring it, she ultimately returned to Google Slides, citing its simplicity (Observation Three). This diversity in technology use reflected a balance between choice and personal comfort. While many students welcomed the chance to explore new tools, not all were equally willing or able to do so. However, both approaches were accepted in the classroom, and students could either experiment with new technologies or stick to established ones, ensuring that all learners felt supported in their choices.

Other Perceived Potentials

Students in the focus group identified several other benefits of digital technologies in their language learning. They valued the role of digital tools in **keeping them updated on assignments, deadlines, and grades**, particularly through Google Classroom and email notifications. Zoe explained that whenever a teacher uploaded a new assignment, students received an email, ensuring they stayed informed (Focus Group, Zoe). Anna emphasised that without these notifications, students might forget assignments or submit them late, underscoring their role in time management (Focus Group, Anna). In addition to reminders, students appreciated the ability to track their progress. Grace noted that notifications informed them when a teacher graded their work, allowing them to check feedback promptly (Focus Group, Grace). During holiday periods, students continued checking their emails for grade updates (Focus Group, Kaia). Email was also a key communication tool. Grace noted that it was often the most reliable way to contact teachers when messaging was not an option at school (Focus Group, Grace). Additionally, students used email for academic requests, such as asking for deadline extensions, making it an efficient tool for managing coursework and administrative matters (Focus Group, Zoe). Overall, automated notifications and email updates played a crucial role in helping students stay organised, track assignments, and communicate with teachers efficiently. While classroom observations did not capture these activities directly, student testimonies suggest that such digital tools were well-integrated into their learning routines outside of class.

Students recognised the role of digital tools in **supporting feedback and tracking progress**, particularly appreciating Google Classroom’s private comment function, which allowed teachers to provide individualised responses on assignments. Kaia found this especially helpful for monitoring her development without having her recordings viewed by classmates, which contributed to a more supportive learning environment. This preference for privacy was echoed in other students’ comments about speaking tasks. Grace and Zoe, for example, described how they were required to upload oral recordings to Padlet, where all classmates could listen. This made some students feel self-conscious, especially when others laughed at exaggerated pronunciation (Focus Group, Grace; Zoe; Kaia; Aroha). As Zoe remarked, “People probably laugh at mine.” Several students expressed anxiety about how their recordings would be received by peers. When asked whether they were comfortable having their classmates hear these recordings, responses were overwhelmingly negative. Hunu, for instance, stated that recordings were intended for the teacher only (Focus Group, Hunu). These perspectives suggested a strong preference for feedback that remained private and individualised. This sensitivity may have been heightened in the te reo Māori classroom, where many learners had personal or cultural connections to the language. For these students, speaking in front of others could evoke a sense of vulnerability, especially when they felt they ought to have been more fluent due to their background. The wide range of proficiency levels often present in such classes may have further intensified these feelings. Although this dynamic was not directly observed during lessons, it appeared that much of the emotional response to digital speaking tasks occurred outside the classroom, as students reflected on how their language performance was perceived by others.

Exposure to Māori culture was also one of the benefits they identified. Anna explained that their teacher often played music by Māori artists or translated versions of New Zealand songs during free time, creating a linguistic and cultural immersion in the classroom. In addition to music, students watched short films and historical videos, such as those about Waitangi Day, which provided them with different perspectives on historical events. Zoe found these digital cultural resources particularly effective,

describing them as “a different way of learning” compared to paper-based materials. Aroha and Kaia also preferred videos and online content over textbooks, as the visual aspect made it easier to grasp new concepts. However, classroom observations suggested that students were not solely focused on Māori culture but were developing broader ICC by considering Aotearoa New Zealand’s place in a global context rather than exclusively engaging with Māori perspectives.

Beyond cultural exposure, digital tools played a helpful role in **student engagement and motivation**. Many students were drawn to gamified learning platforms like Quizlet and Kahoot, which introduced competition and interaction into vocabulary practice. Zoe described how Quizlet’s features, such as choosing the correct answers, unlocking rewards, and competing with classmates, made learning feel less like a chore and more like a game. Grace echoed this sentiment, noting that the repetitive nature of Quizlet activities helped reinforce learning in a way that felt effortless. Even structured tracking tools, such as Trello, contributed to motivation by allowing students to monitor their progress and set learning goals. Aroha explained that their teacher provided checklists within learning cycles, often encouraging students to set personal deadlines for task completion. Zoe noted that while Trello did not necessarily enhance language acquisition, it helped students stay organised and on top of their coursework, ultimately supporting their learning process. However, this was not observed in classroom practice, likely due to the nature of lesson activities and the fact that progress tracking typically takes place outside of class.

The final benefit students highlighted was the **collaborative potential** of digital tools. Grace described how students frequently worked together on Google Docs and Slides, either by editing the same document simultaneously or dividing tasks among different pages. This setup allowed for both independent contributions and group collaboration, making it easier to manage joint projects. Aroha added that email was another essential tool for sharing slides and documents with group members, ensuring that everyone remained connected to the task. This was confirmed in classroom observations, where students were widely seen using collaborative technologies to create presentations.

7.5.2 Bridging Teacher and Student Perspectives on Benefits of Digital Technology Integration in Language Education

Marama and her students were closely aligned in treating digital platforms as the routine infrastructure for organising class materials and submissions. Both Marama and her students recognised the value of digital resources, particularly videos and online materials, for supporting cultural understanding. However, this engagement remained largely input-based and research-oriented, with no use of digital platforms for direct intercultural communication. Nevertheless, differences emerged in how particular tools were experienced: while Marama viewed Padlet recordings as a productive oral assessment approach, students experienced public recordings as discouraging and expressed a clear preference for private feedback channels (Focus Group, Grace; Zoe; Kaia).

However, while Marama's stated perceptions and those of her students were largely aligned, a more notable divergence was identified between Marama's pedagogical intentions and her actual classroom practice. Both the teacher and students emphasised the importance of digital tools in structured language practice, particularly for vocabulary retention, translation exercises, and oral production. Marama described tools like Education Perfect and Quizlet as reinforcement platforms (Interview with Marama) and viewed Padlet as an effective way to assess pronunciation and progress (Interview with Marama). Yet, classroom observations revealed that structured digital language practice was not a primary focus. Instead, digital tools were predominantly used for collaborative knowledge construction, online inquiry, and project-based learning (Observations One, Two, and Three). This stands in contrast to the more form-focused, drill-based use of technology that both the teacher and students had described.

This discrepancy may reflect Marama's ongoing shift toward a more student-centred, constructivist approach. While she valued structured language practice, her classroom implementation leaned more toward exploratory, content-based tasks that encouraged students to engage with information, translate findings, and co-construct knowledge. This shift is particularly evident in her lesson planning, where she intentionally shifted the focus of her teaching from New Zealand-based content toward a global perspective,

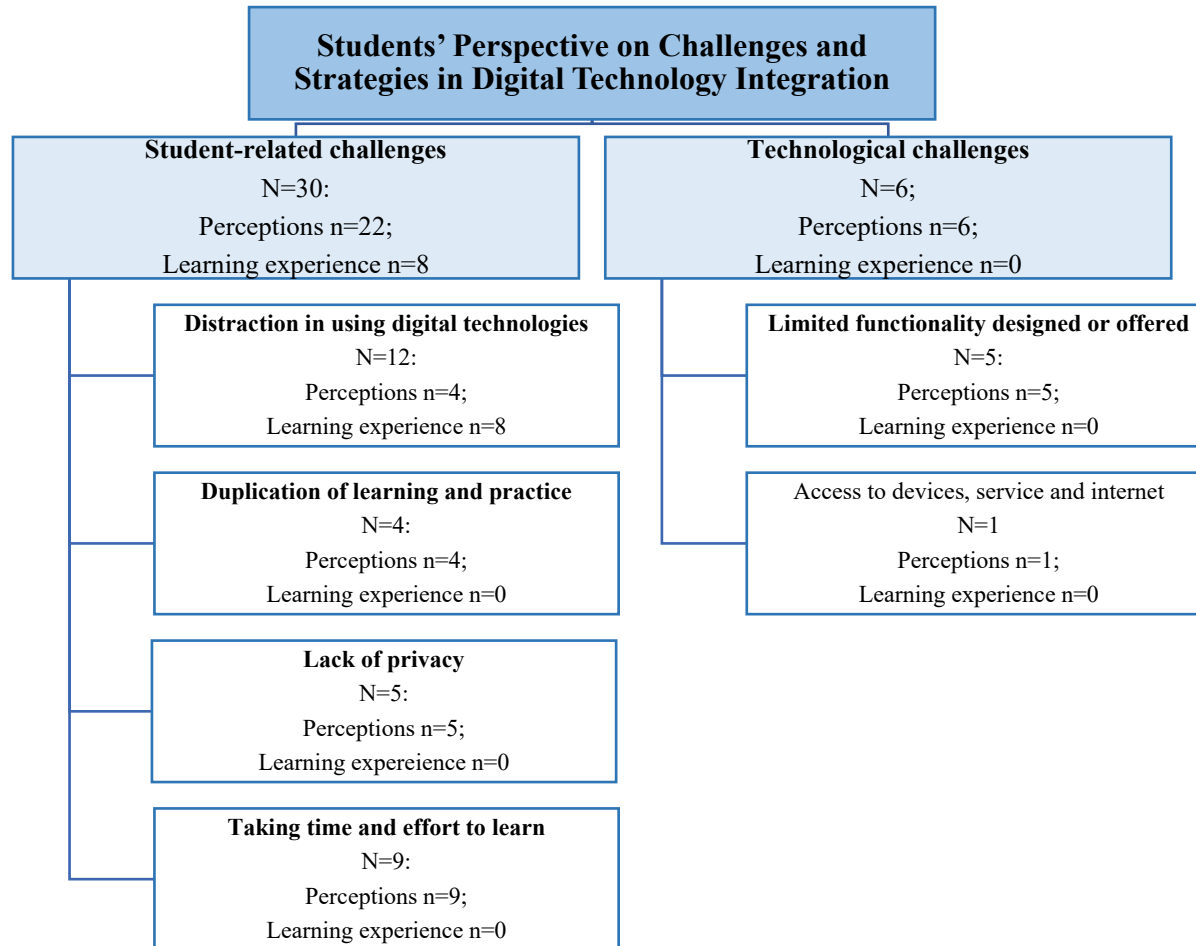
incorporating research tasks that required students to compare cultures and synthesise information (Lesson Plan Two). Marama herself noted that this was a relatively new approach for her and that she was still adjusting to balancing her prior instructional habits with the integration of digital tools in a more student-driven learning model (Interview with Marama). These findings suggest that the primary gap is not between teacher and student perspectives, but between Marama's evolving pedagogical approach and her existing instructional habits. While she was open to using digital tools for structured reinforcement, her actual classroom implementation leaned more toward constructivist, student-led inquiry, creating a mismatch between her stated goals and observed practice.

7.5.3 Students' Perspective on Challenges and Strategies in Digital Technology Integration and Alignment with the Teacher's Perspectives

Students in the focus group identified a range of challenges associated with integrating digital technologies into language learning (see Figure 7.4). These challenges can be broadly categorised into student-related challenges, which concern cognitive overload, workflow inefficiencies, and maintaining focus, and technological challenges, which include issues related to translation accuracy and restricted internet access.

Figure 7.4

Breakdown of the Theme Concerning the Students' Perceived Challenges in Technology Integration in Language Learning in Case Study Three



Student-Related Challenges

Students in the focus group identified several student-related challenges in using digital technologies for language learning. One commonly mentioned difficulty was the cognitive overload caused by managing multiple digital tools. Some students also found it hard to adapt to unfamiliar platforms, often preferring to rely on familiar methods even as they gradually became more comfortable with certain technologies. In addition, concerns about having their recorded speech made accessible to classmates and the potential for negative peer reactions posed another major challenge, as discussed in Section 7.5.1.

Another challenge students reported was inefficiency in workflow due to the requirement of transferring handwritten notes into digital formats. Anna and Grace noted that having to first write their work in notebooks before typing it into Wakelet or Google Docs was time-consuming and sometimes unnecessary (Focus Group, Anna; Grace). Zoe observed that while handwriting aided memory retention, it also extended the learning process for those who preferred digital input (Focus Group, Zoe). This highlights a tension between handwriting and digital efficiency, as students had different preferences for how they processed and engaged with content.

Students also struggled with maintaining focus during digital tasks. While they generally perceived digital tools as enhancing engagement, they also commented that digital technologies could be distracting. Some students justified playing games during free time as a motivational strategy, finishing tasks quickly to earn a break (Focus Group, Kaia; Grace). However, classroom observations revealed that distractions extended beyond designated free time. Some students were seen playing games like Tetris during lessons, particularly when teacher supervision was minimal (Observation Two). Others used laptops for non-academic purposes, such as browsing online when the teacher was not closely monitoring their progress (Observation One). Additionally, one student who did not bring a laptop to class chose not to borrow one from the library and remained disengaged for the entire lesson, opting instead to doodle in their notebook, briefly use their phone, or leave the classroom for a period (Observation One). These findings suggest that while digital tools offer valuable learning opportunities,

they also present challenges in maintaining student focus and task completion, particularly in the absence of active teacher supervision.

Technological Challenges

In the focus group discussions, technological challenges were not a dominant concern but were still noted by students. One key issue was the inaccuracy of digital translation tools. Zoe observed that platforms like Google Translate often generated incorrect or misleading translations, particularly when Māori words were pronounced with non-native accents or had multiple meanings (Focus Group, Zoe; Kaia). As a result, students were discouraged from relying on such tools, with the teacher explicitly advising against their use due to reliability concerns (Focus Group, Zoe).

Another challenge was the school's restrictive Wi-Fi policies. Anna pointed out that many online platforms were blocked, limiting students' ability to access external digital resources beyond those provided by the teacher (Focus Group, Anna). This restriction also reduced opportunities for digital interaction, as students reported rarely using technology for communication beyond email (Focus Group, Students). However, since this limitation was likely implemented for broader school security reasons, it may not be viewed entirely negatively.

Classroom observations aligned with students' perceptions in that unreliable digital tools, such as Google Translate, were not commonly used in lessons. Instead, students primarily relied on teacher-provided resources and direct teacher support for language input, highlighting the central role of teachers in guiding and supporting language learning.

7.5.4 Comparing Student and Teacher Perspectives on Challenges

Marama and her students shared similar perceptions of the challenges associated with digital technology integration in language learning, particularly regarding cognitive overload, student distraction, and the limitations of digital tools. However, their

perspectives diverged in some areas, such as students' willingness to engage with new technologies, their preferences for balancing handwriting with digital storage, and the role of digital tools in facilitating language learning.

Both Marama and her students noted the cognitive burden of managing multiple digital tools. However, Marama was more critical of students' willingness to engage with technology, frequently describing them as resistant to using new digital resources (Interview with Marama). She also believed that students did not take full advantage of digital resources outside of class, citing instances where they failed to watch instructional videos or use online dictionaries independently (Interview with Marama). Additionally, she felt that students struggled to see the relevance of digital tasks to their learning, often completing assignments without fully internalising the content (Interview with Marama). In contrast, while students admitted to feeling overwhelmed by new tools at the start, their perceptions of digital learning were generally more positive. They recognised the benefits of certain digital tools, such as Google Classroom for organisation and Quizlet for vocabulary retention, and while some students resisted new platforms, others actively explored different presentation tools, such as Canva (Focus Group, Kaia). This contrast suggests that while students may not always engage with digital learning in the way Marama expected, they still found value in these tools in ways that were more self-directed and context-dependent.

Both Marama and her students recognised digital distraction as a feature of technology-rich classrooms, but they framed it differently. Marama viewed off-task digital behaviour as an obstacle to engagement that required constant monitoring and intervention, whereas some students tended to interpret limited off-task activity as a motivational strategy linked to task completion. These accounts suggest that students' understandings of digital distraction differed from their teacher's framing. Whereas Marama viewed off-task digital activity as a significant barrier to learning, students were more likely to interpret it as a negotiated part of classroom routines and task completion.

There was also consensus on the limitations of digital translation tools. Both Marama and her students agreed that platforms like Google Translate were unreliable for te reo Māori, often producing inaccurate translations with incorrect pronunciation (Interview with Marama; CS3, Focus group, Zoe). As a result, students avoided these tools, relying instead on teacher support for language input (Focus Group, Students). Classroom observations confirmed this, as students did not use online translation tools in lessons but frequently asked Marama for clarification (Observation One). This alignment suggests that teacher perceptions strongly influenced students' perceptions and behaviours regarding digital translation tools.

However, notable differences were identified regarding the balance between handwriting and digital storage in the learning process. Marama appeared to be negotiating between her preference for handwriting as a means of reinforcing learning and the need for digital storage to ensure accessibility (Interview with Marama). She encouraged students to write in notebooks before transferring their work to digital platforms, aiming to combine the cognitive benefits of handwriting with the convenience of digital access. However, students largely viewed this process as inefficient and unnecessary, questioning why they could not write directly on digital platforms instead (Focus Group, Anna; Zoe). While some students noted that handwriting helped with memory retention, they still felt that manually transferring their work into a digital format added an extra, time-consuming step (Focus Group, Zoe). This reflects a divergence in priorities, with Marama seeking to integrate both handwriting and digital methods for deeper learning, whereas students prioritised efficiency and ease of access.

7.6 Chapter Summary

This final case study examined Marama's integration of digital technologies in a te reo Māori classroom. While she valued handwriting and *kanohi ki te kanohi* (face-to-face) interaction, she also incorporated a range of platforms (e.g., Google Classroom, Education Perfect, Quizlet, Padlet, and collaborative tools such as Google Docs and Canva) to support classroom routines, inquiry activities, and the management of

learning resources. Across the observed lessons, digital technologies were used primarily to enable online research, collaborative knowledge construction, cultural inquiry and exploration, and presentation preparation, rather than sustained, drill-based language practice, suggesting a shift towards more student-led, inquiry-oriented learning.

Students described digital tools as embedded in their everyday learning routines and valued their organisational potential and convenience, particularly for keeping track of tasks and revisiting materials. At the same time, they raised concerns about emotional safety in public recording tasks (e.g., Padlet), the inefficiency of transferring handwritten work into digital formats, and the challenges of distraction and platform overload. Notably, while Marama sometimes interpreted students as resistant to digital learning, student accounts suggested more selective engagement shaped by perceived usefulness, ease of use, and comfort. Together, these findings highlight the importance of aligning the intended purposes of digital tasks with students' lived experiences of using them.

Chapter 8: Cross-case Analysis

8.1 Introduction

In this chapter, a cross-case analysis is conducted to synthesise the key findings from the three case studies presented earlier and to identify shared patterns and key differences in how digital technologies are perceived and used in language teaching. This chapter provides an integrated account of how different components of Communicative Competence are positioned within teachers' pedagogical objectives and what challenges and opportunities emerge from technology use in practice. To support a structured comparison, the analysis focuses on three interrelated aspects. First, the chapter examines teachers' objectives and emphases in developing different components of Communicative Competence across classroom contexts. While all three teachers recognised the importance of these competencies, the way they integrate them into their teaching and their perceptions of their relative significance may vary depending on the specific context of their classrooms. Second, the analysis explores teachers' perspectives on digital technologies and how these perspectives are reflected in their classroom practices, including how digital tools are incorporated into lessons, the pedagogical purposes they serve, and the challenges associated with their use. Finally, the chapter considers students' perceptions and experiences with digital technologies, assessing how their views align with or diverge from those of their teachers and how digital tools influence their engagement with language learning.

To support readers in navigating the breadth of findings presented in this chapter, a high-level comparative summary is provided in Table 8.1. This table synthesises the key cross-case themes across the three contexts, highlighting both shared patterns and salient differences in teachers' perceptions and practices, as well as students' experiences with digital technologies in language learning. The table is intended as a conceptual map that offers an overview of the comparative patterns identified, while the sections that follow elaborate on these themes through contextualised discussion.

Table 8.1
High-Level Cross-Case Comparison Across the Three Cases

Cross-case Theme	Case 1: NZSL (Lisa)	Case 2: Chinese (Fang)	Case 3: te reo Māori (Marama)	Cross-case Insight
Linguistic competence	Strong emphasis on vocabulary clarity and accurate sign parameters (handshape/location/movement); grammatical precision was flexible in service of communicative clarity.	Vocabulary prioritised; grammar viewed as important but secondary, with accuracy developed after confidence/fluency.	Strong emphasis on grammatical accuracy as integral to authentic expression; structural correctness foregrounded.	All treated linguistic competence as foundational for beginners, but “accuracy” was interpreted differently across languages and contexts.
Discourse competence	Mostly sentence-level focus, consistent with beginner NZSL learning and online lesson constraints.	Mostly sentence-level focus, aligned with beginner status and textbook sequencing.	Greater emphasis on extended discourse, including structured writing tasks; enabled by students’ prior exposure and higher starting proficiency.	Discourse competence development depended less on technology per se and more on learner readiness and curriculum/task demands.
Strategic competence	Evident use of compensatory techniques; likely reinforced by NZSL’s visual–spatial negotiation of meaning.	Valued non-verbal strategies and managing breakdowns (stated emphasis).	Not explicitly taught; allowed English insertions to maintain fluency/structure rather than teaching repair strategies.	Strategic competence was present across cases but differed in explicitness and instructional framing.
ICC	ICC positioned as integral to NZSL learning; emphasis on Deaf social norms and community practices. Comparison was	Culture embedded through selected materials; linked to contemporary language use and cultural practices. Explicit comparison encouraged	Culture framed within identity and global citizenship; Māori language learning positioned within wider civic/ethical horizons.	All treated language–culture as inseparable, but the depth and framing of intercultural learning varied markedly.

	contextual/situated (Deaf vs hearing norms) rather than formal “culture A vs culture B”.	(Chinese vs English practices) to deepen understanding. Recognised value but did not systematically build authentic interaction into teaching.	Direct comparison discouraged; emphasis on openness and respectful curiosity rather than contrasting. Recognised value but did not formally incorporate authentic interaction; cultural inquiry favoured over live exchange.	Comparative pedagogy reflected teachers’ linguistic/cultural positioning and the sociocultural status of the target language. Valuing ICC did not automatically translate into experiential interaction; this required sustained design, access, and time.
Digital competence	High: digital competence treated as both a pedagogical foundation and a gateway to authentic engagement.	Selective/cautious: safety and students’ digital literacy shaped a controlled, teacher-directed approach	Ambivalent: reservations about digital communication; supported some digital skills pragmatically, but preferred face-to-face and handwriting.	Teachers varied along a clear continuum from fully embedded integration to selective/pragmatic adoption.
Technology used for language input/output and practice	Extensive multimodal input; students revisited video content; structured activities plus real-time communicative tasks.	Structured practice for vocabulary/listening and some output (e.g., translation); largely teacher-directed.	Digital tools mainly supported inquiry and presentation rather than structured linguistic practice.	Technology supported input/output in all cases, but the pedagogical centre of gravity ranged from language practice to cultural inquiry.
Technology for interaction and collaboration	Designed to replicate real-time interaction online; synchronous peer dialogue was central.	Limited: technology was not used to design student interaction; learning remained teacher-led.	Strong in project collaboration: shared workspaces and co-creation of digital outputs; interaction often task-oriented.	Interaction outcomes depended on intentional design: digital tools enabled interaction, but did not produce it automatically.

Teacher reflective practice with digital tools	Strong, systematic: analytics, participation trends, and student feedback informed adjustments.	Minimal/implicit: reflection relied more on in-class judgement; limited evidence of data-informed digital reflection.	Targeted: digital assessment used to diagnose misunderstandings and adjust subsequent teaching.	Digital reflection was uneven.
Key challenges and responses (teacher/student/technology)	Device/internet reliability and online behaviour norms; supported by structured PD and on-site supervision that reduced distraction.	Student distraction and cautiousness about open online spaces; preference for teacher-led explanation where tools lacked precision.	Professional isolation and reservations about digital tools; used pragmatic solutions and emphasised accountability features.	Shared pressures included time, student readiness, and infrastructure; divergence lay in professional support, classroom context, and perceived tool–language fit.
Student experience: benefits most salient	Valued multimodal models, flexible modes (spoken/typed/visual) and private/structured feedback; generally confident with platforms.	Valued multimedia input; used LMS more passively as content repository; preferred teacher clarification in class.	Valued collaboration tools, choice/flexibility in tools, progress tracking; engagement supported by project structure.	Students valued access, multimodality and feedback, but their levels of active engagement differed with task design and teacher integration patterns.
Student experience: challenges most salient	Challenges framed as external (connectivity, technical disruptions) more than self-regulation.	Personal self-regulation challenges (focus/distraction); tool limitations for handwriting and rigid automated marking.	Focus/distraction plus perceived inefficiency when duplicating handwritten and digital work; doubts about tool reliability for meaning/translation.	In blended contexts, self-regulation and task–tool alignment were more problematic; students prioritised usability and workflow continuity.
Teacher–student alignment and tensions	High alignment around interaction and digital feedback; strong uptake	Alignment around input support, but technology remained	Alignment around collaboration and inquiry; tension around peer	Overall alignment followed teachers’ designs, yet students

where tools were integral and clearly structured.

peripheral; students relied on teacher authority more than tools.

visibility in feedback (privacy/emotional safety concerns).

foregrounded usability, privacy, and immediate learning needs.

Although the three case studies share certain fundamental characteristics, they also differ in several important ways. A key similarity is that all three classrooms involve Year 9 or Year 10 students who are required to take a language course at this level, making language learning a compulsory part of their curriculum. Furthermore, the classes in all three cases are designed for beginner-level learners, with teachers aiming to introduce fundamental language skills and cultural elements through their instructional practices. Another commonality is that all three teachers were highly proficient users of the language they taught and have at least five years of experience in language education. Additionally, each school imposes certain restrictions on digital technology use, with mobile phones generally not permitted during class. Despite these shared features, the three cases are set in distinct teaching environments that influence how digital technologies are used in practice.

The NZSL classroom presents a unique setting, as it is fully online, requiring the teacher to rely heavily on digital tools to facilitate instruction. Given that NZSL is a visual-gestural language, video-based interaction is central to language learning, making digital technology an essential rather than supplementary component of the course. In contrast, the Chinese language classroom follows a face-to-face format, where textbooks and whiteboard instruction remain the primary teaching tools, with digital platforms such as Schoology and Education Perfect serving as supplementary resources rather than the core medium of instruction. The te reo Māori classroom, while also conducted in a physical setting, places a greater emphasis on cultural identity and global citizenship, incorporating digital platforms such as Google Classroom and Education Perfect to support resource sharing and co-constructed learning.

These differences suggest that teachers' use of digital technologies is shaped not only by their personal and pedagogical perceptions but also by the structure and objectives of their courses. In the NZSL classroom, digital tools are deeply embedded in teaching due to the necessity of remote instruction, while in the Chinese classroom, their role is more limited, supporting rather than driving learning activities. The te reo Māori classroom, meanwhile, positions digital technology as a means of extending learning beyond the classroom, facilitating student engagement with cultural and global themes

through digital inquiry. These distinctions indicate that while digital tools offer broad pedagogical potential for language teaching, their effectiveness and application depend on how they are aligned with teachers' instructional goals and classroom dynamics.

8.2 Comparing Teachers' Objectives in Developing Students' Communicative Competencies

Across the three case studies, all teachers recognised the importance of Communicative Competence in language learning, though they differed in how they emphasised its subcomponents. **Linguistic competence**, particularly vocabulary acquisition, was widely perceived as foundational across the three cases, reflecting the beginner-level proficiency of most students. However, their approaches to grammar and form accuracy varied. In the NZSL classroom, Lisa placed a strong emphasis on vocabulary clarity, with particular attention to the accuracy of sign components such as handshape, position, and movement, which function in place of pronunciation in this visual language. Grammatical precision was regarded as important but approached with flexibility, as communicative clarity remained the primary instructional goal. In contrast, Marama placed strong emphasis on grammatical accuracy, considering it essential to authentic expression in te reo Māori. This stance may be partly shaped by the morphological features of te reo Māori, where grammatical structures appear to influence word choice and variation. Fang, meanwhile, considered grammar important but secondary to vocabulary, encouraging students to first gain fluency and confidence before refining structural accuracy. These differences reflected not only pedagogical orientations, but also the distinct linguistic characteristics and communicative conventions of each language.

Differences were also identified in the attention given to **discourse competence**. While all teachers focused primarily on sentence-level expression, Marama placed more emphasis on extended discourse, incorporating structured writing tasks into her lessons. This variation may be understood in relation to the differing language proficiency levels of their students. For most Year 9 and 10 learners, especially those studying Chinese or NZSL as complete beginners, the focus naturally remained on building the foundational

elements of communication. However, many of Marama's students had prior exposure to te reo Māori, and were therefore operating at a more advanced level, which enabled her to incorporate structured writing development into her lesson plans. Her focus on discourse competence reflected both her pedagogical perceptions and the realities of her teaching context.

Across the three cases, **strategic competence** received varying levels of attention. Fang and Lisa both demonstrated an emphasis on helping students manage communication breakdowns. Fang did so through her stated perceptions about the value of non-verbal strategies, and Lisa through the use of compensatory techniques observed in her classroom practice. In Lisa's case, this focus was likely reinforced by the visual-spatial nature of NZSL, where meaning is often negotiated through gesture and facial expression. By contrast, Marama did not explicitly teach strategic competence, but allowed students to insert English words when encountering lexical gaps, prioritising sentence structure and fluency over compensatory strategies. While differing in form, all three approaches reflected context-sensitive understandings of how learners navigate communicative challenges.

Across the three case studies, all teachers recognised **ICC** as an integral component of language education, though their approaches to incorporating it varied. ICC was broadly understood to encompass cultural knowledge, cross-cultural comparison, and opportunities for intercultural interaction, and all three teachers saw language and culture as inseparable. However, the ways in which these elements were integrated into practice reflected differences in teachers' perceptions of what is important, student backgrounds, and language-specific contexts. All three teachers embedded cultural knowledge into their teaching, positioning it as foundational to meaningful communication. While Lisa and Fang focused on immersion in the sociocultural norms of NZSL and Chinese respectively, Marama extended her approach beyond local cultural understanding, framing Māori language learning within a broader vision of global citizenship. This distinction might partly reflect the unique curricular framing of te reo Māori (Ministry of Education, 2009), which is governed by its own subject-specific guidelines rather than the national Learning Languages area of the New

Zealand Curriculum (Ministry of Education, 2007).

Another important area of divergence was how teachers approached cross-cultural comparison. Fang explicitly encouraged students to compare Chinese and English cultural practices, such as how language is used in different social contexts, believing that such contrasts could deepen students' intercultural understanding. Lisa's comparative approach was more contextual and situated, drawing on everyday differences between Deaf and hearing social norms. In contrast, Marama discouraged direct comparison, instead promoting a stance of openness and respectful curiosity. These differing approaches may also be partly shaped by the teachers' cultural and linguistic positioning. Fang, who was born and raised in China, brought with her a perspective informed by lived experience across two distinct cultural systems, which likely contributed to her emphasis on explicit cultural comparison. By contrast, both Lisa and Marama taught languages such as NZSL and te reo Māori, which are rooted in the local culture and society of Aotearoa New Zealand. Their teaching reflected this embeddedness, placing less emphasis on contrasting cultures and more on fostering intercultural interaction and inclusion.

These differences in cultural comparison extended further to how teachers supported authentic intercultural interaction. Lisa most actively facilitated real-world engagement by connecting students with members of the Deaf community, embedding interaction within her pedagogy. By contrast, Marama and Fang, while recognising the value of lived intercultural experience, did not formally incorporate such opportunities into their teaching. This suggests that while all three teachers valued ICC, only some translated this into consistent experiential opportunities for students.

The teachers also displayed varying perceptions regarding the development of students' **digital competence**. In this study, digital competence involved the use of digital tools to support both structured language learning and authentic communicative engagement. While all three teachers recognised the potential value of digital technologies, their practices varied significantly depending on a combination of internal and external

factors. Lisa demonstrated the highest level of integration. Because her teaching context was an online NZSL course, sustained use of digital platforms was required, but her practice extended beyond logistical necessity. She actively embedded digital tools into both structured learning activities and real-time communicative tasks. In addition to using digital resources for vocabulary and content delivery, she encouraged students to interact with members of the Deaf community through online platforms, treating digital environments as an essential extension of the classroom. Her approach reflected a view of digital competence as both a pedagogical foundation and a gateway to authentic interaction.

Fang adopted a more selective and cautious approach. While Fang recognised the cultural and linguistic value of digital tools, she remained cautious due to concerns about student safety and limited digital literacy. As a result, she did not actively promote authentic communication in digital spaces and rarely encouraged independent online interaction. Her use of technology was shaped by a desire to facilitate guided digital input and controlled practice, rather than open-ended communicative engagement. Marama expressed strong reservations about digital technology, particularly in relation to online communication. Taken on their own, her self-reported views conveyed a clear preference for face-to-face learning and print-based materials. Without reference to her actual classroom practices, these perspectives might suggest a limited role for digital tools in her teaching. She incorporated digital elements only when necessary and appeared to respond to broader educational expectations around students' digital literacy and the integration of technology into classroom practice. She did not actively promote the use of online platforms for communication in te reo Māori. Her approach reflected a pedagogical stance grounded in personal interaction and cultural connection.

Overall, the cross-case analysis revealed that while all three teachers recognised the centrality of Communicative Competence in language education, their approaches varied notably across its components. Vocabulary development was consistently prioritised due to the beginner-level proficiency of most students, yet their treatment of grammar, discourse, and strategic competence diverged in ways that reflected their perceptions and the structural features of the target languages. All teachers also valued

ICC, embedding cultural content into their lessons, though only some facilitated explicit cultural comparisons or real-world intercultural interaction. Their perceptions of digital competence similarly varied. Lisa fully embraced digital tools as integral to both structured learning and authentic communication, while Fang adopted a more cautious, selective approach, and Marama showed strong preference for handwriting, in-person interaction, and other non-digital practices.

8.3 Teachers' Perceptions and Practice of Using Digital Technologies in

Language Teaching

This section presents a cross-case analysis of how three language teachers perceived and enacted the use of digital technologies in their classroom practice. It is structured around three focal areas: teachers' interpretations of the pedagogical potential of digital tools and their application in practice; the challenges encountered during technology integration and the strategies adopted in response; and teachers' broader orientations toward digital education, particularly their perceived roles in supporting students' digital learning.

8.3.1 How Teachers See and Implement the Potential of Digital Technologies

This section employs cross-case analysis to examine how three teachers perceive and implement the potential of digital technologies in language teaching, comparing their approaches in actual classroom practices. The analysis covers seven key themes: increasing practice opportunities and enhancing language input, digital content presentation, exposing students to the target culture and developing ICC, storing and sharing learning resources, fostering student engagement and attention, supporting teachers' reflective practices, and facilitating classroom interaction and student collaboration. While all teachers recognised the benefits of digital technologies, their pedagogical priorities, depth of integration, and practical implementation varied. Through cross-case comparison, this section explores how different teachers leverage digital tools to shape language learning experiences and examines the adaptability and effectiveness of these technologies in diverse teaching contexts.

Increasing Practice Opportunities and Enhancing Language Input

Across the cases, all three teachers recognised the potential of digital technologies to support language learning, yet their approaches varied in emphasis and implementation. Two areas of variation were particularly notable: how digital tools were used to increase students' opportunities for practice, and how they contributed to the provision of language input. Lisa integrated digital technologies more extensively into her teaching than the other two teachers, positioning them as the primary medium for delivering instruction. Her approach was probably influenced by her online teaching context, which encouraged the integration of digital technologies across resource presentation, student interaction, and communicative tasks. By curating multimodal resources and encouraging students to revisit video content beyond class time, she sought to promote both language production and repeated exposure, which was particularly well-suited to the visual-gestural nature of NZSL.

Fang, by comparison, adopted a more selective and structured approach. Her use of digital tools primarily supported vocabulary and listening through repeated practice, and she incorporated translation exercises to extend opportunities for output. Although she recognised the value of digital media in presenting contemporary language use, her implementation remained largely teacher-directed and textbook-based, with digital technologies serving a supplementary role in her teaching. Marama's teaching reflected yet another orientation, characterised by student-led inquiry and project-based learning. Although she reported using platforms designed to support structured language practice and input, these were not evident in her observed lessons. Instead, digital tools were primarily used to support students' research and presentation of cultural content, with minimal focus on structured linguistic practice. This gap between her stated use of digital tools and her actual classroom implementation illustrates a broader tension between pedagogical intention and enactment.

Digital Content Presentation

Across the three cases, all teachers incorporated digital content presentation to varying

degrees, typically through slides or screens, yet their rationales and implementation practices differed significantly. Lisa used digital slides in a structured and deliberate way, integrating them closely with her lesson sequencing and instructional scaffolding. For her, tools such as PowerPoint were central to providing a clear, accessible learning structure. Slides supported vocabulary and grammar instruction and were used to pace learning through step-by-step progression. This approach reflected her view of digital content as a vehicle for organisation, transparency, and student comprehension. Marama also made regular use of digital slides, though with a stronger emphasis on visual flexibility and aesthetic engagement. Her preference for Canva allowed her to create visually dynamic materials that supported both content delivery and classroom routines. Notably, Marama also encouraged students to actively use presentation tools as part of their learning process, and this aspect will be further discussed in the following section.

In contrast, Fang made only limited use of digital presentation tools. While she occasionally used a screen to display videos or websites, these instances were not central to her lesson structure. One contributing factor may be the nature of the course she taught, which relied more heavily on a set textbook. Both teacher and students tended to follow the textbook closely during lessons, with digital content playing a peripheral role. These differences suggest that digital content presentation practices were shaped by their instructional preferences and resources in their classrooms.

Exposure to the Target Culture and Developing ICC

Across the three cases, all teachers recognised the value of digital technologies in supporting students' cultural understanding. They recognised that such tools could provide access to authentic materials and diverse cultural perspectives that might not otherwise be available in the classroom. A key point of divergence lay in the degree of student interaction promoted through digital technologies. Lisa conceptualised cultural learning as inherently dialogic, aiming to facilitate direct engagement with members of the Deaf community through synchronous and asynchronous platforms. Her emphasis on reflection and communication positioned digital tools as active mediators of intercultural experience.

In contrast, Fang and Marama used digital technologies primarily to support cultural exposure rather than interaction. Fang incorporated curated video content to introduce cultural practices, yet her instruction remained largely teacher-centred, with limited follow-up discussion or student-led engagement. Marama embedded digital tools into student research tasks, encouraging independent inquiry into cultural themes. While this approach fostered critical engagement with content, it did not involve direct intercultural communication. These differences reflected not only pedagogical perceptions but also contextual constraints. Marama regarded interactive intercultural activities as difficult to implement within limited classroom time, and her approach framed cultural learning as a process of investigation rather than real-time communication. Similarly, Fang also considered additional intercultural interaction unnecessary in her context, noting that her school was highly culturally diverse and that students already had ample opportunities for cross-cultural engagement in their everyday school lives. Furthermore, the absence of authentic digital intercultural interaction in Marama's class may also be related to the students' backgrounds, as some already had personal or community-based exposure to Māori language and culture. In both cases, the perceived sufficiency of students' existing intercultural experiences might contribute to a preference for content-focused rather than interaction-based digital activities. Therefore, while all three teachers viewed digital technologies as valuable for cultural learning, their approaches ranged from interactive engagement to informational exposure. These choices were shaped by pedagogical orientations, practical limitations, and the sociocultural contexts in which they taught.

Storing, Accessing, and Sharing Learning Resources

All three teachers recognised the value of digital technologies for storing, accessing, and sharing learning materials. They viewed digital platforms as useful for enhancing both instructional organisation and student access to content. However, their implementation differed notably in terms of depth, purpose, and integration.

One point of divergence lay in the extent to which digital storage was embedded into the teaching process. Lisa and Marama consistently integrated platforms such as Moodle or Google Classroom into their lesson planning, using them to organise content,

support student engagement, and provide ongoing access to instructional materials. In their practice, digital storage was not just a repository but an active component of the learning process, as students were expected to retrieve materials, revisit content, and submit work digitally. In contrast, Fang adopted a more limited approach. Although she recognised the organisational benefits of digital platforms, her use was more occasional and focused on content delivery rather than sustained engagement. As a result, students had fewer structured opportunities to interact with digital resources as part of the learning cycle. This may be partly attributed to the resource used in her classroom, where a set of textbooks played a central role. Students were encouraged to record key vocabulary and sentence structures in their notebooks, and instructional activities were primarily grounded in print-based materials. Compared to the other two cases, Fang's classroom relied less on digital resources for ongoing student access, which in turn reduced the perceived need to embed digital storage systems into the learning cycle.

Another point of divergence lay in how digital platforms supported teacher-to-teacher collaboration and resource exchange. Lisa used shared platforms extensively, routinely distributing her materials for colleagues to adapt. Fang also took part in informal sharing networks, though in a less systematic way. Marama, by contrast, did not explicitly mention using digital tools for collaboration. This absence aligns with her sharing that her report that limited collegial support was a challenge for her in integrating technology.

Student Engagement, Learning Motivation, and Attention

Across the three cases, all teachers recognised the potential of digital technologies to enhance student engagement, but their approaches differed considerably in terms of integration depth, perceived function, and implementation consistency. Lisa regarded digital tools as essential for sustaining attention, particularly in online learning contexts. Her strategy focused on proactive classroom management, embedding features such as interactive prompts and monitoring functions to help students stay focused. Although direct evidence of these strategies was limited, her lessons were generally orderly and students appeared attentive, suggesting that her structured use of technology may have contributed to a well-managed learning environment.

By contrast, both Fang and Marama viewed digital technologies as supplementary tools to enhance engagement, particularly when student attention declined during extended tasks. They used digital resources selectively and in time-bound ways, integrating short videos and different digital language tasks to introduce variety, maintain momentum, and refocus students. Despite these similarities, Marama placed additional emphasis on student accountability. She valued the real-time tracking features of digital platforms, believing that visible expectations encouraged students to stay on task.

Reflecting on Teaching Practice

Among the three cases, only two teachers explicitly recognised the role of digital technologies in supporting reflective teaching practices. Both Lisa and Marama incorporated digital tools to evaluate and adjust their instruction, though the scope and depth of their engagement differed noticeably. Fang, by contrast, did not emphasise digital reflection, which may reflect a preference for on-the-spot, observation-based decision-making.

Lisa adopted a broad and systematic approach to reflective practice, using digital platforms to monitor engagement trends, analyse student participation, and collect feedback. Her reflection was informed by both quantitative data, such as completion rates and attendance patterns, and qualitative input gathered through student surveys. This data-driven approach allowed her to make instructional adjustments based on evidence rather than assumption, and to track patterns over time. Marama also saw value in using digital tools for reflection, though her approach was more targeted and assessment-focused. She used digital assessments to identify patterns of misunderstanding and adjusted subsequent lessons accordingly. Unlike Lisa's broader use of analytics and feedback loops, Marama's reflection was anchored in diagnosing specific learning gaps. Her engagement with digital tools centred on identifying and addressing conceptual errors, rather than tracking longitudinal engagement data or collecting broader student feedback.

Fang, in contrast, did not report using digital tools to support reflective practice, nor were such practices evident during classroom observations. Her use of learning management systems appeared limited, and likely did not extend to features that support data-informed reflection. While the absence of structured digital reflection does not necessarily indicate a lack of reflective teaching, it may reflect a pedagogical orientation that places greater emphasis on immediate classroom experience and professional judgement over systematic analysis of performance data.

Facilitating Classroom Interaction and Student Collaboration

Across the three cases, only two teachers, Lisa and Marama, actively integrated digital technologies to promote student interaction, though their approaches reflected different pedagogical emphases. Lisa's approach focused on replicating real-time, face-to-face communication in an online setting. She used platforms that enabled spontaneous peer conversation and structured dialogue, with an emphasis on student autonomy and language authenticity. Interaction in her classroom was primarily synchronous, aiming to foster fluency through natural, real-time exchanges. Marama, by contrast, embedded digital tools into collaborative project work. Her students worked in groups to investigate topics, make joint decisions, and co-create digital outputs. Rather than centring on spoken interaction, her model emphasised co-construction of knowledge through shared digital workspaces. Interaction was often asynchronous or semi-synchronous, focused on task completion and peer accountability. Fang took a different approach. She used digital technologies for routine practice and resource access, but not for designing student interaction. This illustrates that while digital tools offer the potential to support interpersonal interaction, such outcomes depend on intentional pedagogical design and cannot be realised automatically.

8.3.2 Challenges in Technology Integration

This section highlights cross-case findings on barriers and contextual constraints encountered in efforts to integrate technology effectively, focusing on three aspects: teacher-related, student-related, and technological challenges.

Teacher-Related Challenges in Technology Integration

Across all three case studies, a key challenge shared by teachers was the significant time and effort required for effective digital technology integration. Teachers consistently emphasised that meaningful use of digital tools demanded ongoing learning, adaptation, and resilience, particularly in the face of technical difficulties or platform limitations. However, their strategies for managing these demands varied considerably depending on the extent of professional support available to them.

A key difference lay in teachers' access to and perceptions of professional development. While all three recognised the importance of improving their digital capabilities, only Lisa engaged extensively in structured professional development and external collaboration. Her sustained involvement was driven in part by a teacher inquiry project on online teaching and her leadership responsibilities, which enabled close partnerships with support networks and access to tailored resources. By contrast, Fang and Marama found available training either too basic or opted for informal, self-directed learning instead. These differences reflect broader contextual disparities: teachers embedded in collaborative and well-supported environments were better positioned to pursue sustained development, whereas others navigated digital integration more independently. Professional isolation further compounded these challenges in some cases. For example, Marama's role as the sole te reo Māori teacher in her school meant she lacked subject-specific colleagues or departmental infrastructure. Unlike foreign languages such as Chinese or French, which are typically taught within a shared language department and benefit from collegial collaboration, te reo Māori is often positioned differently within schools, both in terms of curriculum structure and teacher networks. Consequently, Marama's efforts to integrate technology were largely solitary, with limited opportunities to share strategies or seek peer support. In contrast, teachers with access to professional learning communities benefited from shared resources, collaborative problem-solving, and sustained motivation.

Another point of divergence was classroom management in digitally supported environments. Lisa, who taught fully online, explicitly raised concerns about student behaviour in digital spaces, stressing the need to rebuild authority and set new norms

for online interaction. This issue was less prominent in the other two cases, where digital tools were used within blended settings alongside face-to-face instruction. While behaviour management was not foregrounded in their accounts, teachers in blended contexts still faced the dual task of monitoring students' physical presence and their actions on digital platforms. These demands, although less visible, introduced additional complexity into classroom management and required teachers to adapt their routines and expectations. Taken together, these findings highlight that while digital integration was universally labour-intensive, teachers' experiences diverged based on key contextual factors: the availability of professional development, the presence (or absence) of collegial support, and teaching mode. Teachers with structured training and collaborative networks generally faced fewer barriers and expressed greater confidence. In contrast, those working in more isolated or unsupported contexts, particularly when navigating unfamiliar tools in real time, carried a heavier load and experienced more frequent disruptions.

Student-Related Challenges in Technology Integration

Across all three cases, teachers identified a range of student-related challenges linked to the integration of digital technologies in language learning. While specific concerns varied, recurring themes included students' difficulty adapting to digital environments, short attention spans, limited independent use of digital tools, and surface-level engagement with tasks. A shared concern was the time and support students needed to become familiar with digital tools, particularly in the early stages of implementation. Teachers observed that many learners struggled to navigate platforms, manage their time, and understand the pedagogical purpose behind certain technologies. Even when students developed basic technical fluency, this did not always lead to deeper engagement, highlighting that familiarity alone was insufficient for meaningful digital participation. For example, Marama expressed frustration that instructional videos, pronunciation platforms, and other supplementary tools were often ignored unless directly embedded into classroom tasks. She noted that students were unlikely to explore such tools independently unless their relevance was clearly explained and repeatedly reinforced by the teacher.

Teachers also differed in the extent to which they perceived digital distraction as a barrier to learning. In Fang and Marama's blended classrooms, where students used personal devices during lessons, maintaining focus was an ongoing challenge. Both teachers noted that students frequently shifted attention to non-academic content or used digital tools for purposes unrelated to learning. In contrast, Lisa did not emphasise distraction as a significant issue. This may be attributed to the tightly structured nature of her online lessons, the small class size, and the additional classroom management support provided by Olivia, who supervised students on-site during sessions. These conditions likely reduced opportunities for off-task behaviour. However, as noted earlier, Lisa did raise concerns about students' conduct in online activities, not specifically related to distraction but rather to behavioural appropriateness and its impact on classroom flow. Her emphasis on online interaction norms contrasted with Fang and Marama, whose concerns centred more on device misuse or disengagement. These differences partly reflect the structure of their lessons: Lisa's classes included opportunities for real-time student interaction, while the other two focused more on teacher-led tasks.

Concerns were also raised about students' critical engagement with digital content. Fang, in particular, questioned students' ability to evaluate the credibility of online information and navigate the cultural and linguistic complexity of digital communication. As a result, she discouraged the use of open-ended digital exchanges such as social media interactions with native speakers, viewing these as potentially confusing or misleading for students with limited critical literacy skills. This cautious approach reflected a desire to shield students from unreliable content in the absence of robust evaluative strategies.

Taken together, these findings illustrate that student-related challenges were present across all cases, but their specific manifestations and perceived significance varied across cases. These differences were shaped by contextual factors such as teaching mode, class size, the nature of digital tool use, and the degree of teacher guidance. Importantly, the analysis underscores that effective digital learning requires not only teacher initiative and instructional design, but also sustained support for students as

they develop the confidence, judgement, and behaviours necessary to engage productively with digital technologies.

Technological Challenges in Digital Integration

Technological challenges were identified as a consistent concern across all three cases. The main difficulties related to device access and internet reliability, the limitations of digital tools for language-specific instruction, and the broader usability of platforms within resource-constrained school environments.

Access to appropriate devices and reliable internet connections was a shared issue, though it was particularly pronounced in Lisa's context, where instruction was delivered entirely online and relied heavily on student-owned technology. Teachers observed disparities in students' access to suitable devices, with some relying on phones or school-issued equipment that was ill-suited to the demands of language learning. While schools attempted to address these barriers by providing laptops or enhancing infrastructure, technical constraints continued to shape how teachers selected and used digital tools. In more digitally intensive settings like Lisa's, ensuring stable access and performance became integral to lesson planning, potentially raising broader concerns about digital equity. In other contexts, where teaching remained largely face-to-face, occasional connectivity issues were considered manageable and less disruptive to instructional flow. However, Fang and Marama also faced limitations related to budget and infrastructure. Both adopted a pragmatic approach, prioritising free and familiar platforms while avoiding tools they viewed as ineffective or overly complex within their school settings.

In addition to infrastructure, teachers' responses to technological challenges were shaped by the linguistic demands of the subjects they taught. A major point of divergence was the perceived inadequacy of mainstream digital tools in supporting language-specific pedagogical needs. Teachers agreed that widely used platforms were not designed to accommodate the unique features of different languages, but their concerns varied in focus. For sign language, the absence of written text and the visual-

spatial nature of the language meant that conventional platforms, which were often built for text-based or audio instruction, were inappropriate. Teachers responded by prioritising video-based resources and adapting their strategies to account for the two-dimensional limitations of digital environments. For languages like te reo Māori, the challenge extended to the inaccuracy of popular tools such as translation applications, which were seen as misrepresenting the language and undermining cultural authenticity. As a result, teachers often curated or developed their own materials to better align with pedagogical and cultural objectives. Similarly, for a language like Chinese, with its complex grammar and flexible syntax, digital tools were seen as lacking the capacity to offer meaningful feedback or support grammatical learning. In such cases, teachers expressed scepticism about the pedagogical value of AI-based platforms and preferred teacher-led explanations and face-to-face instruction. This selective use of digital resources was shaped by both instructional quality concerns and technical limitations.

Across all cases, there was agreement that technological challenges, although not always insurmountable, required ongoing adaptability, critical evaluation of available tools, and, in many cases, additional planning or support. Teachers' responses were influenced not only by material access, but also by the alignment of tools with their pedagogical goals, their professional agency, and the level of institutional support available to help bridge the gap between tool design and classroom realities. For some, digital technologies became central to their teaching practice; for others, they remained supplementary or secondary to more established instructional methods.

8.3.3 Adapting to Digital Education and Perceived Teachers' Role

Beyond the perceived potentials and challenges of digital technology integration, the three teachers also shared additional perspectives on the necessity of adapting to digital education and the role of teachers in digital learning. In terms of adapting to digital education, all three teachers acknowledged the growing inevitability of digital technology in language education, yet their orientations lay along a continuum, ranging from enthusiastic endorsement to more cautious and pragmatic engagement. These differences reflected not only personal preferences but also broader negotiations between institutional demands and pedagogical convictions. Lisa fully embraced digital

integration, viewing it as an opportunity to reshape language teaching and learning. She advocated for sustained professional development to support this transition and believed that confident, well-supported teachers could foster more effective digital environments.

The other two teachers demonstrated more measured engagement. For Marama, the adoption of digital tools was primarily a practical response to the expectations of contemporary education. Despite her reservations and preference for face-to-face interaction and book-based learning, she made deliberate efforts to support students' digital competence by explaining the rationale behind tools and highlighting their long-term value. Moreover, her teaching practice, particularly in areas such as student collaboration and research, suggested a deeper level of digital integration than her self-reported perceptions alone might imply. Together, these perspectives reveal that while digital technology was universally recognised as necessary, teachers varied in the extent to which they internalised it as a core pedagogical priority, positioning themselves at different points along a continuum of integration.

Building on these orientations, their views on the teacher's role in digital learning further illustrated how these perceptions translated into everyday practice. In terms of the role of teachers in digital learning, teachers adopted different approaches to supporting student engagement with digital learning. While some viewed their role as guiding students in developing confidence and competence with digital tools, others were more selective, emphasising the importance of managing access and aligning technology use with classroom goals and students' learning readiness. These differences reflected each teacher's interpretation of their professional responsibilities in a digital learning environment. Lisa and Marama both considered teacher support essential to helping students meaningfully engage with technology. They emphasised modelling confident use and integrating digital tools into structured tasks with clear purposes. In their view, digital competence was not assumed to be intuitive for students but developed through ongoing guidance and explicit explanation. Although Marama strongly valued face-to-face teaching and pen-and-paper tasks, she still encouraged students to use digital tools for collaboration and research, illustrating established

classroom practices with emerging digital expectations.

Fang, in contrast, approached technology integration with greater caution. Aware of students' age and language proficiency, she introduced digital tools selectively, favouring those she considered pedagogically sound and manageable within her specific classroom context. Rather than embedding technology throughout her instruction, she used it to supplement teacher-led explanations, especially in areas such as grammar teaching or open-ended communication, where she felt digital tools lacked precision or appropriateness.

Taken together, this section examined how three language teachers perceived and implemented digital technologies in their teaching, revealing notable variations shaped by pedagogical perceptions, teaching contexts, and institutional support. While all teachers recognised the value of digital tools, their integration practices differed in scope and purpose, ranging from fully embedded multimodal instruction to more selective or supplementary use. Across cases, digital technologies were used to support language input, cultural learning, student motivation, and resource management, though the depth of integration depended on individual orientation and classroom needs. Common challenges included limited training, technical constraints, and student digital readiness, with teachers' responses shaped by the availability of professional development and peer support. Importantly, teachers' evolving roles in digital education reflected differing levels of confidence, adaptability, and responsibility. Some embraced active guidance and reflection, while others adopted more cautious, task-focused strategies. These findings underscore that effective digital integration relies not only on access to tools, but also on teacher agency, supportive conditions, and a clear pedagogical vision. Building on these insights, the following section turns to students' perspectives, examining how they perceived and experienced the use of digital technologies in language learning.

8.4 Comparing Students' Perceptions and Experiences of Digital Technologies in Language Learning

This section offers a cross-case analysis of students' perceptions and experiences with digital technologies in language learning. It explores how students engaged with digital tools in relation to language input and output, feedback, interaction, and motivation, as well as the challenges they encountered in different classroom contexts. It also considers how students' views aligned with or diverged from those of their teachers.

8.4.1 How Students Perceive and Experience the Potential of Digital Technologies

Across all three cases, students reported the value of LMS platforms in supporting independent learning. Commonly used platforms such as Microsoft Teams, Moodle, Schoology, Google Classroom, and Education Perfect enabled students to access study materials, **manage assignments and sustain learning** outside the classroom. In particular, the ability to revisit digital resources at any time was appreciated, especially when physical textbooks were unavailable for home use. While this foundational role of LMS tools was commonly recognised, the extent and manner of engagement varied. In Lisa's and Marama's classrooms, students made more active and multifaceted use of digital platforms, employing them not only to access materials but also to submit assignments, track deadlines, and communicate with teachers. These practices supported greater learning autonomy. By contrast, in Fang's classroom, students engaged with digital tools more passively, relying on them primarily as static repositories for teacher-provided content, with limited involvement in task management or self-monitoring.

Students across the three cases identified digital tools as **supporting both structured language output and enriched language input**, though the forms of use and instructional integration varied to some extent. In Case Studies Two and Three, platforms such as Education Perfect, Google Docs and teacher-designed resources were commonly used to scaffold output-oriented tasks, especially in writing and translation. These activities were sometimes embedded within project-based learning, which

required students to move beyond isolated sentence work to produce more extended texts. Similarly, translation tasks featured in the sign language class, although students there were more frequently engaged in personalised dialogue practice based on their own communicative contexts, rather than working with prescribed texts. Across all cases, output practices included both video-recorded submissions for spoken or signed languages, as well as in-class oral presentations in Marama's class to share project outcomes.

Students consistently valued the role of digital tools in supporting language input. Across cases, they highlighted the benefits of multimodal materials such as videos and audio recordings in enhancing vocabulary acquisition, pronunciation, and listening comprehension. Whether through online dictionaries, teacher-produced videos or curated audiovisual content, these resources were perceived as more authentic, accessible and effective than print-based materials.

A further pattern related to students' use of digital dictionaries. In Case Studies One and Three, these tools were viewed as useful for independent vocabulary retrieval, particularly outside of class. However, observations revealed that students often turned to their teachers for immediate clarification during lessons, likely due to the perceived ease and reliability of native-speaker support. This suggests that while digital dictionaries supported autonomous learning, their use was often secondary to in-person interaction. In Fang's class, digital dictionaries were not explicitly referenced by students, though a few mentioned a website for viewing Chinese character stroke order. The limited mention of this tool may reflect the distinctive demands of learning Chinese at the beginner level, where instruction prioritised pinyin (the Romanised phonetic system) and basic character recognition over the complex visual and motor skills required for accurate handwriting. This pedagogical emphasis may explain why digital reference tools supporting character formation played a minimal role in students' reported learning practices.

Across all cases, students perceived digital resources, especially videos and other

multimedia materials, as valuable tools for **accessing cultural knowledge**. From their perspective, such materials enhanced engagement and helped them better understand the social and historical dimensions of their target languages. Videos were especially appreciated for their contextual richness, offering cultural insights that extended beyond textbooks or classroom-based explanations. While this appreciation was shared across language groups, students described different functions of video resources depending on the language being learned. Chinese and te reo Māori learners, for example, viewed cultural videos not only as sources of cultural knowledge but also as opportunities for incidental language learning, where songs, films and documentaries exposed them to authentic vocabulary and expressions in use. Sign language students, on the other hand, emphasised the communicative dimension of cultural resources. From their perspective, these materials provided essential models of interaction norms and sociocultural practices specific to Deaf communities, aligning closely with their need to observe visual-gestural communication in context.

Across the cases where this theme was discussed, students perceived digital technologies as important tools for **supporting classroom interaction**, particularly in contexts where face-to-face communication was limited, or collaborative learning was prioritised. While their specific experiences varied, students in two contexts consistently described how digital platforms helped them stay connected and engaged, whether through interaction with teachers or collaboration with peers.

In the sign language class, students emphasised the importance of digital tools for sustaining teacher-student communication in an online setting. They appreciated being able to switch between spoken, typed, and visual modes of communication, which allowed them to overcome physical barriers and engage more effectively with a remote teacher. From their perspective, technology played a crucial role in maintaining continuity and clarity when in-person interaction was not possible. By contrast, students in the te reo Māori class highlighted the value of digital platforms for coordinating peer collaboration. Tools that supported real-time editing and resource sharing were seen as essential for managing group tasks and ensuring equal participation. Students perceived these platforms not only as practical aids for dividing and completing work but also as

mechanisms for fostering shared responsibility and collective learning. In the Chinese language class, however, students did not report using digital tools to support interaction. Their learning experience was largely teacher-directed and text-based, with few collaborative tasks and limited emphasis on technology-supported communication.

Students in both Case Study One and Case Study Three expressed a clear preference for **individualised feedback** delivered through online platforms, which they viewed as essential for tracking progress and developing language skills. Digital tools were seen as enabling teachers to offer clear, targeted guidance in an accessible format. While this preference was consistent, the two groups differed in their responses to peer feedback. In the sign language class, students embraced peer evaluation as a collaborative and constructive aspect of their learning, particularly suited to a visual language context where reviewing each other's recordings supported reflection and the development of signing skills in an online environment. By contrast, students in the te reo Māori class expressed discomfort with peer evaluation, especially when speaking tasks were accessible to the whole class. As discussed in Section 7.5.1, concerns about peer judgement and perceived expectations, particularly among students with cultural or linguistic ties to Māori, contributed to a strong preference for private, teacher-only feedback. This sensitivity, though not directly observed in classroom interactions, appeared to shape students' engagement with digital feedback practices. In the Chinese language class, students did not mention digital feedback tools or peer evaluation. This absence may reflect a teacher-led environment in which feedback was delivered verbally during class, with limited use of structured digital assessment tools. Overall, student perspectives across these cases underscore the importance of feedback format, privacy, and emotional safety in shaping how digital feedback practices are perceived and enacted in language learning contexts.

Students in Case Studies Two and Three commonly identified digital technologies as helpful for **sustaining engagement and motivation**. Gamified elements such as point systems, quizzes and reward-based tasks were frequently mentioned as making learning more enjoyable and less monotonous. Most students found competitive features engaging, particularly when they could monitor their progress relative to peers.

However, this was not universal; some students felt that visible rankings were discouraging, especially when they consistently placed lower on leaderboards. These views suggest that while gamification can motivate confident or high-performing students, it may create pressure or reduce motivation for others.

In addition to gamification, many students perceived video-based content as a useful way to maintain attention, particularly when used sparingly. Some appreciated the change of pace that occasional videos offered, while others incorporated culturally relevant films into their personal learning routines to stay focused and interested. A further theme, particularly evident in the te reo Māori class, was the value students placed on structured progress tracking. They described using digital tools to organise tasks, set goals, and monitor their progress, which they felt gave them a greater sense of control and encouraged more independent learning.

From the case studies, students consistently valued digital tools that were **easy to use and aligned with their learning preferences**. While the specific tools and priorities varied, two distinct perspectives were evident: some students appreciated straightforward platforms with clear structure and minimal navigation demands, while others placed greater value on having flexibility and choice in selecting digital resources.

In the sign language class, students emphasised the usability of structured platforms that enabled independent learning and supported smooth task progression. These tools were described as intuitive and helpful for reinforcing learning routines, contributing to a sense of clarity and control. Students expressed that when digital tools were simple to use, they felt more confident and less distracted by technical barriers. This preference may have been shaped by the course design, which included dedicated self-directed learning time guided by materials provided by a remote teacher through the LMS. In this context, digital simplicity was not only convenient but essential for sustaining autonomous learning.

In the te reo Māori class, by contrast, students valued having a range of tools to choose from, selecting those that best fit their personal preferences and specific project

requirements. Although some initially found the variety overwhelming, they later described this flexibility as enhancing their sense of agency. Their routines evolved to balance exploration with reliance on familiar platforms. This appreciation for choice may have been influenced by the collaborative, project-based nature of the course, particularly in the later stages where students were expected to integrate diverse digital tools to plan and deliver group presentations. The teacher's encouragement to personalise tool use rather than follow a single prescribed method further reinforced students' sense of ownership and control. Taken together, these perspectives highlight that usability in digital learning is not solely about technical simplicity. For some students, ease of use enables confidence and autonomy in structured learning contexts, while for others, meaningful choice and tool customisation foster engagement and a stronger sense of agency.

8.4.2 Students' Perspectives on Challenges

Across all three cases, students encountered **learner-related challenges** when engaging with digital technologies, though the nature and intensity of these challenges varied. A key distinction lay in how they viewed their ability to manage digital learning. Students in the online sign language class generally felt confident using digital platforms and attributed most difficulties to external technical issues. In contrast, students in the Chinese language class and te reo Māori class more often reported personal challenges, particularly difficulties in staying focused and avoiding distractions during digital tasks. In these two cases, students frequently described losing focus due to non-academic content such as social media or online games, indicating that using digital devices and conducting digital tasks could hinder sustained attention, especially when teacher supervision was limited. Some students in the te reo Māori class also found that having to complete tasks in both handwritten and digital formats led to repetitive work, which they viewed as inefficient and time-consuming. Therefore, these student perspectives suggest that while learners across all three cases recognised the value of digital tools, their ability to engage productively with them was shaped by individual learning preferences, previous digital experience, and the level of in-class support.

Moreover, across the three cases, students encountered a range of **technology-related obstacles**, though the nature and impact of these challenges varied. A common concern was connectivity and access. Students in the online sign language class experienced unstable internet, which disrupted communication and made it difficult to complete tasks smoothly. In contrast, students in the Chinese and te reo Māori classes referred more to school-imposed internet restrictions. However, these restrictions were not seen as directly affecting their language learning, as they mainly related to personal use, such as accessing social media platforms that were not part of their classroom instruction. Beyond connectivity, students also raised concerns about the limitations of digital tools for language-specific tasks. Some students in the te reo Māori class expressed doubts about the reliability of online reference tools, especially when facing multiple meanings or ambiguous translations. In such cases, they preferred teacher input, indicating a greater reliance on native speakers and the authority of the classroom teacher.

Students in the Chinese language class reported additional frustrations. In particular, they noted that some digital platforms did not support handwriting practice effectively, leading them to use paper-and-pen methods for learning Chinese characters. They also found that rigid automated assessment systems penalised minor errors in grammar or spelling, even when their responses were conceptually correct. This diminished their sense of progress and affected their confidence. Taken together, these student perspectives highlight that while digital technologies offer important benefits, they can also create barriers when not well aligned with learners' linguistic needs, task demands, or expectations for meaningful support.

8.4.3 Bridging Teacher and Student Perspectives

Across the three cases, students generally engaged with digital tools in ways that reflected their teachers' instructional choices. Teachers' perceptions of the role of technology largely shaped how digital resources were introduced and embedded in classroom practices, and students often responded in ways that echoed these orientations. While some students interacted with digital resources in a more receptive manner rather than through active use, this pattern may be attributed to their age, proficiency level, and the nature of the tasks rather than a lack of alignment. This section

presents both teachers' and students' perspectives on the potential and challenges of digital technology in language learning, highlighting where their views converged and where subtle differences were identified. This section explores teachers' and students' perspectives on the integration of digital technologies, highlighting both shared and differing perspectives on their pedagogical potential as well as the challenges encountered in practice.

All three teachers integrated digital resources to improve students' exposure to authentic language input, and students generally recognised the value of these tools. Online videos, dictionaries, and listening exercises were perceived as helpful for comprehension and vocabulary development. However, rather than relying solely on digital tools, students sometimes preferred to seek clarification, translation, or explanation directly from their teachers, especially when the teachers were native speakers. This preference reflects a tendency to prioritise immediate, personalised support when available, even though digital materials were still valued as supplementary learning resources.

Another area where student engagement aligned with teacher emphasis was digital communication. In classes where teachers prioritised digital communication tools, such as the online sign language class and the te reo Māori class, students actively participated in collaborative and interactive learning using platforms like video conferencing or shared documents. In contrast, in settings where such tools were not central to instruction, such as in the Chinese language class, students reported minimal use of communication technologies for learning purposes.

Digital tools also played a role in supporting cultural learning, although the depth of student engagement varied considerably across contexts. This variation appeared to relate closely to teachers' instructional design and the types of opportunities they provided for cultural exploration. Students in the te reo Māori class, for instance, actively used digital research tasks and multimedia resources to investigate cultural perspectives in depth. By contrast, students in the Chinese language class mainly

watched videos about the target culture, but their engagement tended to remain at a surface level, with limited opportunities for reflection or interaction. While teachers often explicitly framed these activities in terms of intercultural understanding, students rarely described them in such terms. However, this does not necessarily suggest a lack of awareness. Some students may have been engaging with cultural content in ways that were not readily verbalised, perhaps due to language limitations, age, or the early stage of their intercultural learning.

In addition, some students identified benefits in features not explicitly emphasised by their teachers, especially gamified elements. Point systems, rewards, and interactive features were seen by some as motivating, even though teachers primarily focused on pedagogical value rather than engagement mechanics. Finally, teachers widely used digital tools for formative assessment and feedback, and students generally participated in these processes. However, differences were identified in how feedback was perceived. While teachers encouraged peer review and public performance, some students expressed discomfort with these methods and instead preferred private, teacher-led feedback. These preferences were not always anticipated by teachers.

Across all three cases, both teachers and students recognised challenges associated with digital technology, though their perspectives differed in emphasis and orientation. Teachers often approached digital constraints from an instructional standpoint, identifying tensions between technological potential and the pedagogical demands of language teaching, particularly in areas such as grammar instruction, pronunciation development, and the visual-spatial nature of sign language. Students, by comparison, tended to interpret digital tools through the lens of personal learning experience, attending more closely to how these tools supported usability, task completion, and ease of navigation. These differences were also evident in how each group perceived infrastructural constraints such as internet connectivity, platform access, or hardware reliability. Teachers frequently considered how such conditions influenced their ability to deliver lessons or maintain continuity in instructional flow, often seeking ways to adjust or supplement their teaching accordingly. Students, meanwhile, were more attuned to how these disruptions affected their immediate ability to engage with tasks.

For example, upload delays or blocked platforms often interrupted their workflow.

A key point of contrast lay in how each group understood their role in addressing technological challenges. Teachers often considered it part of their professional responsibility to navigate between pedagogical aims and the constraints of available digital tools, and they frequently adjusted their approaches to sustain effective instruction. Students, in turn, tended to treat digital technologies as stable components of their learning environment and expected them to function with minimal disruption. Their responses focused more on managing the immediate impact of technical issues on their learning processes, rather than on broader concerns related to task design or platform selection. While both groups responded to the challenges they encountered, their approaches reflected the different responsibilities and expectations embedded in their respective roles.

Teachers sometimes interpreted students' selective engagement with digital tools as a sign of reluctance or limited digital readiness. However, student responses did not reflect widespread resistance. On the contrary, many expressed interests in the digital technologies used in their language classes and viewed them positively. Some also reported confidence in using digital platforms effectively. This confidence, however, may have been shaped by their familiarity with teacher-selected tools and structured environments. While some teachers voiced concerns about students' ability to critically engage with a wider range of online information, students often referred to their digital engagement within the structured and guided context of classroom-based activities.

Taken together, this section examined students' perceptions and experiences of digital technologies in language learning, revealing both shared patterns and context-specific variations across the three cases. Students generally valued digital tools that supported independent study, enhanced language input and output, and made cultural content more engaging. However, their preferences and patterns of use were shaped by factors such as classroom structure, teacher guidance, and task design. Students also identified a range of challenges, including difficulties with focus, tool limitations, and unreliable

digital feedback systems. These issues were more pronounced in blended settings, particularly where supervision was limited or technology lacked alignment with language-specific needs. While technical disruptions and platform design affected engagement, students' responses highlighted the importance of usability, flexibility, and accessible support. Finally, the analysis revealed both similarities and differences between teacher and student perspectives. While teachers often focused on pedagogical intent and instructional goals, students emphasised ease of use and immediate learning needs. Despite these differences, students generally expressed positive perceptions of digital technologies, engaging most actively when tools were clearly integrated, well-supported, and responsive to their learning preferences.

8.5 Chapter Summary

This chapter provided a cross-case analysis of how language teachers and students perceived and engaged with digital technologies in language teaching. While all three teachers valued Communicative Competence, their emphasis across its components, such as grammar, discourse, strategic skills, and intercultural competence, varied according to their pedagogical perceptions, language-specific demands, and teaching contexts. Their approaches to digital competence similarly ranged from full integration to cautious, selective use. Teachers implemented digital technologies in diverse ways, with notable differences in how they supported language input and output, cultural learning, student motivation, feedback, and interaction. These practices were shaped by individual perceptions, available infrastructure, and levels of professional support. Challenges in technology integration were common, including limited training, time constraints, student digital distractions, and technical limitations. Teachers responded to these with varying strategies, reflecting their roles and resources. The chapter also examined how teachers' orientations influenced students' experiences. Students generally echoed their teachers' priorities, engaging more actively when digital tools were well-integrated and purposefully used. While students appreciated the benefits of multimedia resources, independent access, and feedback, they also faced challenges related to focus, tool limitations, and assessment design. Importantly, while teachers and students shared many positive views on technology, their perspectives diverged in emphasis: teachers focused more on pedagogy and instructional delivery, whereas

students placed greater importance on usability and the support provided by digital tools.

Chapter 9: Discussion

9.1 Introduction

This chapter discusses the key findings of the study in light of existing literature, highlighting how it contributes to the current understanding of digital technology integration in language teaching for Communicative Competence development. This chapter goes beyond integrating the findings from two data phases; instead, it critically interprets the patterns observed across the survey and case studies, drawing on previous research to examine how these findings confirm, challenge, or extend existing knowledge. In doing so, it foregrounds the study's contributions to the field of language education, particularly in relation to the specific ways in which digital tools are used to support different components of Communicative Competence.

While the study was guided by four research questions, this chapter is not structured according to each question individually. This is because many findings address multiple research questions simultaneously, particularly Research Questions 2 and 3, which focus on teachers' perceptions and classroom practices concerning digital technologies. To avoid unnecessary repetition and to preserve thematic coherence, the discussion is organised around major themes generated through analysis of the study findings. The discussion is divided into two main sections. Section 9.2 focuses on the intersection of Communicative Competence and digital technology integration. It draws together findings that directly relate to teachers' objectives in developing students' Communicative Competence (Research Question 1), as well as those aspects of teachers' perceptions and practices (Research Questions 2 and 3) that are explicitly concerned with the use of digital technologies for Communicative Competence development. The themes in this section were interpreted through the Communicative Competence framework presented in Figure 2.1. Within this analytic lens, linguistic, discourse, strategic, intercultural, and digital competences were treated as key components of Communicative Competence, whose classroom realisation was examined in relation to the ways digital technologies shaped learning conditions and opportunities for communication.

Section 9.3 broadens the discussion to consider more general aspects of digital technology integration in language teaching and learning. This includes findings related to teachers' perceptions and practices that are less directly tied to Communicative Competence, the challenges and barriers they perceive or encounter in implementing digital technologies, both of which relate to Research Questions 2 and 3, and a comparative analysis of teacher and student perspectives on digital language learning (Research Question 4). While this section extends beyond the study's core focus on Communicative Competence, it is essential for contextualising teachers' digital practices more fully and for understanding the practical constraints and broader pedagogical considerations that shape their instructional decisions.

9.2 Communicative Competence and Digital Technology Integration

This section examines how language teachers at the pre-NCEA level in Aotearoa New Zealand perceive and prioritise the four components of Communicative Competence, namely linguistic, discourse, strategic, and intercultural, and how they use digital technologies to support the development of each of these components in their pedagogical practice. It directly addresses Research Question 1 (teachers' objectives in developing Communicative Competence) and informs aspects of Research Questions 2 and 3 (teachers' perceptions and practices regarding the use of digital technologies to support development).

9.2.1 Linguistic Competence: A Central Focus in Teachers' Perceptions and Practice

Within the Communicative Competence framework adopted in this study, the findings indicated that linguistic competence, particularly vocabulary, pronunciation, and grammar, remained the primary focus of language instruction. This aligns with Canale's (1983) framework, which positions linguistic competence as the foundational component of Communicative Competence. The strong emphasis on this competence is also consistent with the early stage of language learning observed in Year 9 and 10 language classrooms, where learners are still developing core linguistic competence. This pedagogical emphasis is consistent with the developmental trajectory of

Communicative Competence, where learners require explicit instruction in linguistic forms as a foundation for broader communicative ability (Ellis, n.d.; Littlewood, 2004). Ellis (n.d.) suggests that a focus-on-forms approach may be particularly appropriate for young, beginner learners, as it can result in the acquisition of formulaic patterns and, in some cases, rule-based competence that lays the groundwork for later communicative use. Similarly, Littlewood (2004) situates this form-focused emphasis at the initial stages of a continuum, where learners engage in non-communicative or pre-communicative activities such as grammar drills and pronunciation practice before progressing to structured and authentic communication. In this context, it is unsurprising that teachers participating in this study viewed the development of linguistic competence as a central instructional goal, especially in classes where students had limited formal prior exposure to the target language. Their practices reflect an understanding that Communicative Competence cannot be developed without a sufficient linguistic foundation, particularly in beginner-level contexts where the ability to engage in extended discourse remains limited. These findings therefore underscore the relevance of adapting pedagogical focus to learners' proficiency levels and support the claim that linguistic competence justifiably receives priority at early stages of language learning.

Moreover, linguistic competence tends to be more easily taught and assessed, making it a practical focus for teachers operating within formal school settings (Borg, 2006). Although this study focused on pre-NCEA language classrooms in Aotearoa New Zealand secondary schools, these settings are not isolated from the broader assessment culture shaped by the NCEA framework. Instruction at the Year 9 and 10 level is often implicitly shaped by the need to prepare students for future NCEA standards. This helps explain why teachers often prioritise linguistic competence, particularly vocabulary and grammar, as key objectives in their teaching, not only due to their ease of observation and assessment, but also because they form the foundation of language development at all stages of proficiency. Within the Aotearoa New Zealand system, even internally assessed performance tasks may unintentionally favour structured and rehearsed outputs. As East (2016) notes, many teachers observed a tension between spontaneous language use and the pressures of high-stakes internal assessment, often resulting in scripted performances that aligned more closely with assessable criteria. Accordingly,

the prominence of linguistic competence in early language instruction reflects not only pedagogical considerations but also the anticipatory influence of high-stakes assessment frameworks.

In addition, while Canale's model was originally developed with typical spoken foreign languages, the present study illustrates how its core components can be meaningfully applied to a broader range of language contexts, including NZSL and te reo Māori. The findings contribute to a more contextually grounded understanding of how Communicative Competence operates in linguistically and culturally distinctive Aotearoa New Zealand classroom settings. They offer insights into how the dimensions of the model may be realised in languages with different modalities or sociocultural functions, without negating its foundational principles. This perspective is consistent with Celce-Murcia's (2008) view that Communicative Competence should be treated as a dynamic and adaptable construct, whose components can be flexibly interpreted in response to different pedagogical goals and learner needs. She emphasises that the application of such a model is relative rather than absolute and must reflect the linguistic and cultural realities of the teaching context. For example, NZSL teachers placed strong emphasis on visual-gestural features such as handshapes and facial expressions, which serve similar functions to phonological and grammatical features in spoken language (McKee, 2015). Although NZSL lacks a written form, its linguistic structure can still be taught and reinforced through video-based modelling and visual repetition activities, which several teachers effectively used to support receptive and productive skills.

Beyond recognising the centrality of linguistic competence, the present study offers insight into how language teachers in Aotearoa New Zealand enact this priority within digitally supported environments. Teachers reported using digital technologies not only to increase input exposure, but also to create learning conditions aligned with their pedagogical goals and institutional expectations. These practices reflect evolving understandings of how linguistic competence can be fostered through input control, repetitive practice and multimodal presentation in CALL contexts. While this section references specific digital tools, these serve primarily as illustrative examples to highlight how technology use reflects broader pedagogical intentions and supports

communicative development. The analysis focuses not on the tools themselves, but on how they are integrated into instructional strategies that shape opportunities for language learning. These findings are supported by CALL literature, which has long emphasised the value of technology-supported repetition for language acquisition. For example, Ashcroft et al. (2018) demonstrated that digital flashcard systems enhance vocabulary retention by providing interactive and spaced exposure, particularly beneficial for low-proficiency learners. Similarly, Özer et al. (2017) found that the gamified format of Quizlet was effective in promoting long-term vocabulary retention among low-proficiency secondary language learners. The alignment between these studies and the present findings suggests that teachers' use of digital tools reflects pedagogical strategies grounded in form-focused instruction (Heift & Vyatkina, 2017).

In relation to pronunciation, the present study found that while teachers across most language classrooms recognised the value of pronunciation instruction, their approaches to integrating digital tools varied depending on the language taught and the potential of specific technologies. In NZSL classrooms, where spoken pronunciation is not applicable, teachers reported using digital tools, particularly video recording, to support the development of visual-gestural features such as handshapes, facial expressions, signing space, and movement patterns (Fenlon et al., 2015). These features are central to the grammar and meaning-making functions of NZSL, and their accurate use is crucial for communicative clarity, as described in existing research (McKee, 2015; Pichler et al., 2016). Given that NZSL lacks a written form, the present study observed that video recording and playback enabled students to observe specific aspects of sign production and reflect on their own expressive accuracy. This finding echoes insights from Fox et al. (2025) and serves a function similar to pronunciation training in spoken languages (Fenlon et al., 2015; Pichler et al., 2016).

By comparison, teachers of spoken languages such as Chinese and te reo Māori in the present study commonly integrated audio or video recording tasks to support students' pronunciation development. These tools allowed learners to practise oral production and receive teacher feedback, which was consistently perceived as more meaningful and contextually appropriate than automated alternatives. These findings are strongly

echoed in existing literature. Luo (2016), for instance, found that pairing digital recording with teacher feedback significantly improved learners' phonological accuracy compared to automated feedback alone. Similarly, Celce-Murcia (2008) and Chapelle (2009) have argued that recorded learner performances, when paired with teacher mediation, promote metalinguistic awareness by enabling learners to reflect critically on their output, a process clearly reflected in the practices observed in this study. Although some CALL studies have highlighted the potential of Automatic Speech Recognition (ASR) for autonomous practice (e.g., Mahdi & Al Khateeb, 2019), teachers in the current study were sceptical of its reliability in classroom contexts. Several noted that ASR systems frequently misinterpreted student output and failed to adequately address prosodic features. This concern aligns with McCrocklin's (2019) critique that ASR-driven feedback can frustrate learners and limit its pedagogical usefulness. The convergence between these studies and the current findings reinforces the importance of direct teacher feedback in digitally supported pronunciation instruction, especially within beginner-level classroom settings.

The present study found that secondary school language teachers frequently used gamified digital tools, such as Quizlet, Kahoot, and Education Perfect, to support vocabulary development. These tools were valued for their ability to promote repetition, enhance memory retention, and provide immediate feedback, making them especially suitable for reinforcing core linguistic elements. This finding aligns with existing literature, which underscores the effectiveness of gamification in vocabulary acquisition through spaced retrieval, interactive formats, and rapid correction (Ashcroft et al., 2018; Bahari et al., 2022; Medina & Hurtado, 2017). The focus on vocabulary also reflects its teachability and accessibility in early-stage language instruction (Borg, 2006), highlighting the strategic role of gamification in supporting linguistic competence. The current study also found that competitive features such as leaderboards, timed quizzes, and performance-based rewards were generally well received by students and helped maintain engagement in repetitive practice. However, some students in the current study expressed discomfort when consistently ranking lower than peers, which at times led to demotivation. A similar concern was raised by Calvo-Ferrer (2017), who cautioned that over-reliance on competition may discourage less confident learners. In addition, rather than adopting fully immersive or commercial

games, the present study found that secondary school teachers preferred structured, curriculum-aligned gamified tools to support vocabulary learning. This preference reflected the need for safety, content control, and assessment alignment within formal school environments, a trend also observed in prior research (Dehghanzadeh et al., 2021). In particular, concerns about student safety, unpredictable online interactions, and institutional policies led teachers to avoid open multiplayer games. This contrasts with higher education contexts, where students are often granted greater autonomy in using gaming environments for language learning (Franciosi, 2017).

In addition to gamified tools, online dictionaries were commonly used by the language teachers in the present study in their teaching to support vocabulary acquisition and learner autonomy. Teachers valued these tools for providing definitions, example sentences, and pronunciation models, and supporting individual learning beyond the classroom. These findings mirror studies such as Zamkova et al. (2023) and Alamri and Hakami (2022), which highlight learners' appreciation for the accessibility, multimodal features, and contextualised content of e-dictionaries. In NZSL classrooms, the study observed strong student preferences for online sign language dictionaries featuring video demonstrations. These tools were praised for helping learners accurately model handshapes, facial expressions, and spatial use. This aligns with corpus-based sign language research that emphasises the pedagogical value of dynamic visual input over static text (Fenlon et al., 2015).

However, the current study also revealed that many beginning-level students preferred to seek pronunciation clarification directly from teachers during classroom interactions, rather than using digital audio features of online dictionaries. This preference, particularly evident in classrooms where teachers were native speakers of the target language, may reflect learners' trust in interpersonal explanations or their limited confidence in navigating pronunciation functions independently, echoing observations by Dashtestani (2013b) on students' preference for teacher input in technology-supported settings. This underscores that, while digital tools facilitate independent vocabulary learning, they do not replace the need for teacher support and clarification. Finally, despite recognising the benefits of online dictionaries, teachers in this study

expressed scepticism toward machine translation tools like Google Translate, citing concerns about accuracy and student overreliance. This concern is well documented in the literature (Krajka & Campoy-Cubillo, 2020; Vyatkina & Boulton, 2017), reinforcing the importance of guided, purposeful use of digital reference tools in formal language learning contexts.

9.2.2 ICC: The Gap Between Recognition and Implementation

In line with the conceptualisation of intercultural communicative competence adopted in this study, the findings revealed a clear gap between teachers' recognition of ICC and its classroom implementation. While most teachers considered ICC important and viewed technology as having potential for enhancing cultural understanding, ICC-related activities were typically confined to teacher-led explanations or the viewing of cultural videos, with limited opportunities for student dialogue, reflection, or intercultural comparison. Such practices reflect a broader trend noted in the literature: cultural content is frequently presented as static and decontextualised, leaving little room for interpretation, comparison, or dialogue (Chun, 2016; Liddicoat & Scarino, 2010). Although these resources can enhance learners' attitudinal openness and cultural knowledge (Byram, 1997), they may inadvertently reinforce stereotypes if not accompanied by guided reflection (Avgousti, 2018).

Rather than embedding digital tools within dialogic pedagogies, many classrooms in this study relied on passive forms of cultural exposure. This supports concerns that the way technology is implemented in ICC teaching often lacks structured guidance, thereby limiting the development of intercultural skills such as perspective-taking and negotiation (Akayoglu et al., 2021). As Susilo et al. (2023) suggest, learners rarely move beyond factual cultural awareness unless pedagogical design explicitly supports inquiry and exchange. While many teachers valued broader dimensions such as identity, critical reflection, and intercultural exchange, their teaching more often focused on factual cultural content, such as national customs, festivals, or food, largely due to practical constraints. These practical constraints included students' limited language proficiency (Newton et al., 2015), safety considerations in managing online interaction (Helm, 2015), curriculum alignment requirements (Oranje & Smith, 2018), time

pressures (Conway & Richards, 2017), and assumptions about student readiness (Liddicoat & Scarino, 2010). Echoing earlier concerns in the literature (Liddicoat & Scarino, 2010; Young & Sachdev, 2011), the findings suggest that without pedagogical models that support reflection, comparison, and authentic interaction (Byram & Wagner, 2018), ICC tends to remain at the level of awareness rather than functioning as an operational communicative capability.

In multilingual and multicultural contexts such as Aotearoa New Zealand, many learners are regularly exposed to diverse cultural communities through familial ties, migration backgrounds, and daily social interactions. This contextual richness might lead to an assumption that intercultural competence will emerge naturally. However, the present study raises questions about this assumption, as classroom observations and teacher reports suggested that exposure to diversity alone was not sufficient to foster deeper intercultural understanding, particularly among beginner-level learners. This finding supports and extends prior scholarship cautioning against the conflation of cultural proximity with intercultural capability. As Liddicoat and Scarino (2013) and Newton et al. (2015) argue, diversity alone is insufficient; intercultural learning must be actively fostered within structured pedagogical frameworks. In line with this, the present study found that whether students were learning te reo Māori, which is an indigenous language embedded in the national context, or widely taught foreign languages such as Chinese, the development of ICC still required explicit classroom intervention. Scholars such as Byram (1997), Sercu and Bandura (2005), and Scarino (2009) have long emphasised that ICC develops not from incidental contact but from intentional instructional strategies, such as guided reflection, comparative analysis, and dialogic engagement. This perspective is particularly relevant both within indigenous language contexts and in migration-rich national settings. As Gay (2010) and Kramsch (2013) note, students may still lack opportunities to interrogate their own cultural assumptions or engage meaningfully across cultural boundaries unless such opportunities are explicitly designed. The present study reinforces this view, showing that digital tools, while offering cultural exposure, are most effective for supporting ICC when integrated into pedagogies that foster critical thinking, multiple perspectives, and interpersonal interaction.

Moreover, by contrast with the extensive literature highlighting the potential of social media and extended reality technologies for fostering ICC (Avgousti, 2018; Liaw, 2019; Shadiev & Yu, 2024), the present study found that such tools were seldom used in the participating classrooms. Several interrelated factors may account for this. First, the study focused on learners in Years 9 and 10, most of whom were beginner-level language students. At this stage, limited linguistic proficiency posed a barrier to spontaneous or deep intercultural dialogue, particularly in virtual environments. This finding aligns with prior research suggesting that learners' communicative readiness is crucial for meaningful ICC development (Byram, 1997; Helm, 2015), yet highlights how digital spaces can amplify this challenge for novice users. In addition, teachers voiced specific concerns about students' age and digital vulnerability. While previous studies have documented general worries about online safety and content regulation (Chun, Kern, & Smith, 2016; O'Dowd et al., 2020), teachers in this study emphasised the ethical and developmental risks of involving underage learners in unsupervised cultural interaction, particularly across linguistic and cultural boundaries. These findings underscore the heightened caution required when designing ICC-oriented digital tasks for adolescents.

Additionally, some teachers in the current study implicitly conveyed a preference for face-to-face modes of intercultural engagement, particularly in cultural contexts such as Māori, where *kanohi ki te kanohi* (face-to-face) communication is deeply valued (Macfarlane et al., 2007). While such preferences were not explicitly framed as resistance to digital methods, they reflect an orientation grounded in culturally situated communication norms. This suggests that local cultural paradigms may shape how teachers interpret the role of technology in fostering ICC, an aspect that remains underexplored in much of the existing literature (Keown et al., 2005; Macfarlane et al., 2007).

9.2.3 Discourse and Strategic Competence: Limited and Implicit

Instructional Attention

Interpreted through the Communicative Competence framework presented in Figure 2.1, the present study found that discourse and strategic competence, although widely recognised by teachers as important components of Communicative Competence, received comparatively limited and often implicit instructional attention in pre-NCEA classrooms. These competencies were generally considered secondary to core linguistic skills such as vocabulary and pronunciation. This pattern appears to reflect a practical and pedagogically sound response to the beginner proficiency levels of most Year 9–10 students, for whom extended discourse production may not yet be a realistic goal. As such, the development of discourse competence was typically approached in implicit ways, integrated into broader communicative tasks without targeted instruction or assessment, rather than through direct and systematic teaching.

In the te reo Māori classroom in this study, a somewhat different pattern was identified. As an official and indigenous language of Aotearoa New Zealand, te reo Māori holds deep cultural and emotional significance for many learners, some of whom have ancestral or community ties to the language. These connections often contributed to higher initial proficiency, particularly in receptive skills, which enabled the integration of more advanced tasks such as extended written narratives. Even for learners without a Māori cultural background, recent research suggests that many possess a substantial proto-lexicon, or implicit familiarity with Māori word forms developed through incidental exposure in everyday life, including place names, media, and ceremonial contexts (Macfarlane et al., 2007; Mattingley et al., 2024). This unconscious linguistic familiarity can be activated in formal learning settings, offering learners a valuable head start in vocabulary acquisition and text comprehension. As a result, the te reo Māori classroom were in some cases able to introduce more discourse-level activities than those observed in Chinese or NZSL settings. However, even in this relatively supportive environment, teaching practices largely followed paper-based and face-to-face modes of teaching, with only limited use of digital tools. Teachers primarily relied on paper-based writing tasks and provided handwritten or face-to-face guidance to support students in developing clarity, structure, and audience awareness in their texts.

In the present study, strategic competence was most clearly addressed in the NZSL classroom context, where it was supported through both the teacher's explicit instruction and reported opportunities for learners to engage in synchronous communication with Deaf students. These real-time interactions introduced unpredictable conditions that naturally required students to manage communication breakdowns through compensatory strategies. The emphasis on strategic competence in this setting may be linked to the visual-spatial modality of NZSL, which relies on face-to-face negotiation of meaning through gestures, facial expressions, and spatial referencing (McKee, 2015; Ministry of Education, 2007). In such environments, strategies such as clarification requests, circumlocution, and self-repair are not merely supplemental but integral to maintaining communication (McKee & Manning, 2015). This communicative orientation is also reflected in curriculum guidelines, which encourage learners to employ interactive strategies to achieve message clarity and sustain dialogue (Ministry of Education, 2006).

By contrast, the Māori language classroom in this study did not foreground strategic competence in instruction. When learners encountered lexical gaps, they were routinely permitted to insert English words without correction or rephrasing. This practice may reflect the sociolinguistic reality of Aotearoa New Zealand, where te reo Māori and English coexist fluidly in public discourse and everyday communication (Higgins et al., 2014; James et al., 2022). Most Māori language learners are fluent English speakers, and translanguaging between the two languages is generally accepted in informal and semi-formal contexts (James et al., 2022). Within this environment, inserting English words may be perceived as a pragmatic and low-risk strategy, potentially reducing the need for explicit instruction in target-language compensatory techniques. These findings suggest that sociocultural positioning and local communicative norms shape how strategic competence is enacted or de-emphasised in classroom practice.

However, digital technologies were rarely adopted to support the development of discourse and strategic competence in the present study. This appeared to stem not only from practical limitations but also from a broader conceptual hesitation among teachers.

While previous studies have highlighted the benefits of collaborative writing platforms and automated feedback systems in fostering coherence and iterative revision (Kuteeva, 2011; Li, 2018; Tabatabaei & Farajnezhad, 2020), teachers in this study expressed doubts about whether such tools could adequately respond to the nuanced and interactive nature of discourse. Some teachers were concerned that reliance on automated digital tools might undermine learner confidence, particularly when these tools failed to interpret communicative intent or provide contextually appropriate feedback. These concerns echo broader critiques in the CALL literature (Hung & Higgins, 2016; Rouhshad et al., 2016), suggesting that for many teachers, interpersonal feedback remains the preferred and trusted mode of supporting student communication. Consequently, while the importance of discourse and strategic competence was widely affirmed, their development continued to rely on conventional approaches, indicating an ongoing tension between pedagogical ideals and practical classroom strategies.

9.2.4 Digital Competence: Divergent Views in Teachers' Perceptions and Practice

Against this broader conceptualisation of Communicative Competence, which in this study incorporated digital competence as a cross-cutting dimension, the findings revealed considerable variation in how teachers positioned the role of digital competence within language teaching. Teachers in the study displayed varied positions along a continuum regarding the development of students' digital competence. A small number of teachers appeared to view digital competence as a fundamental component of contemporary language learning, highlighting the need to prepare learners for authentic interaction in online environments. Others demonstrated a more ambivalent stance. While they did not strongly foreground digital competence as a pedagogical priority, their comments suggested an awareness of its growing relevance, possibly shaped by broader societal expectations, curricular developments, or perceived shifts in professional responsibility (Kessler, 2018). In such cases, the integration of digital skills seemed less a matter of personal conviction and more a response to evolving institutional norms.

Still others showed signs of hesitation, particularly when working with younger

students, navigating online safety concerns, or teaching in contexts where *kanohi ki te kanohi* (face-to-face) communication is culturally emphasised (Keown et al., 2005; Macfarlane et al., 2007). Rather than reflecting clear-cut divisions, these responses illustrate a continuum of orientations, ranging from confident adoption to cautious engagement, shaped by pedagogical perceptions, cultural values, and perceived responsibilities. Such variation aligns with findings from other studies, which show that teachers' digital pedagogical practices are influenced not only by their access to tools or training, but by their contextual interpretations of what is appropriate, feasible, and meaningful (Buzzard et al., 2011). This highlights the importance of examining how teachers negotiate the place of digital competence in their instructional decisions, particularly as digital demands increasingly intersect with language education policies and professional norms.

Crucially, these divergent orientations toward students' digital competence point to the need for a broader examination of how digital technologies are conceptualised and integrated within language education. Rather than focusing solely on their role in developing Communicative Competence, it is important to consider the wider spectrum of digital practices that teachers adopt, including task types and learning goals not directly tied to communication, but still central to language education. This broader view resonates with the New Zealand Curriculum's emphasis on "future-focused learning" and digital capability as core competencies across learning areas (Fletcher et al., 2020; Ministry of Education, 2007), and sets the stage for the following section's expanded discussion on digital integration in classroom practice.

In summary, the present study suggests that Communicative Competence may be better understood as a developmental and situated construct, rather than as a fixed or uniformly enacted set of abilities. While the framework remains relevant, its components did not carry equal weight in everyday teaching; instead, their visibility and priority shifted in response to classroom conditions, including learner proficiency levels, the language being taught, modes of teaching delivery, and the availability of appropriate teaching resources. Viewed in this way, Communicative Competence was enacted selectively in practice, as teachers foregrounded or backgrounded particular

dimensions in response to immediate pedagogical demands. Examining a range of language subjects further highlights the context-dependent nature of Communicative Competence. Across languages with differing modalities, cultural positioning, and institutional histories, communicative development appeared to follow distinct pathways, suggesting that Communicative Competence should not be assumed to operate in the same way across all language subjects. At the same time, teachers' varied and sometimes cautious engagement with digital tools indicates that digital competence is not merely a peripheral add-on to Communicative Competence, but an increasingly influential factor in shaping how communication can be represented, practised, and supported in contemporary classrooms.

9.3 Beyond Communicative Competence: Broader Technology Integration in Language Education

This section extends the discussion beyond the Communicative Competence-oriented focus presented in Section 9.2 to examine broader patterns of digital technology integration in language teaching. While the theoretical framework of this study foregrounds Communicative Competence as a central pedagogical construct, the findings indicate that a substantial proportion of teachers' digital practices were shaped by considerations that were not explicitly competence-oriented. These included content delivery, classroom management, resource organisation, institutional expectations, and pragmatic responses to contextual constraints. Examining these practices is therefore essential for understanding not only how Communicative Competence was supported in some contexts, but also why it was not foregrounded in others. In this section, while the primary emphasis is on teachers' pedagogical perceptions, practices, and challenges, selected student perspectives (Research Question 4) are incorporated to highlight areas of similarities and differences. This comparative lens offers a more comprehensive understanding of digital tool integration in language classrooms. Findings from the current study reveal widespread support for the use of digital tools, with most teachers reporting positive prior experiences. Survey findings suggest that the majority of participants recognised the importance of technology and felt reasonably confident in integrating it into their practice. While nearly all survey respondents agreed that digital tools were important for contemporary language education and believed they enhanced

teaching effectiveness, only about two-thirds perceived them as offering distinct advantages over non-digital practices. The remaining third were neutral or disagreed, indicating a more cautious stance. These reservations were mirrored in the case studies, where digital technologies were often positioned as supplementary rather than central to instructional design. To fully understand how digital technologies are enacted in the classroom, it is important to consider not only teacher practices and constraints but also student experiences and expectations.

9.3.1 Perceived Broader Potential of Digital Integration in Language

Teaching

This subsection discusses teachers' perceptions of the broader role of digital technologies in language teaching beyond Communicative Competence, focusing on how digital tools were perceived to support a range of pedagogical purposes in classroom practice.

Digital Content Presentation

Findings from the current study indicated that digital technologies were most commonly used to support content delivery in language classrooms. Teachers frequently relied on presentation tools and document-based platforms to present vocabulary, grammar, and cultural materials in ways that emphasised content transmission, structural sequencing, and multimedia enhancement. These patterns align with prior research suggesting that such technologies are often valued for improving clarity, structure, and visualisation of instructional content (Kim, 2013; Rafiee & Purfallah, 2014). As Chen et al. (2021) note, they also support multimodal and dynamic forms of input, though this potential is not always fully utilised.

However, this widespread preference for presentation tools in the current study reflects a broader pedagogical inclination toward efficient content delivery rather than interactive or learner-centred engagement. In many classrooms, digital tools were deployed in a highly linear and teacher-led manner, echoing transmission-oriented approaches even when digital slides were absent and instruction relied primarily on

paper textbooks. These patterns resonate with critiques in the literature that digital technologies often reinforce existing pedagogical habits rather than disrupt them (Kessler, 2018). Over-reliance on such formats, whether slide-based or textbook-driven, may result in fragmented understanding and diminished opportunities for student engagement (Chen & Chang, 2011). However, a small number of teachers in the study adopted more participatory uses of presentation tools, such as involving students in co-creating digital slides to summarise research findings or present cultural knowledge.

When viewed through the lens of the TPACK framework, which emphasises the integration of technological, pedagogical and content knowledge (Mishra & Koehler, 2006; Tseng et al., 2022), the varied uses of presentation technologies in this study illustrate how teachers' pedagogical decisions are shaped by the intersection of content goals, pedagogical reasoning, and the perceived potential of these technologies. As scholars have argued, meaningful technology integration requires more than tool selection. Rather, it depends on aligning digital tools with specific pedagogical purposes and content demands (Angeli & Valanides, 2009; Cox & Graham, 2009). In classrooms focused on linguistic competence, particularly grammar and vocabulary, teachers often prioritised clarity, sequencing, and accuracy, leading them to favour presentation tools that support structured input (Chai et al., 2013). Whether through digital slides or textbook content, such formats aligned with teachers' emphasis on orderly and accessible knowledge delivery. However, teachers' enactment of these tools varied. Some used presentations to control lesson flow, reinforcing teacher-led routines (Baran, Chuang, & Thompson, 2011). Others adapted the same tools for student collaboration, project-based learning, or peer knowledge construction, highlighting that the potential of a technology is not inherent in the technology but shaped by teachers' professional judgement and classroom context (Hixon & Buckenmeyer, 2009). These differences do not reflect a simple contrast in teaching styles or orientations. From a TPACK-informed perspective, these findings suggest that the same tool may support divergent teaching aims depending on how it is pedagogically framed and embedded in practice (Tseng et al., 2022).

Storing, Accessing, and Sharing Learning Resources

The findings of this study suggest that the effective use of LMSs lies not merely in their adoption, but also in their role as central hubs that support coherent, accessible, and self-paced learning experiences. Teachers in both the survey and case studies reported widespread and consistent use of platforms such as Google Classroom, Microsoft Teams, and Education Perfect, which they valued for centralising course content, streamlining assessments, and facilitating structured access to learning materials. These systems played an important role in regular classroom settings, supporting instructional delivery and resource organisation, and became particularly critical during both pandemic-related lockdowns and regular distance education, where digital platforms served as essential channels for teaching, access, and communication. This aligns with studies highlighting the critical role of LMSs in supporting pedagogical resilience during COVID-19 disruptions (Daniel, 2020; Whalen, 2020), as well as broader research on their function in flexible, blended, and remote learning environments (Lai & Bower, 2019; Wang & Torrisi-Steele, 2016).

However, the pedagogical value of LMSs depends not only on their presence but on how effectively teachers integrate them with other digital tools and platforms. The current study found that students were frequently required to switch between multiple systems including LMSs, video conferencing apps, and third-party exercise platforms, and that teachers played a pivotal role in ensuring these transitions were smooth, accessible, and low in both cognitive and technical load. Effective digital integration involves managing compatibility, streamlining login procedures, and guiding students across platforms, all of which are essential to sustaining engagement and minimising digital fatigue. These findings are consistent with previous research that highlights the risks of fragmented digital ecosystems, where poorly coordinated tools can lead to confusion, reduced participation, and learner disengagement (Bond et al., 2021; Lai & Bower, 2019).

Classroom Interaction and Collaboration

The integrated findings of this study suggest that digital technologies offered varied potential for supporting classroom interaction and student collaboration. For example, videoconferencing tools facilitated synchronous communication, collaborative

platforms enabled co-construction of knowledge, and email remained the dominant channel for teacher-student contact beyond the classroom. Unlike the intercultural communication exchanges discussed in Section 9.2.2, the interactions addressed here were primarily administrative and instructional in nature, supporting classroom coordination, basic language practice, and immediate teacher-student communication. According to Whalen (2020), many teachers perceived videoconferencing tools as emergency substitutes rather than long-term instructional solutions, a perception echoed in this study's findings. In language classrooms, which rely heavily on non-verbal cues and real-time feedback, the limitations of video environments, such as restricted facial visibility, gesture interpretation, and shared spatial awareness, pose significant barriers to meaningful interaction. As noted by Guichon and Cohen (2014) and Hampel and Stickler (2012), these constraints are particularly problematic for communicative tasks that depend on nuanced interpersonal dynamics. Teachers also reported elevated cognitive load while juggling multiple tasks during synchronous teaching. Lowenthal et al. (2017) observed that the simultaneous management of screen sharing, chat functions, and technical issues can significantly increase instructional strain. Moreover, the loss of spatial and behavioural control, central to orchestrating pair work and communicative tasks, led some teachers to favour face-to-face modalities for more dynamic classroom management. Once the opportunity to return to in-person teaching arose, many abandoned videoconferencing tools altogether (Zimmerman & Benjamin Jr, 2023).

The discussion in this section has focused on selected areas where digital technologies were most visibly integrated in this study, particularly in content delivery, resource management, and classroom interaction, highlighting patterns consistent with existing literature and shaped by a range of pedagogical and contextual factors. However, these potentials represent only part of the broader picture; the following section turns to the challenges that influenced how technologies were enacted and experienced in everyday teaching practice.

9.3.2 Perceived Challenges of Digital Technology Integration in Language Teaching

While the survey findings largely reflected teachers' positive perceptions of digital tools, several indicators point to underlying hesitations. Compared with other teaching goals, digital competence was perceived as less central. Nearly one-third of participants expressed neutrality when comparing digital and non-digital practices, suggesting uncertainty rather than full endorsement. Although the survey focused on perceived benefits, several open-ended responses highlighted concerns about replicating interactive dynamics online, tracking student engagement, and managing screen time. These concerns may reflect the structured nature of the survey and potential social desirability bias, which could have led teachers to underreport challenges. In contrast, the case study findings offered richer, more contextualised insights into how these concerns played out in practice. Teachers expressed uncertainty in integrating digital tools meaningfully, with challenges falling into three categories: teacher-related issues, student-related concerns, and technological barriers.

Teacher-Related Challenges

The findings of the current study show that the time and effort required for meaningful digital integration posed a considerable challenge for many teachers. Rather than serving as direct substitutes, digital tools often demanded continual adaptation, careful planning, and ongoing troubleshooting. This is consistent with prior literature indicating that technology-intensive teaching increases teacher workload across multiple fronts, including lesson preparation, tool selection, student support, and technical problem-solving (Ahmed et al., 2020; Ertmer et al., 2012). In the context of New Zealand's pre-NCEA language education, this challenge is further compounded by the absence of detailed curriculum guidelines and standardised assessments for junior secondary levels. While the national curriculum grants teachers considerable autonomy in designing content and delivery (Ministry of Education, 2007), this flexibility often places the burden of curriculum interpretation and resource development squarely on teachers' shoulders, and as Ashton (2021) observes, many novice teachers in Aotearoa New Zealand experience it not as professional empowerment but as a source of stress and excessive time commitment, particularly

when navigating multi-level classes without adequate support or resources.

Another key teacher-related challenge identified in this study was the limited availability of targeted and sustained professional development. Although most participants expressed a willingness to improve their digital competence, access to systematic, context-specific training remained limited. In particular, opportunities for collaborative learning, peer mentorship, or guided application of tools were often informal or narrowly focused on technical operation. As Hubbard (2008) argues, teacher education programmes in technology often prioritise tool training over pedagogical relevance, leaving language teachers without adequate support to integrate digital tools into communicative and linguistic goals. Similarly, Bax (2003) and Kessler and Bikowski (2010) note that CALL training frequently neglects the alignment between digital practices and core disciplinary content, resulting in superficial tool use divorced from instructional intent. These critiques are echoed in more recent scholarship emphasising the importance of content-specific, situated training that addresses the realities of language teaching contexts (Farrell, 2011). Without such grounding, even motivated teachers may struggle to adapt generic digital skills to the nuanced demands of language pedagogy.

However, the case study findings also revealed variation in how teachers responded to professional learning opportunities despite these constraints. Teachers in leadership roles or fully online teaching contexts demonstrated a more proactive approach to skill development, often initiating their own learning or facilitating peer support structures. This observation aligns with findings by Baran, Correia and Thompson (2011) and Howard et al. (2021), who found that perceived instructional necessity and role expectations play an important role in shaping teachers' engagement in professional growth. As Raman and Thannimalai (2019) and Ghamrawi et al. (2024) suggest, teacher-leaders often serve as change agents and feel a professional obligation to model effective digital practice, which can increase their investment in ongoing upskilling. Furthermore, Tondeur et al. (2012) highlight that where teachers assume responsibility for coordinating technology use within teams or leading digital initiatives, their sense of agency and accountability tends to drive deeper engagement with training and

experimentation. In the current study, these differences were not simply personal preferences, but reflected broader institutional roles and the degree to which digital tools were embedded in teachers' daily practice.

Student-Related Challenges

The findings of the current study indicate that students, like their teachers, require considerable time and effort to adapt to digital tools and platforms used in language learning. While classroom-based teacher support was present, students still needed time to learn how to navigate unfamiliar systems, manage digital tasks, and engage in online collaborative work. This suggests that digital competence among learners cannot be assumed, particularly at the junior secondary level where digital literacy and independent learning habits are still developing. Prior studies have similarly noted that adolescent learners often require extended exposure and instructional guidance to use digital tools effectively in academic contexts (Goldman, 2012). As Shin and Son (2007) observed, even with access to digital resources, students may struggle to engage meaningfully in technology-supported learning without explicit preparation.

A second challenge identified in this study relates to digital distraction. Teachers frequently observed that students became sidetracked by content unrelated to the lesson, even when using educational platforms. These distractions extended beyond entertainment media to include messaging apps, passive browsing, or switching between tabs, behaviours widely recognised as detrimental to learning focus (Wang, 2022). Digital distraction has been shown to impair students' comprehension, concentration, and academic outcomes (Halubanza et al., 2023; Wang, 2022; Wood et al., 2012). Younger students, in particular, often struggle with the self-regulation skills needed to manage attention across competing digital stimuli, making digital distraction especially problematic in junior secondary contexts where focused, independent learning habits are still developing (Ragan et al., 2014; Wang, 2022). Similarly, Ashton (2017) found that students in multi-level language classes struggled with managing their learning independently when using technology, and emphasised the need for explicit support at the start of the school year to prepare them for technology-facilitated self-directed learning. Teacher intervention was found to play a vital role in supporting

student focus and minimising off-task behaviour. As Attia et al. (2017) and Kay et al. (2017) suggest, setting clear behavioural expectations, designing interactive and goal-oriented tasks, and establishing screen-use norms can help redirect attention toward learning objectives. In addition, this study's findings underscore the importance of sustained teacher monitoring and timely feedback in maintaining student engagement during digital learning activities. Dietz and Henrich (2014), for instance, found that adolescents who received structured instruction on managing digital distractions demonstrated greater persistence and task completion in language assignments. These insights suggest that effective digital integration requires not only student familiarity with tools, but also consistent instructional management and support to promote productive engagement in digital learning environments.

Teachers in this study also expressed concerns about students' limited critical digital literacy, particularly in their ability to evaluate online content, engage with culturally complex materials, and use digital tools purposefully for language learning. While many Year 9–10 students were familiar with popular digital platforms, this familiarity did not consistently translate into productive academic engagement. Some teachers were concerned that students interacted passively with online resources, showed limited discernment when encountering conflicting or culturally nuanced information, and struggled to apply digital tools strategically to support their communicative development. These concerns were especially pronounced when dealing with language and cultural topics that involved sociopolitical or contested dimensions. Such issues were highlighted as particularly salient in contexts where the target language is culturally or regionally diverse. These findings align with concerns raised in previous research, which caution against assuming that students' everyday digital fluency translates into the ability to use technology effectively for learning purposes (Buckingham, 2007; Ng, 2012; Taghizadeh & Hasani Yourdshahi, 2019; Xue & Churchill, 2022). Studies have consistently shown that adolescent learners often lack the evaluative strategies and epistemic awareness needed to interpret digital content critically, particularly when engaging with unfamiliar cultural perspectives or ideologically sensitive topics (Belshaw, 2016; Livingstone & Helsper, 2007). In language learning, Ashton (2017) found that Aotearoa New Zealand secondary students, including seniors, often struggled to use technology productively for educational

purposes, and emphasised the importance of early, explicit support in developing the digital and self-regulatory skills required for effective, independent learning.

Technological Barriers

The findings of the current study suggest that while digital technologies offer considerable pedagogical potential, their integration into secondary language classrooms in Aotearoa New Zealand remains constrained by various infrastructural and resource-related challenges. Unlike many developing contexts where device and connectivity issues present major obstacles (Starkey et al., 2021), access-related barriers appeared less prominent in this study. This relative advantage may partly reflect targeted government interventions during and after the COVID-19 pandemic. The pandemic itself exposed and intensified existing inequalities in digital readiness, particularly as the sudden shift to online learning placed students from lower-decile schools at a disadvantage (Starkey et al., 2021; Yates & Starkey, 2020). In response, initiatives such as the Digital Inclusion Action Plan (Department of Internal Affairs, 2020) aimed to expand device availability and internet connectivity. Consistent with these national efforts, some participating schools in this study provided students with access to devices through library or loan schemes, and subsidised commercial platforms such as Education Perfect. These supports enabled more regular engagement with digital content. It is also important to note that all three case study schools in this study were located in medium- to high-decile communities, which may have further contributed to the limited access-related challenges observed.

However, improved infrastructure did not guarantee the availability of high-quality digital tools that aligned with the specific needs of language education. While general-purpose platforms were widely accessible, teachers frequently reported that language-specific tools, especially those featuring authentic multimodal input, cultural content, or adaptive feedback, were often locked behind subscription paywalls. Budget limitations meant that premium features could not be extended to all students, resulting in inequitable learning opportunities across classrooms. In contrast, freely available tools, although heavily relied upon, were often pedagogically limited, difficult to customise, or prone to technical issues in classroom environments. These findings

resonate with prior research noting that even in well-resourced educational settings, the quality, contextual relevance, and instructional design of digital tools remain key constraints on effective integration (Lai & Pratt, 2004; Starkey, 2020; Tomczyk, 2020). Moreover, the technical burden of digital integration was frequently shouldered by individual teachers. Teachers were often expected to resolve connectivity issues, troubleshoot software problems, and manage student access independently during lessons. This situation disrupted pedagogical continuity and placed additional demands on teacher workload, especially for those managing multiple classes and diverse learner needs. As Whalen (2020) points out, the additional cognitive and emotional labour required for digital management contributes to professional burnout and limits long-term engagement with educational technologies.

Taken together with the previously discussed gaps in teacher professional development and student digital competence, these resource-related constraints reflect a deeper form of digital inequity that extends beyond device access to include the pedagogical relevance, quality, and contextual fit of digital tools. This perspective aligns with the notion of a second-level digital divide (Helsper, 2021), which highlights that meaningful digital engagement depends not merely on access, but on the capacity to integrate technology into purposeful learning. In the context of secondary language education in Aotearoa New Zealand, this divide intersects with curriculum-specific requirements, such as the development of communicative competence, which require not only appropriate digital tools but also targeted pedagogical design and sufficient teacher and student digital capability (Fletcher et al., 2020; Samarasekara et al., 2023).

9.3.3 Teacher–Student Perspectives on Digital Learning: Similarities and Differences

Although this study focused primarily on teachers’ perceptions and practices, comparing what teachers said with what they actually did in the classroom, as well as examining how this aligned or conflicted with students’ experiences, provided valuable insights. While numerous studies have emphasised the centrality of teacher cognition in shaping technology integration (Ertmer & Ottenbreit-Leftwich, 2010; Tondeur et al., 2017), the present study observed instances where some teachers began experimenting

with digital tools even before their underlying pedagogical perceptions had shifted. This finding challenges linear models of professional growth that assume belief change must precede practice change (e.g., Guskey, 2002), and instead supports emerging perspectives that conceptualise teacher development as a non-linear, recursive process (Clarke & Hollingsworth, 2002; Opfer & Pedder, 2011). Such practice-led change may stem from various contextual pressures. For instance, policy imperatives, institutional expectations, and resource availability can compel teachers to adopt tools for pragmatic reasons (Selwyn, 2021). In this study, the availability of ready-to-use platforms and technical support, alongside external expectations for digital delivery, appeared to prompt some teachers to try first, evaluate later. For some, digital experimentation emerged as a response to pedagogical difficulties, such as sudden lockdowns, limited classroom input, or declining student engagement, prompting them to adopt unfamiliar tools despite initial reservations. These teachers represent a growing cohort who engage in situated improvisation, using digital technologies as tentative solutions while gradually reconstructing their pedagogical rationales. However, in the absence of a clear pedagogical framework, digital adoption may result in fragmented experiences, as observed in some case classrooms. Teachers who lacked coherent strategies occasionally relied on tool functionality without deeper alignment to communicative goals, leading to surface-level use and limited student engagement. This highlights the need to support both practical experimentation and conceptual reflection in teacher development programmes, ensuring that digital innovation is not reduced to instrumentalism but situated within broader pedagogical aims (Njiku et al., 2020; Voogt et al., 2013).

Furthermore, rather than constituting a separate line of inquiry, student perspectives provided interpretive evidence, highlighting how digital instructional decisions were received, enacted, and at times reinterpreted within classroom contexts. This approach aligns with recent calls for the inclusion of learner perspectives in technology integration research, not as end-users alone but as active agents in meaning-making processes (Kessler, 2018; Wang & Vasquez, 2014). Findings suggest that teacher and student perspectives were largely aligned in their recognition of digital technologies' instrumental value, particularly in relation to structured content, multimodal input, and learning management systems. Students consistently reported the usefulness of tools

for accessing materials, revising vocabulary and grammar, and managing coursework, mirroring the pedagogical intentions expressed by their teachers. This convergence is consistent with prior research suggesting that students' digital engagement is often shaped by teacher-directed routines and norms (Howard et al., 2016). Even when students did not articulate pedagogical goals explicitly, their behaviours reflected an internalisation of teacher priorities, especially regarding practice and task completion.

Although the previous section highlighted some similarities between teachers and students, there were also clear differences in how they perceived digital integration in language teaching and learning. Teachers in this study tended to select digital tools based on curriculum objectives, multimodal potential, and pedagogical fit. In contrast, students prioritised ease of use, engagement, and perceived relevance to immediate learning outcomes. Similar contrasts have been observed in other CALL-supported CLT contexts. For instance, Sarfraz et al. (2015) found that while both teachers and students generally supported communicative approaches, their perceptions diverged on what made digital tasks effective. Teachers focused on structure and learning outcomes, whereas students emphasised familiarity and emotional engagement. These differences shaped not only task perceptions but also participation in classroom activities.

Additionally, this study revealed a notable gap between teacher intentions and student perceptions regarding the development of higher-order Communicative Competence, specifically discourse, strategic, and intercultural dimensions. While teachers in all three case studies reported deliberate efforts to embed these competencies into digital tasks, such as multimodal storytelling, collaborative writing, and cross-cultural comparisons, students rarely referenced such goals in their reflections. Their comments predominantly focused on vocabulary, grammar, and task completion, with limited recognition of broader communicative aims. This pattern is not entirely unexpected given the learners' developmental stage. As secondary school students in Years 9 and 10, many are still in the early stages of forming metacognitive awareness about language learning. Research has shown that adolescent learners often require sustained and explicit support to perceive the deeper objectives embedded in language tasks (Liddicoat & Scarino, 2013). It is therefore understandable that students gravitated

toward immediate, tangible outcomes such as completing assignments or preparing for assessments rather than abstract goals like intercultural understanding or discourse-level coherence.

Nonetheless, this finding does not suggest a deficiency on the part of students. Rather, it highlights a crucial pedagogical responsibility. In digital language learning environments, particularly at the lower secondary level, teachers play an essential role in helping students understand not only how to use technology, but why it is used in particular ways. That is, beyond task completion and resource access, students need explicit guidance to grasp the broader communicative purposes that digital tools are intended to support. As this study shows, without ongoing instructional mediation, students are likely to approach digital tools primarily as functional aids for achieving short-term academic outcomes. To counter this tendency, it is imperative that teachers continuously articulate the diverse communicative demands of language learning, including the roles of discourse coherence, strategic flexibility, and intercultural awareness. This involves not only embedding such goals into task design but also openly discussing with students how different tools can support various aspects of language use and communication. As Stickler (2022) argues, meaningful technology integration requires transparent pedagogical framing where learners are made aware of the deeper educational intentions behind digital engagement. In this respect, digital technologies should not be positioned merely as delivery mechanisms or motivational devices, but as integral components of broader communicative development. The teacher's role, therefore, is to make these learning purposes explicit, to clarify how particular activities and tools connect to communicative goals, and to support students in shifting from a tool-oriented mindset towards a communication-oriented one.

9.4 Chapter Summary

This chapter discussed the key findings of the study in relation to existing literature, focusing on how secondary language teachers in Aotearoa New Zealand integrate digital technologies to support Communicative Competence. These patterns reflect both practical limitations, such as student proficiency and curriculum demands, and broader

cultural influences, particularly in contexts like te reo Māori and NZSL, where relational and modality-specific factors shaped digital pedagogies. Linguistic competence was identified as the dominant focus, supported by digital tools used for structured, form-focused activities targeting vocabulary, grammar, and pronunciation. In contrast, discourse and strategic competencies were less systematically addressed and tended to be incorporated incidentally through broader communicative tasks. Although ICC was recognised as an important aspect of language teaching, it was generally approached through static cultural content, with limited opportunities for dialogic interaction or critical reflection.

Teachers' approaches to digital integration were shaped by curriculum goals, cultural values, institutional roles, and their perceptions of student needs. While many expressed openness toward technology, its use often mirrored delivery-oriented patterns of teaching, focusing on teacher-led explanations and structured tasks. A few teachers, however, adopted more exploratory practices, incorporating student collaboration and content creation. From the student perspective, digital engagement was largely driven by usability and short-term relevance. Few students explicitly recognised broader communicative aims within digital tasks, highlighting a potential gap between instructional design and learner perception.

The chapter also examined key challenges associated with digital technology integration, including limited access to language-specific resources, insufficient pedagogical support, and uneven professional development opportunities. These findings underscore the importance of context-sensitive and pedagogically coherent digital integration. In doing so, the chapter lays important groundwork for understanding how Communicative Competence frameworks can operate within diverse CALL settings, and how technology use in language education is shaped by localised realities, including both linguistic and cultural factors that influence teaching choices and learning experiences.

Chapter 10: Conclusions and Implications

10.1 Introduction

This study investigated how pre-NCEA secondary school language teachers in Aotearoa New Zealand perceive and implement digital technologies in their teaching, with a particular focus on their efforts to foster students' Communicative Competence. This final chapter begins by summarising the key research findings, encompassing both the integration of digital technologies to support Communicative Competence and their broader role in language teaching. Building on this synthesis, the chapter outlines the study's theoretical and practical contributions, highlighting how the findings extend existing knowledge and offer contextually grounded insights into language education in digitally supported environments. It then considers the implications of these findings for classroom practice, teacher professional development and digital resource design. Finally, the chapter acknowledges the limitations of the research and concludes by identifying areas for future study.

10.2 Research Conclusions

This section summarises the key conclusions drawn from the study, which investigated how pre-NCEA secondary school language teachers in Aotearoa New Zealand perceive and implement digital technologies in their efforts to support students' Communicative Competence. While the study was guided by four research questions, the conclusions presented here are not structured as direct responses to each RQ. This is because many findings were interrelated and addressed multiple questions simultaneously. Instead, the conclusions are thematically organised to avoid redundancy and provide a coherent synthesis of the study's core findings. Where relevant, connections to individual research questions are indicated.

10.2.1 Digital Technology Integration for Communicative Competence and Broader Instruction

Teachers' perceptions of the importance of different components of Communicative Competence primarily address Research Question 1. Their perceptions about and use

of digital technologies to support each of these components respond to parts of Research Questions 2 and 3, demonstrating variation in teachers' perceptions of relative importance and the selective integration of digital strategies to support communicative components that were perceived as less important in classroom practice.

First, this study found that linguistic competence was often perceived as important and consistently reflected in classroom practice. Teachers placed particular emphasis on the development of vocabulary, grammar, and pronunciation, especially in beginner-level classrooms in Years 9 and 10. This focus reflected both pedagogical considerations, such as the need to establish foundational language knowledge, and institutional factors, including the influence of assessment frameworks that favoured observable and assessable linguistic elements. Teachers widely reported using digital technologies to support the development of linguistic competence. They integrated tools that enabled structured repetition, multimodal presentation, and pronunciation modelling to reinforce key linguistic features. Gamified platforms, such as Quizlet and Education Perfect, were commonly employed to support vocabulary acquisition through repetitive practice and immediate feedback. These tools were typically chosen because they enabled engaging, content-aligned activities that offered game-based repetition in a controlled environment. In the context of NZSL, video-based resources were used to model visual-gestural features that paralleled phonological components in spoken languages. While such tools supported structured repetition, multimodal input, and learner autonomy, many students still preferred to seek clarification from their teachers, particularly regarding pronunciation, rather than rely on online pronunciation tools.

Second, while most teachers identified ICC as an important component of language education, their classroom practices did not consistently reflect this perception. ICC was often addressed through teacher-led explanations or cultural video presentations, with limited opportunities for student dialogue, reflection, or intercultural interaction. Digital tools were mainly used to present factual cultural content, rather than to facilitate interactive or dialogic intercultural learning. The integration of digital technologies to promote deeper intercultural engagement remained limited across the participating classrooms. Very few classrooms made use of tools such as social media,

virtual exchanges, or immersive technologies to support ICC development. Teachers identified several barriers that constrained the implementation of ICC-focused practices, including limited learner proficiency, concerns about online safety, time constraints, and perceived misalignment with curriculum expectations. As a result, ICC was frequently approached at the level of cultural awareness, rather than as an active Communicative Competence. Findings also showed that some teachers preferred in-person, relationship-based modes of cultural engagement, especially in contexts such as te reo Māori, where in-person interaction holds strong cultural value. These preferences influenced how teachers interpreted the role and appropriateness of digital tools for promoting ICC in local educational settings.

Third, this study found that discourse and strategic competence were less prominently featured in instructional practices, even though teachers regarded them as important aspects of Communicative Competence. These competencies were generally treated as secondary to linguistic skills and tended to be incorporated incidentally during broader communicative tasks, rather than through explicit instruction or assessment. In the te reo Māori classroom, occasional discourse-level activities such as extended writing were observed, often supported by learners' receptive strengths or prior exposure, but these remained rooted in conventional methods and received limited digital support. By contrast, strategic competence was more actively developed in the NZSL classroom, where real-time interaction with Deaf users required strategies like clarification and self-repair. In the te reo Māori class, learners frequently engaged in translanguaging by drawing on English to manage communication gaps. This was a culturally situated and pragmatic practice, though not typically used as a platform for strategic instruction. Across all cases, digital technologies played a minimal role in developing discourse and strategic competence, with teachers expressing reservations about automated feedback and relying instead on face-to-face interaction.

Fourth, teachers expressed varied views on the role of digital competence in language learning. Some saw it as essential for preparing students to operate in online communicative environments, while others approached it with caution or hesitation, particularly when working with younger students or in culturally sensitive contexts.

Teacher decisions regarding digital competence were shaped by institutional responsibilities, cultural values around face-to-face communication, and concerns about safety and appropriateness. As a result, the development of students' digital competence was not systematically embedded in most language programmes. While some digital practices were integrated into teaching to support language learning, they were not always explicitly framed as efforts to foster digital competence.

Beyond practices directly related to Communicative Competence, the study identified broader patterns of technology integration that contributed further insights to Research Questions 2 and 3. Digital tools were widely used to support content delivery, classroom organisation, and communication, typically through teacher-led approaches prioritising clarity and efficiency. While most teachers felt confident using such tools, most of their application often reinforced existing teacher-directed instructional flows. LMSs played a particularly prominent role, especially in remote and blended learning, by centralising resources and enabling structured, self-paced learning. A few teachers adopted more interactive uses of technology, involving students in co-constructing digital content. Other tools, such as videoconferencing platforms, also supported classroom interaction but were often perceived as temporary solutions rather than sustainable pedagogical strategies.

10.2.2 Challenges in Digital Technology Integration in Language Teaching

While the overall teacher response to digital technologies in this study was broadly positive, the integration of these tools in secondary language education was shaped by a range of challenges. These challenges, related to teacher perceptions, student readiness, classroom management, and technological factors, revealed tensions that influenced instructional decision-making and shaped how digital tools were enacted in practice. As such, this section offers a further response to Research Questions 2 and 3 by illustrating the contextual barriers that language teachers perceived and navigated when implementing digital technologies.

First, the study identified time constraints and workload as major barriers to meaningful

digital integration. Teachers were often required to independently select, adapt, and manage digital tools, which added to their planning and support responsibilities. A lack of sustained, context-relevant professional development further limited their capacity to integrate technology effectively. While most teachers expressed interest in improving their digital competence, access to pedagogically focused training remained inconsistent. Engagement with professional learning varied depending on teachers' roles and institutional expectations, with those in leadership or digitally intensive positions more likely to take initiative in driving digital integration.

Second, teachers identified that students faced challenges in adapting to digital platforms, particularly in terms of maintaining focus, exercising autonomy, and demonstrating digital literacy. These difficulties were especially evident among secondary learners, whose independent learning habits were still developing. Teachers noted that digital distraction was a common issue and that many students required support to engage meaningfully with tasks involving digital technologies. Concerns were also raised about students' limited ability to use digital tools strategically for language and intercultural learning. These concerns reflected teachers' perceptions of a gap between students' general familiarity with digital platforms and their ability to use them effectively for academic and intercultural purposes.

Finally, technical and resource-related barriers continued to constrain the integration of digital technologies in language teaching. Although basic infrastructure was generally adequate, teachers faced limited access to high-quality, language-specific digital tools, particularly those offering multimodal input or adaptive feedback. Many relied on free tools with restricted functionality, which reduced pedagogical flexibility. Teachers were also frequently responsible for resolving technical issues during lessons, adding to their workload and disrupting instructional flow.

10.2.3 Similarities and Differences Between Teacher and Student Perspectives

Although this study focused primarily on teachers' perceptions and practices,

comparing their stated views with observed classroom behaviours and students' experiences (as addressed in Research Question 4) offered valuable insights. In most cases, teachers' perceptions about digital technology integration aligned with their instructional practices. However, findings also suggested that some teachers began using digital tools before they had fully developed clear ideas about how these tools could support learning. These teachers experimented with digital tools to address immediate instructional needs, with pedagogical justifications emerging gradually. However, in the absence of clearly articulated goals, such experimentation occasionally resulted in fragmented implementation and inconsistent student engagement.

The study also found that students' engagement with digital tools often mirrored their teachers' instructional priorities, particularly in areas such as authentic input, communication, and cultural learning. When teachers actively incorporated digital communication or multimedia resources, students were more likely to engage meaningfully. While both groups valued technology, their perspectives diverged in emphasis: teachers focused on pedagogical design and adapting to constraints, whereas students prioritised usability and task completion. Students were more sensitive to technical disruptions and expected smooth functionality, while teachers tended to accommodate such challenges as part of their instructional role. Differences were also identified in perceptions of feedback, cultural content, and gamified features, with students sometimes favouring approaches less emphasised by teachers. Despite teacher concerns about student readiness, students generally expressed positive views of digital learning, suggesting that selective engagement reflected individual learning preferences rather than resistance.

10.3 Contributions of the Study

This section outlines the key contributions of the study, spanning both theoretical and practical domains. It first discusses how the Communicative Competence framework can be applied and interpreted within linguistically and culturally distinctive language learning contexts. It then identifies practical implications for language teachers, professional development, and the integration of digital tools into classroom practice.

This study offers two key theoretical contributions. First, it demonstrates the applicability of the Communicative Competence framework within the linguistically and culturally distinctive pre-NCEA language classrooms of Aotearoa New Zealand. Rather than treating Communicative Competence as a fixed or uniformly enacted set of abilities, this study suggests that it can be understood as a developmental and contextually situated construct, with different dimensions becoming more or less prominent in response to classroom conditions, learner proficiency, and language-specific characteristics. By exploring how linguistic, discourse, strategic, and intercultural competencies are interpreted and enacted in these settings, the study affirms the framework's relevance while highlighting the need for contextual adaptation, particularly for beginner learners and languages with unique pedagogical characteristics, such as NZSL and te reo Māori.

Second, the study contributes to Canale's (1983) Communicative Competence framework by highlighting the role of digital competence in shaping how communicative practices are represented, practised, and supported in contemporary language classrooms. The findings suggest that digital competence was not simply treated as an additional component, but influenced which dimensions of communication were emphasised in teaching. In addition, the findings of this study contribute to a more dynamic understanding of the relationship between teacher perceptions and practices in digitally supported language education. Instead of following a linear path from perception to practice, the findings suggest that teachers sometimes start using digital tools before they have fully thought through how these tools fit into their teaching. This highlights the value of collaborative reflection and professional learning opportunities to support teachers as they make sense of digital practices through experience.

This study offers several grounded practical contributions to the field of digitally supported language education in Aotearoa New Zealand secondary schools. The findings show that digital tools were most often used to support structured content delivery, particularly for beginner-level learners. While this reflected learners' proficiency levels and teachers' pragmatic concerns, it also indicated a need for more

support in designing student-centred, communicative, and critically engaging digital activities. At the same time, the study draws attention to the limited availability of high-quality, language-specific digital resources. Teachers frequently encountered difficulties accessing tools that were pedagogically meaningful and culturally appropriate, pointing to the importance of investing in targeted and equitable digital content. These challenges were compounded by a lack of professional development focused on integrating technology in ways that advance language-specific goals, such as fostering discourse-level communication and supporting intercultural learning, rather than focusing solely on tool functionality. Moreover, the study underscores that digital innovation is shaped by local pedagogical traditions and relational values. In culturally distinctive contexts, such as those influenced by te reo Māori, preferences for *kanohi ki te kanohi* (face-to-face) interaction informed teachers' cautious stance toward online modalities. Taken together, these insights highlight the need to develop more context-sensitive approaches to digital integration that address both pedagogical demands and cultural expectations.

10.4 Implications

This study has examined how secondary school language teachers in Aotearoa New Zealand engage with digital technologies to support language teaching and learning. The findings have shed light on their perceptions of Communicative Competence components, as well as their understandings and classroom practices related to the opportunities and challenges of digital integration. Building on these insights, this section outlines practical implications for language teachers, teacher professional development, and institutional and technological decision-makers.

10.4.1 Implications for Language Teachers

The findings of this study carry several important implications for language teachers navigating digital integration in secondary school contexts. First, teachers may consider the value of expanding their use of digital tools beyond content delivery to foster more interactive and student-centred learning. While structured digital platforms such as vocabulary and grammar apps have proven effective for reinforcing core language

components, especially for beginner-level learners, teachers are also encouraged to explore tools that support dialogic engagement, multimodal production, and peer collaboration. Even within the constraints of low proficiency, small shifts such as inviting students to co-construct digital content or reflect on cultural materials through scaffolded prompts may promote more meaningful communicative development. Notably, this study identified a small number of teachers who successfully facilitated authentic interaction between students and target-language speakers through carefully structured digital exchanges. These practices, although limited, demonstrated that with sufficient teacher scaffolding and monitoring, even beginner learners can engage in meaningful communicative tasks that support both linguistic development and the internalisation of sociocultural norms.

Second, the study underscores the importance of supporting students in developing both linguistic and digital literacy within language learning contexts. While many students were comfortable using everyday digital tools, they often lacked the skills to engage with language-specific technologies in ways that promoted deeper communicative development. Teachers can play a key role by modelling how to use online dictionaries strategically, engage with multimodal input, and participate in culturally appropriate digital communication. These forms of support are especially important for junior secondary learners, who are still developing the ability to use digital resources for language construction, meaning negotiation, and intercultural reflection. Positioning digital technologies as tools for communicative and cultural engagement can help students build stronger connections between technology use and language learning goals.

In addition, digital integration does not need to begin with fully formed pedagogical beliefs. Language teachers who feel uncertain about the instructional value of a tool can still engage in small-scale, low-risk experimentation to address specific classroom needs. By treating digital practice as an iterative process, teachers can draw on classroom feedback and learner outcomes to reflect on the pedagogical relevance of each tool. When combined with targeted professional development, such reflective experimentation allows practical insights to gradually shape and refine instructional

perceptions, reducing the pressure to achieve full conceptual clarity or flawless implementation from the outset. To support this process, teachers are encouraged to define clear, lesson-specific objectives for each digital activity, even when working with unfamiliar tools. Identifying what the tool is intended to support, whether it be vocabulary practice, intercultural exploration, or collaborative production, can help prevent fragmented implementation and promote more coherent learning experiences. Where appropriate, sharing these objectives with students can also foster greater learner engagement and clarify the communicative purposes of digital tasks.

10.4.2 Implications for Teacher Professional Development

The findings of this study reinforce longstanding concerns about the limitations of professional development for language teachers in digital contexts. Many participants reported that available training focused on introducing digital tools rather than on how to use them to support communicative language teaching. This reflects a broader issue in how professional development is designed and delivered, as it is often led by school-wide technology coordinators or external providers with limited understanding of language-specific pedagogical needs. As a result, teachers were frequently left to make their own connections between digital tools and teaching goals. These findings suggest that effective professional development should be co-designed with language teachers and embedded within subject-specific contexts, offering practical strategies not only for vocabulary and grammar instruction, but also for promoting discourse, intercultural communication, and strategic language use.

Strengthening the theoretical framing of professional development is also important. Although this study was primarily guided by the Communicative Competence framework, the patterns observed in teachers' decision-making align closely with digital pedagogical models such as TPACK, which emphasise the interplay between technological, pedagogical, and content knowledge. Explicitly incorporating such models into professional development could help teachers make more intentional choices about how digital tools support communicative goals, rather than relying on trial-and-error experimentation or generic school-wide training. For example, several teachers demonstrated strong pedagogical and content knowledge but were less

confident in how technological resources could be leveraged to support discourse development, intercultural communication, or strategic competence. A TPACK-informed approach may help identify these areas of imbalance and provide a more structured pathway for building capacity.

At the same time, the findings of this study contribute to extending existing digital pedagogical frameworks by grounding them in the realities of language classroom practice. Generic models such as TPACK, while widely used, are not specifically designed for the unique demands of language teaching, including the integration of multimodal input, scaffolding interaction, and balancing linguistic and cultural objectives. By examining how teachers of NZSL, te reo Māori, and Chinese navigated these challenges, this study offers subject-specific insights that can inform efforts to refine or adapt digital pedagogical models. Although the study does not propose a new framework, its findings highlight how Communicative Competence, digital competence, and pedagogical decision-making intersect in language classrooms, and how professional development could better support teachers working in linguistically and culturally distinctive settings.

A further implication relates to the different roles teachers occupy within their schools. Teachers in leadership or online teaching positions were often more proactive in experimenting with digital tools and supporting colleagues, highlighting the value of both formal professional development and informal collaboration. With adequate institutional support, these opportunities can help teachers strengthen their technical skills and make more informed pedagogical decisions. Informal peer learning, including co-planning, observing lessons, and sharing experiences with digital tools, provides a practical avenue for grounding technology use in real classroom contexts and can enhance teachers' sense of confidence, agency, and professional connectedness.

10.4.3 Implications for Institutional Decision Makers and Technology Developers

The findings of this study suggest that meaningful digital integration in language

education depends on ongoing institutional support and the availability of pedagogically appropriate tools that reflect the linguistic, cultural, and instructional needs of different language programmes. While most schools involved in this research had adequate digital infrastructure, many language teachers reported challenges in accessing high-quality, level-appropriate digital resources, particularly for indigenous or visually based languages such as te reo Māori and NZSL. The scarcity of structured, differentiated, and culturally aligned materials often compelled teachers to invest significant time and effort in developing their own resources to meet learners' needs. To address this gap, schools and education providers should consider ongoing investment in the development and distribution of language-specific digital content. Procurement strategies should move beyond generic, cross-subject platforms to support the development and licensing of multimodal, adaptable, and locally contextualised tools, especially those suitable for beginner learners and lower-proficiency environments.

Technology developers, in turn, are encouraged to engage more closely with the diversity of language education contexts. Tools intended to support communicative language teaching should avoid standardised, language-agnostic designs, and instead attend to the particularities of the languages they aim to serve, such as the visual-gestural nature of NZSL, the culturally embedded interactional norms in te reo Māori, or the orthographic and syntactic features of Chinese and Arabic. Involving language teachers as design collaborators or consultants throughout the development process can help ensure that products are both pedagogically grounded and practically usable. This not only reduces the resource production burden on teachers but also enhances the relevance, inclusivity, and uptake of the tools in real classrooms. Therefore, digital integration must respect community preferences and allow for local pedagogical interpretation. This calls for institutional guidelines and platform designs that are flexible by nature, enabling schools and teachers to adapt tools in ways that align with cultural expectations and classroom priorities. In doing so, digital integration in language education can become not only technically viable, but also culturally and educationally meaningful.

10.5 Limitations

Like all empirical research, this study has its limitations. These are acknowledged to clarify the scope of interpretation and suggest directions for future inquiry. First, while the explanatory sequential mixed-methods design provided both breadth and depth, the sampling strategy limits generalisability. The online survey relied on voluntary, non-probability sampling, which may have attracted teachers with particular perceptions of digital technologies. The three case studies, though rich in insight, involved experienced female teachers from mid- to high-decile schools, excluding the perspectives of novice teachers, male teachers, or those in under-resourced settings.

Second, the research foregrounded teacher perceptions and practices. While student voices were included in the qualitative phase, they were not analysed as a distinct focus. Nor did the study explore the roles of school leadership, support staff, or external actors in shaping digital pedagogy. While this focus was necessary to maintain analytical depth, future research could adopt a broader, multi-stakeholder perspective.

A further limitation concerns the selection of focal languages. The inclusion of NZSL, te reo Māori, and Chinese was based on the willingness of the participating teachers. While the survey captured a wider range of languages taught in Aotearoa New Zealand secondary schools, the case studies concentrated on these three. This focus, though shaped by participant availability, also presents a valuable opportunity: NZSL and te reo Māori invite reconsideration of some of the assumptions that underpin conventional models of Communicative Competence. Their distinctive linguistic and cultural features offer useful contrasts with the languages that have most commonly informed the development of such frameworks in the literature of Communicative Competence.

This divergence also highlights a degree of theoretical–empirical misalignment within the study. Chapter 2 focused primarily on common foreign language teaching in the literature, with reference to CLT and Communicative Competence as applied to spoken and written language instruction. This emphasis reflected the availability and orientation of the literature at the time of writing. Although NZSL and te reo Māori

were not fully theorised in the earlier chapters, their inclusion in the empirical component allows for critical reflection on how communicative frameworks might be extended to better accommodate linguistically and culturally distinctive contexts. The study draws on relevant New Zealand-based research, particularly in relation to ICC, to support this adaptation. Acknowledging this partial alignment helps clarify the interpretive scope of the study and suggests valuable directions for further theoretical development in digital language education.

10.6 Suggestions for Future Research

Building on the scope and limitations of the present study, several avenues for future research can be identified. These directions aim to expand the theoretical, methodological, and contextual reach of digital language education research in Aotearoa New Zealand and beyond. First, future studies could address sampling and representational gaps by including a more diverse range of teachers. The current case study phase focused on experienced female teachers in mid- to high-decile schools. Further research involving novice teachers, male teachers, or those working in low-decile or under-resourced contexts may offer insight into how teaching experience, institutional setting, and available support shape digital integration practices. Longitudinal studies could also explore how teachers' perceptions and strategies evolve over time through continued engagement with digital tools and environments.

Second, greater attention is needed to the student perspective. While this study incorporated learner voices during the qualitative phase, these were used to support teacher-focused analysis rather than as a standalone object of inquiry. Future research could foreground student agency, exploring how learners experience digital language tasks, develop critical digital literacies, and perceive the communicative and intercultural aims embedded in digital pedagogy. In addition, research could examine the roles of other key stakeholders, such as school leaders, IT support staff, and parents, in shaping the broader conditions under which teachers adopt and sustain digital practices. A systems-level perspective would help illuminate how institutional structures, leadership cultures, and resource decisions enable or constrain pedagogical

innovation.

Third, there remains considerable scope for further theorisation of Communicative Competence in relation to linguistically and culturally distinctive languages. While this study demonstrated the applicability of the Communicative Competence framework within NZSL and the te reo Māori classrooms, it also pointed to the need for ongoing reflection on how such models align with the specific characteristics of these languages. Future research could explore how these and other non-dominant languages prompt reconsideration of specific components of Communicative Competence, particularly strategic and intercultural aspects, and whether existing frameworks could be adapted to better account for the multimodal, affective, and community-embedded nature of communication in these contexts. Comparative studies across languages and modalities may further illuminate how Communicative Competence is best understood and supported in language teaching contexts that involve digital technologies and culturally responsive approaches.

10.7 Final Remarks

This study set out to explore how secondary language teachers in Aotearoa New Zealand navigate the opportunities and tensions of digital technology integration in pursuit of Communicative Competence. Its core contribution lies not only in mapping what teachers do, but in revealing the pedagogical reasoning, contextual conditions, and cultural values that shape those decisions. As digital tools become increasingly embedded in language education, the challenge is no longer whether to use technology, but how to use it in ways that are communicatively meaningful, culturally responsive, and contextually sustainable. This research affirms the centrality of teacher agency in that process, and the importance of listening carefully to both teachers and learners as they co-construct digital pedagogies within their own realities. The work is necessarily partial and situated, but it offers one grounded perspective on the evolving ecology of language teaching. The study hopes to contribute to more reflective, adaptive, and equitable practices in the digital integration of language education that remain attuned to both local needs and global possibilities.

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Appendices

Appendix A: Online Survey for Language Teachers

A Survey on the Use of Digital Technologies in Language Class Teaching

***Note:** In this survey, digital technology refers to devices, software and digital resources connected with the internet, such as tablets, social networking tools and online resources.

Information Sheet of Survey: Language Teachers

Who am I and what is this research about?

Thank you for considering being a part of this research. My name is Yi (Vicky) Liu, a doctoral student in the Institute of Education, Massey University. As the title shows, I am interested in understanding how you use and perceive digital technologies in language classes. This research is being supervised by Dr Maggie Hartnett and Dr Ute Walker.

Why are you being asked to take part?

I am inviting you, as an in-service language teacher at Year 9 and/or Year 10, to participate.

What benefits will the research bring?

This study can provide you with an opportunity to share your thoughts about using digital technologies for language teaching, especially in the context of the current pandemic and the greater demand for digitally facilitated learning. Your input may also help develop conclusions which can be useful for educators about ways in which digital technologies can be integrated in teaching and learning languages.

What will you be asked to do?

I am inviting you to complete an anonymous survey. It is expected that the survey will take approximately 20 minutes.

What will happen to the data?

The information collected from this survey will be managed with utmost care, and no information will be given to any other person outside my study. Data will be kept on my personal password-protected laptop, which is solely used by myself to ensure that all information given in this survey is kept private and confidential. No names or other identifying details will be used in the project report. The findings of this study will be presented as part of my PhD thesis and may also be used in conference presentations and journal publications.

What rights do you have?

You are under no obligation to accept this invitation. If you decide to participate, you have the right to refuse to answer any questions. Your participation in the survey implies your consent for your data to be collected.

Please do not hesitate to contact either me or my supervisors at any time if you have any questions or concerns about the project. Contact details are as follows:

Student	
Yi (Vicky) Liu Massey University Institute of Education Email: Vicky.Liu.2@uni.massey.ac.nz	
Supervisors	
Dr Maggie Hartnett Massey University Institute of Education Private Bag 11 222 Palmerston North Phone (06) 356 9099, Ext 84409	Dr Ute Walker Massey University School of Humanities, Media and Creative Communication Private Bag 11-222

Email: m.hartnett@massey.ac.nz	Palmerston North Phone 0800 627 739 Ext 84964 Email: u.walker@massey.ac.nz
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This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application SOB 21/39. If you have any concerns about the conduct of this research, please contact Dr Gerald Harrison, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83570, email humanethicsouthb@massey.ac.nz.

Thank you for considering this request.

Yours sincerely,

Yi (Vicky) Liu

Student ID: _____

Part A: Personal Information

What is your gender?	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Non-binary <input type="checkbox"/> Prefer not to say
What is your age?	<input type="checkbox"/> 20-29 <input type="checkbox"/> 30-39 <input type="checkbox"/> 40-49 <input type="checkbox"/> 50-59 <input type="checkbox"/> 60 and over
What is your ethnicity? (Please choose all that apply.)	
<input type="checkbox"/> New Zealand European (Pākehā)	
<input type="checkbox"/> Māori	
<input type="checkbox"/> Pacific peoples (please specify: _____)	
<input type="checkbox"/> Asian	
<input type="checkbox"/> Middle Eastern, Latin American and African (MELAA)	
<input type="checkbox"/> Other ethnicity (please specify: _____)	
What region is your main school located in?	

North Island:

Northland Auckland Waikato Bay of Plenty Gisborne Hawke's Bay Taranaki Manawatu-Wanganui Wellington

South Island:

Tasman Nelson Bays Marlborough West Coast Canterbury Otago Southland Chatham Island County

Other (please specify: _____)

What is the decile of your main school?

01 02 03 04 05 06 07 08 09 10 I don't know

What mode of language class are you currently teaching in your main school? (Please choose all that apply.)

class with very limited digital technologies used

blended class fully online class other (please specify: _____)

How many years have you been teaching language at secondary school level?

less than 2 years 2-5years 6-10years 11-15 years 16-20 years over 20 years

At which year level are you currently teaching a language class? (Please choose all that apply.)

Year 9 Year 10 Other (please specify: _____)

Language(s) I teach (Please choose all that apply)

New Zealand Sign Language

Te reo Māori

European languages:

English as a second language

French

German

Spanish

Latin

Pacific island languages:

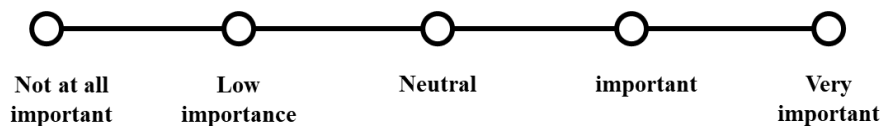
Samoan

- Cook Island Māori
- Tongan.
- Asian languages:**
 - Japanese
 - Chinese Languages
 - Korean
- Other language**, please specify: _____

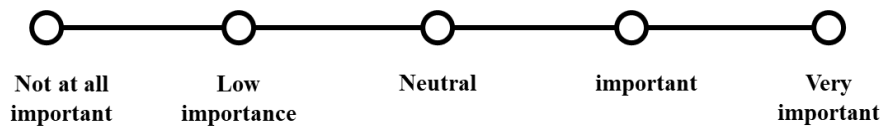
Part B: Objectives in Second Language Teaching

Regarding the following teaching objectives, how important is it for students to:

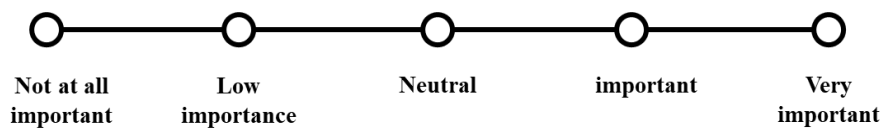
be competent in correct pronunciation of the target language?



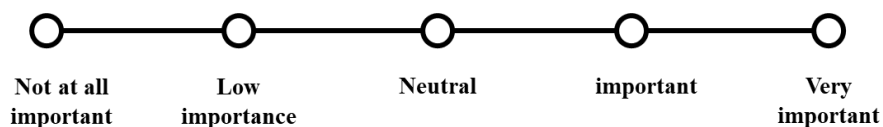
be competent in using vocabulary correctly?



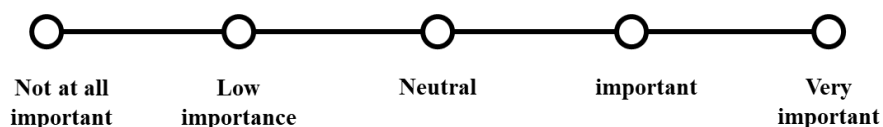
be competent in using the grammar of the target language?



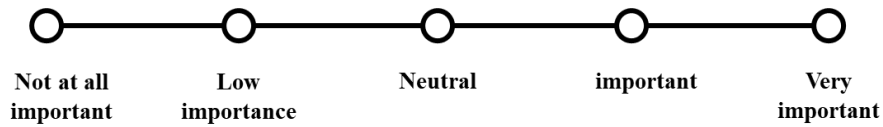
be competent in showing coherence in the target language (i.e. clear connection and flow of ideas)?



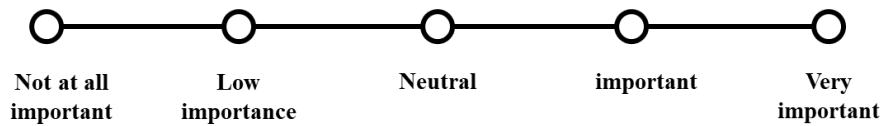
be competent in using verbal and non-verbal strategies to help compensate for communication breakdowns?



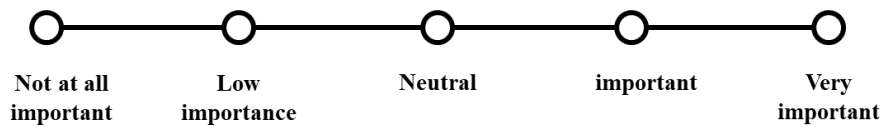
be competent in knowledge and information about the target culture, such as history, geography, festivals and customs?



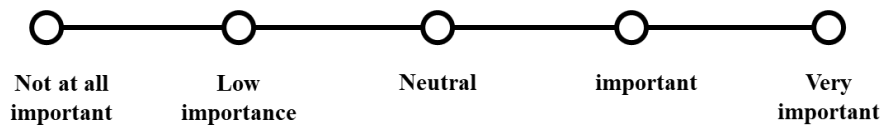
be competent in appropriately using the rules and conventions for how the language is used in different sociocultural contexts (e.g. showing politeness)?



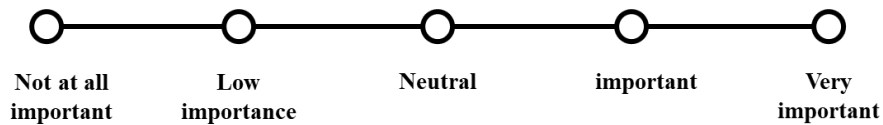
be competent in understanding and making comparisons between different cultures (e.g. the target culture and the students' own)?



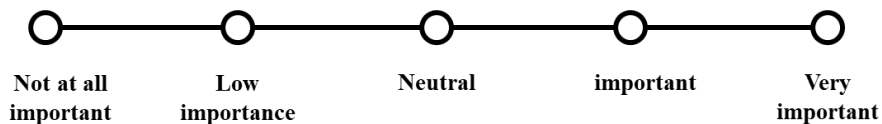
be competent in communicating and interacting with people from other cultural backgrounds, including from the culture of the target language?



be competent in using digital tools to enhance learning of the target language?



be competent in using digital environment for social interaction in the target language?



Do you have any other important language learning objectives? Please specify:

Part C: Use of digital technologies for language teaching in class

Have you ever used any digital technologies in teaching your language classes?

- Yes, I have used digital technologies in my language classes.
- No, I have never used digital technologies in my language classes. [If 'No' is selected, then skip to the end of the survey]

This section is about the use of digital technologies used in your language teaching. Please choose only one class when answering the questions in this section and indicate your choice below:

Year level (e.g. Year 9): _____

Language taught (e.g. Spanish): _____

Curriculum level of language learning: _____

What types of digital devices are commonly used in your classroom? Please rank the following options from the most commonly (1) used to the least commonly used (5).

- laptops personal computers tablets smartphones other (please specify: __)

Thinking about the most commonly used device, how many students typically use or share it, including bring your own device (BYOD) and choose your own device (CYOD)?

- One student per device
- 2-4 students share one device
- 5-7 students share one device
- 8-10 students share one device
- Over 10 students share one device

Please tick the following technologies you are using in your language class teaching.

Email

[If this option is ticked, the follow-up questions will show up]

How often do you use this digital technology for the following activities?

1. I use email to design and present the course content or upload learning resources.
(never/rarely/sometimes/often/always)

2. I have students use email to improve their language performance (e.g. vocabulary, grammar and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use email to practice their language skills (e.g. reading and writing). (never/rarely/sometimes/often/always)
4. I encourage students to use email to learn at their own pace. (never/rarely/sometimes/often/always)
5. What else do you use email for in your teaching practice? _____

Videoconferencing (e.g. Skype, Zoom)

[If this option is ticked, the follow-up questions will show up]

How often do you use this digital technology for the following activities?

1. I use videoconferencing to design and present the course content or upload learning resources. (never/rarely/sometimes/often/always)
2. I have students use videoconferencing to improve their language performance (e.g. pronunciation, grammar and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use videoconferencing to practice their language skills (e.g. listening and speaking). (never/rarely/sometimes/often/always)
4. I encourage students to use videoconferencing to learn at their own pace. (never/rarely/sometimes/often/always)
5. What else do you use videoconferencing for in your teaching practice? _____

Blogs, wikis or websites

[If this option is ticked, the follow-up questions will show up]

How often do you use this digital technology for the following activities?

1. I use blogs, wikis or websites to design and present the course content or upload learning resources. (never/rarely/sometimes/often/always)
2. I have students use blogs, wikis or websites to improve their language performance (e.g. vocabulary, grammar and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use blogs, wikis or websites to practice their language skills (e.g. reading and writing). (never/rarely/sometimes/often/always)
4. I encourage students to use blogs, wikis or websites to learn at their own pace. (never/rarely/sometimes/often/always)

5. What else do you use blogs, wikis or websites for in your teaching practice? _____

Digital language reference tools (e.g. online dictionaries, translation tools or apps)

[If this option is ticked, the follow-up questions will show up]

How often do you use this digital technology for the following activities?

1. I use digital language reference tools to design and present the course content or upload learning resources. (never/rarely/sometimes/often/always)
2. I have students use digital language reference tools to improve their language performance (e.g. pronunciation, vocabulary, grammar and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use digital language reference tools to practice their language skills (e.g. listening, speaking, reading and writing). (never/rarely/sometimes/often/always)
4. I encourage students to use digital language reference tools to learn at their own pace. (never/rarely/sometimes/often/always)
5. What else do you use digital language reference tools for in your teaching practice? _____

Social networking tools (e.g. Facebook, Twitter, Instagram, Google Groups, WhatsApp)

[If this option is ticked, the follow-up questions will show up]

How often do you use this digital technology for the following activities?

1. I use social networking tools to design and present the course content or upload learning resources. (never/rarely/sometimes/often/always)
2. I have students use social networking tools to improve their language performance (e.g. pronunciation, vocabulary, grammar and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use social networking tools to practice their language skills (e.g. listening, speaking, reading and writing). (never/rarely/sometimes/often/always)
4. I encourage students to use social networking tools to learn at their own pace. (never/rarely/sometimes/often/always)
5. What else do you use social networking tools for in your teaching practice? _____

Presentation tools (PowerPoint, Google Slide, Prezi)

[If this option is ticked, the follow-up questions will show up]

How often do you use this digital technology for the following activities?

1. I use presentation tools to design and present the course content or upload learning resources. (never/rarely/sometimes/often/always)
2. I have students use presentation tools to improve their language performance (e.g. vocabulary, grammar and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use presentation tools to practice their language skills (e.g. reading, writing and speaking). (never/rarely/sometimes/often/always)
4. I encourage students to use presentation tools to learn at their own pace. (never/rarely/sometimes/often/always)
5. What else do you use presentation tools for in your teaching practice? _____

Document processors (e.g. Microsoft Office suite, Google Docs)

[If this option is ticked, the follow-up questions will show up]

How often do you use this digital technology for the following activities?

1. I use document processors to design and present the course content or upload learning resources. (never/rarely/sometimes/often/always)
2. I have students use document processors to improve their language performance (e.g. vocabulary, grammar and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use document processors to practice their language skills (e.g. reading and writing). (never/rarely/sometimes/often/always)
4. I encourage students to use document processors to learn at their own pace. (never/rarely/sometimes/often/always)
5. What else do you use document processors for in your teaching practice? _____

Learning management systems (e.g. Moodle, Blackboard, Google Classroom, Canvas)

[If this option is ticked, the follow-up questions will show up]

How often you use this digital technology for the following activities?

1. I use learning management systems to design and present the course content or upload learning resources. (never/rarely/sometimes/often/always)
2. I have students use learning management systems to improve their language performance (e.g. vocabulary, grammar and sentence structure). (never/rarely/sometimes/often/always)

3. I encourage students to use learning management systems to practice their language skills (e.g. reading and writing). (never/rarely/sometimes/often/always)
4. I encourage students to use learning management systems to learn at their own pace. (never/rarely/sometimes/often/always)
5. What else do you use learning management systems for in your teaching practice? _____

Online audio resources or platforms (podcasts, radio, audiobook, Spotify, iTunes)

[If this option is ticked, the follow-up questions will show up]

How often you use this digital technology for the following activities?

1. I use online audio resources or platforms to design and present the course content or upload learning resources. (never/rarely/sometimes/often/always)
2. I have students use online audio resources or platforms to improve their language performance (e.g. pronunciation, vocabulary, and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use online audio resources or platforms to practice their language skills (e.g. listening and speaking). (never/rarely/sometimes/often/always)
4. I encourage students to use online audio resources or platforms to learn at their own pace. (never/rarely/sometimes/often/always)
5. What else do you use online audio resources or platforms for in your teaching practice? _____

Online video resources or platforms (e.g. YouTube, Vimeo, TED Talks)

[If this option is ticked, the follow-up questions will show up]

How often you use this digital technology for the following activities?

1. I use online video resources or platforms to design and present the course content or upload learning resources. (never/rarely/sometimes/often/always)
2. I have students use online video resources or platforms to improve their language performance (e.g. pronunciation, vocabulary, and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use online video resources or platforms to practice their language skills (e.g. listening and speaking). (never/rarely/sometimes/often/always)
4. I encourage students to use online video resources or platforms to learn at their own pace. (never/rarely/sometimes/often/always)
5. What else do you use online video resources or platforms for in your teaching practice? _____

Online games (e.g. Minecraft, Lord of the Rings, World of Warcraft, Second Life, Duolingo, Kahoot)

[If this option is ticked, the follow-up questions will show up]

How often you use this digital technology for the following activities?

1. I use online games to design and present the course content or upload learning resources.
(never/rarely/sometimes/often/always)
2. I have students use online games to improve their language performance (e.g. pronunciation, vocabulary, grammar and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use online games to practice their language skills (e.g. listening, speaking and reading). (never/rarely/sometimes/often/always)
4. I encourage students to use online games to learn at their own pace.
(never/rarely/sometimes/often/always)
5. What else do you use online games for in your teaching practice? _____

Extended reality (e.g. 3D virtual reality, augmented reality, mixed reality)

[If this option is ticked, then the follow-up questions will show up]

How often do you use this digital technology for the following activities?

1. I use extended reality to design and present the course content or upload learning resources.
(never/rarely/sometimes/often/always)
2. I have students use extended reality to improve their language performance (e.g. pronunciation, vocabulary and sentence structure). (never/rarely/sometimes/often/always)
3. I encourage students to use extended reality to practice their language skills (e.g. listening and speaking). (never/rarely/sometimes/often/always)
4. I encourage students to use extended reality to learn at their own pace.
(never/rarely/sometimes/often/always)
5. What else do you use extended reality for in your teaching practice? _____

Do you use any other digital technologies (include devices and online resources) in your language teaching? Please specify: _____

**Part D Your background and perceptions of digital technologies in your
language class**

<p>Have you ever attended any formal training course, workshop, or seminar on using digital technologies for language teaching?</p> <p><input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>(If “yes”) What training did you do? _____</p>
<p>I have had many positive experiences of using digital technologies in my language teaching.</p> <p><input type="checkbox"/>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/>Neither disagree nor agree <input type="checkbox"/>Agree <input type="checkbox"/>Strongly agree</p>
<p>I am interested in using digital technologies for my language teaching.</p> <p><input type="checkbox"/>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/>Neither disagree nor agree <input type="checkbox"/>Agree <input type="checkbox"/>Strongly agree</p>
<p>I am very confident about using digital technologies for my language teaching.</p> <p><input type="checkbox"/>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/>Neither disagree nor agree <input type="checkbox"/>Agree <input type="checkbox"/>Strongly agree</p>
<p>I feel that digital technologies can help improve my language teaching.</p> <p><input type="checkbox"/>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/>Neither disagree nor agree <input type="checkbox"/>Agree <input type="checkbox"/>Strongly agree</p>
<p>Digital technologies save time and effort in my language teaching.</p> <p><input type="checkbox"/>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/>Neither disagree nor agree <input type="checkbox"/>Agree <input type="checkbox"/>Strongly agree</p>
<p>I do not think I would ever need digital technologies for my language teaching.</p> <p><input type="checkbox"/>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/>Neither disagree nor agree <input type="checkbox"/>Agree <input type="checkbox"/>Strongly agree</p>
<p>Teaching with digital technologies offers real advantages over non-digital approaches.</p> <p><input type="checkbox"/>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/>Neither disagree nor agree <input type="checkbox"/>Agree <input type="checkbox"/>Strongly agree</p>
<p>Digital technologies can create an effective learning environment.</p> <p><input type="checkbox"/>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/>Neither disagree nor agree <input type="checkbox"/>Agree <input type="checkbox"/>Strongly agree</p>
<p>Digital technology plays an important part in teaching languages in the 21st century.</p> <p><input type="checkbox"/>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/>Neither disagree nor agree <input type="checkbox"/>Agree <input type="checkbox"/>Strongly agree</p>
<p>Choose the role you see for digital technologies in language teaching and learning (please choose all that apply).</p>

- A tool for sharing teaching content
- A tool for supporting language teaching instruction
- A tool for repetitive language practice (drill and practice)
- A tool for managing learning process
- A tool for classroom interaction
- A tool for intercultural interaction
- A tool for improving digital literacy
- Other (please specify: ___)

Based on your daily language teaching practice, please rank the following language skills from the most suitable (1) to the least suitable (6) to be taught by digital technologies.

- Listening skills
- Speaking skills
- Reading skills
- Writing skills
- Intercultural awareness
- Intercultural communication
- Digital literacy
- Other skills (please specify: ___)

[Open-ended question]

What digital technologies and online resources do you like to use the most for your language class teaching? Why do you like to use it/them?

Part D Effect of the pandemic on your perceptions and practices

[Open-ended question]

Have your perceptions of digital technologies changed as a result of your experiences during the 2020 lockdown? If so, how have they changed?

Part E Would you like to participate in the next phase of research?

Thank you for taking the time to complete this survey.

I would like to invite you to be part of the next phase of this study. In the next phase, I will explore perceptions and practices of using digital technologies in language teaching. The next phase involves me visiting your classroom to see how digital technologies are being used as part of language teaching and learning. Specifically, I would like to:

- i. invite you to share three language lesson plans to help me understand how the lessons are organised.
- ii. conduct three sequential observations in your classroom with the same class.
- iii. conduct one face-to-face interview with you (about 45 minutes).

My research design also includes one group-based discussion with your students (ideally five to eight students), which is envisaged to take place at the end of the phase.

If you are interested in participating in this phase of research, please include your name and contact email below. Thank you!

Name:

Email:

Appendix B: Advertising of Survey

Do you use digital technologies for teaching language?

If you are a language teacher at Year 9 and/or Year 10 in New Zealand schools, this survey may be for you to share your experience and thoughts about using digital technologies in your language class. You may need around 20 minutes to complete this anonymous survey and you can access it through the following link:....

If you're unsure if you meet the requirements or have any queries, please do not hesitate to contact a member of this study team:

Yi (Vicky) Liu

Massey University Institute of Education

Vicky.Liu.2@uni.massey.ac.nz

**Appendix C: Email to New Zealand Association of Language Teachers
(NZALT)**

To: president@nzalt.org.nz

From: Vicky.Liu.2@uni.massey.ac.nz

Subject: Permission Request Letter

Dear [REDACTED]

President of New Zealand Association of Language Teachers

I am Yi (Vicky) Liu, a doctoral student at the Institute of Education, Massey University. I am writing this email to you to seek your permission for distributing an online survey via the NZALT. The survey is about how language teachers use and perceive digital technologies for teaching language, which is the first phase of my PhD research. This research is being supervised by Dr Maggie Hartnett and Dr Ute Walker.

In July, I attended the NZALT 2021 Conference in Wellington. I was deeply inspired by teachers' experiences and thinking when I had some conversations with them, especially about their use of digital technologies.

I am happy to abide by any protocols your association may have regarding researchers undertaking work in your setting. A detailed information sheet about this survey and a consent form have been attached for your information. If you are happy for me to post an online survey link on the website and Facebook page of the NZALT, I will share the survey link and the message that could be sent with the survey to teacher members.

I understand the current lockdown may affect teachers' routines, so I would be grateful if you have any suggestions about the time for distributing this survey.

Please feel free to contact me if you need any information from my end. Thank you for your time and help in advance. I am looking forward to hearing from you soon.

Yours sincerely,

Yi Liu

Appendix D: Information Sheet for the NZALT

Use of Digital Technologies in Language Class Teaching

Who am I and what is this research about?

My name is Yi (Vicky) Liu, a doctoral student in the Institute of Education, Massey University. As the title shows, I am interested in understanding how teachers use and perceive digital technologies for teaching language in the classroom. This research is being supervised by Dr Maggie Hartnett and Dr Ute Walker.

What benefits will the research bring?

A summary of the project findings will be provided for NZALT. It will be able to deepen your understanding of teachers' perceptions and practices of using digital technologies in language classrooms, especially in the context of the current pandemic and the greater demand for digitally facilitated learning. The findings may also help inform educational policies relating to digital technology integration.

What am I asking for?

I request your permission to post a link to an online survey on the website and Facebook page of the NZALT. I am happy to abide by any protocols your association may have regarding researchers undertaking work in your setting.

What's next?

If you allow me to post the link to an online survey on the website and Facebook page of the NZALT, I will send a consent form to you. Can you please complete it and return it to me? Then I will send the link and the draft advertising of the survey.

If you have any questions or concerns about the project, you can contact either me or my supervisors. Contact details are as follows:

Student	
Yi (Vicky) Liu Massey University Institute of Education Email: Vicky.Liu.2@uni.massey.ac.nz	
Supervisors	
Dr Maggie Hartnett Massey University Institute of Education Private Bag 11 222 Palmerston North Phone (06) 356 9099, Ext 84409 Email: m.hartnett@massey.ac.nz	Dr Ute Walker Massey University School of Humanities, Media and Creative Communication Private Bag 11-222 Palmerston North Phone 0800 627 739 Ext 84964 Email: u.walker@massey.ac.nz

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application SOB 21/39. If you have any concerns about the conduct of this research, please contact Dr Gerald Harrison, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83570, email humanethicsouthb@massey.ac.nz.

Thank you for considering this request.

Yours sincerely,

Vicky (Yi) Liu

Student ID:

Appendix E: Link and QR Code of Online Survey

Do you use digital technologies for teaching language?

Are you a language teacher at Year 9 and/or Year 10 in New Zealand school?

If yes, this survey may be for you to share your experience and thoughts about using digital technologies in your language class.

You may need around 20 minutes to complete this anonymous survey, and you can access it through the following anonymous link:



or through the QR code:

[QR code removed for privacy]

If you're unsure if you meet the requirements or have any queries, please do not hesitate to contact a member of this study team:

Yi (Vicky) Liu

Massey University Institute of Education

Vicky.Liu.2@uni.massey.ac.nz

Appendix F: Information Sheet for Teachers in the Case Studies

Use of Digital Technologies in Language Class Teaching

Who am I and what is this research about?

Thank you for considering being a part of this research. My name is Yi (Vicky) Liu, a doctoral student in the Institute of Education, Massey University. As the title shows, I am interested in understanding how you use and perceive digital technologies in teaching language in the classroom. This research is being supervised by Dr Maggie Hartnett and Dr Ute Walker.

Why is your class being asked to take part?

I am inviting you to take part in this study within your language class as you:

- indicated interest in participating in this case study in the online survey;
- indicated that you used digital technologies in your language class;
- have at least two years' experience in language teaching at Year 9 and/or Year 10 in New Zealand;
- are a fully registered teacher with the Teaching Council of Aotearoa New Zealand.

Other criteria have also been taken into consideration, such as year level taught, language taught, geographic location and school decile.

What benefits will the research bring?

This study can provide you with an opportunity to share your thoughts about using digital technologies for language teaching, especially in the context of the current pandemic and the greater demand for digitally facilitated learning. Your input may also help develop conclusions which can be useful for educators about ways in which digital technologies can be integrated in teaching and learning languages. You will be provided with a summary of the research findings when the study is concluded.

What will you be asked to do and what will my role be?

- a. I would like to invite you to share three language lesson plans to help me understand how the lessons will be organised and what teaching resources will be used. It may take approximately 30 minutes to complete one lesson plan, or approximately 90 minutes altogether for three plans. Insights from the lesson plans will facilitate subsequent classroom observations and interviews.
- b. I would like to ask your permission to conduct three sequential classroom observations in your classroom with the same class. Observations will take place during normal class time, so there will be no additional time required by the teacher or students. I will minimise interruption to the class by sitting at the back of the classroom and taking notes. I will not take part in any teaching activities. If there is an inconvenience caused by COVID-19, I will ask for your permission to shift these observations to online virtual language classes. Before the class observations, students who are present but not taking part in the research will be provided information about the observations verbally with your help. Their parents will be informed in advance (e.g. via the school newsletter under the school's permission) so that these parents are aware of the observations will be happening in the class. These students and their parents will be assured that no data will be gathered from them and they will not be asked to do any extra work for this research, only engaging in the language class as normal.
- c. You will also be invited to take part in an interview. The interview involves a list of semi-structured questions and will be audio-recorded. It will last approximately one hour. The precise timing of the interview and the location will be arranged at your convenience. If there is an inconvenience caused by COVID-19, this discussion will be conducted via videoconferencing (e.g., Zoom) and audio-recorded.

You will receive a transcript of the interview and you will be given the right to review transcripts and make some changes if you would like.

I will also invite some of students (ideally five to eight students) in your language class to participate in a group-based discussion.

What will happen to the data?

The information collected from this study will be managed with utmost care, and no information will be given to any other person outside my study. Data will be kept on my personal password-protected laptop, which is solely used by myself to ensure that

all information given in this study is kept private and confidential. No names or other identifying details will be used in the project report. The findings of this study will be presented as part of my PhD thesis and may also be used in conference presentations and journal publications.

What rights do you have?

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- refuse to answer any questions;
- withdraw from the study up until when the data are analysed;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used;
- ask for the classroom observation to be suspended at any time;
- ask for the recorder to be turned off at any time during the interview;
- be given access to a summary of the research findings when the study is concluded.

Please do not hesitate to contact either me or my supervisors at any time if you have any questions or concerns about the project. Contact details are as follows:

Student	
Vicky (Yi) Liu Massey University Institute of Education Email: Vicky.Liu.2@uni.massey.ac.nz	
Supervisors	
Dr Maggie Hartnett Massey University Institute of Education Private Bag 11 222	Dr Ute Walker Massey University School of Humanities, Media and Creative Communication

Palmerston North Phone (06) 356 9099, Ext 84409 Email: m.hartnett@massey.ac.nz	Private Bag 11-222 Palmerston North Phone 0800 627 739 Ext 84964 Email: u.walker@massey.ac.nz
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This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application SOB 21/39. If you have any concerns about the conduct of this research, please contact Dr Gerald Harrison, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83570, email humanethicsouthb@massey.ac.nz.

Thank you for considering this request.

Yours sincerely,

Vicky (Yi) Liu

Student ID: _____

Appendix G: Consent Form for Language Teachers in the Case Studies

Use of Digital Technologies in Language Class Teaching

I have read and understood the Information Sheet. I have had the details of the study explained to me, any questions I had have been answered to my satisfaction, and I understand that I may ask further questions at any time. I have been given sufficient time to consider whether to participate in this study and I understand participation is voluntary and that I may withdraw from the study at any time.

1. I agree to share three language lesson plans.
2. I agree to three language classes being observed.
3. I agree to the interview being audio-recorded.
4. I understand that I have the right to ask for the classroom observations to be stopped.
5. I understand that I have the right to ask for the audio-recording to be turned off at any time during the interview.
6. I agree to participate in this study under the conditions set out in the Information Sheet.

Declaration by the language teacher:

I _____ [full name] _____ hereby consent to take part in this study.

Signature: _____

Date: _____

Appendix H: Permission Request Letter to the School

To: Principal & Board of Trustees [email address]

From: Vicky.Liu.2@uni.massey.ac.nz

Subject: Permission Request Letter

Dear Sir/Madam

Principal & Board of Trustees of [school name]

I am Yi Liu, a doctoral student in the Institute of Education, Massey University. I am writing this letter to you to request that you kindly grant me permission for conducting a case study in one of language classes in your school. This study is about what digital technologies are used in language classes and how these are used. This research is being supervised by Dr Maggie Hartnett and Dr Ute Walker. I enclose a detailed information sheet and a consent form with this letter for you. Thank you for your consideration. I am looking forward to hearing from you soon.

Yours sincerely,

Yi Liu

Appendix I: Information Sheet for Schools in the Case Studies

Use of Digital Technologies in Language Class Teaching

Who am I and what is this research about?

Thank you for considering being a part of this research. My name is Yi (Vicky) Liu, a doctoral student in the Institute of Education, Massey University. As the title shows, I am interested in understanding how teachers use and perceive digital technologies for teaching language in the classroom. This research is being supervised by Dr Maggie Hartnett and Dr Ute Walker.

Why am I asking you to be involved?

I am asking your school to be involved in the research because:

- one of language teachers has indicated their interest in participating in this research;
- digital technologies are used in the language class.

What benefits will the research bring?

This study can provide the teacher and students in your school with an opportunity to share their thoughts about using digital technologies for language teaching and learning, especially in the context of the current pandemic and the greater demand for digitally facilitated learning. Their input may also help develop conclusions which can be useful for educators about ways in which digital technologies can be integrated in teaching and learning languages. You and the participating teacher and students will be provided with a summary of the research findings when the study is concluded.

What will the participating teacher and students be asked to do and what will my role be?

- a. I would like to invite the participating teacher to share three language lesson plans to help me understand how the lessons will be organised and what teaching resources will be used.

- b. I would like to conduct three classroom observations in the class. Observations will take place during normal class time, so there will be no additional time required by the teacher or students. I will minimise interruption to the class by sitting at the back of the classroom and taking notes. I will not take part in any teaching activities. If there is an inconvenience caused by COVID-19, I will shift these observations to online virtual language classes. Before the class observations, students who are present but not taking part in the research will be provided information about the observations verbally with help from the language teacher. Their parents will be informed in advance (e.g. via the school newsletter under the school's permission) so that these parents are aware of the observations will be happening in the class. These students and their parents will be assured that no data will be gathered from them and they will not be asked to do any extra work for this research, only engaging in the language class as normal.
- c. I will conduct one interview with the teacher and one group-based discussion with students from this class (ideally five to eight students). If there is an inconvenience caused by COVID-19, this interview will be online, and audio recorded.

What will happen to the data?

The information collected from this study will be managed with utmost care, and no information will be given to any other person outside my study. Data will be kept on my personal password-protected laptop, which is solely used by myself to ensure that all information given in this study is kept private and confidential. No names or other identifying details will be used in the project report. The findings of this study will be presented as part of my PhD thesis and may also be used in conference presentations and journal publications.

What's next?

If you agree to your school being a location for a case study, can you please complete the consent form and return it to me? I will then be in contact to discuss the best way to give information sheets and consent forms to the language teacher, students, and parents of students.

If you have any questions or concerns about the project, you can contact either me or my supervisors. Contact details are as follows:

Student	
Vicky (Yi) Liu Massey University Institute of Education Email: Vicky.Liu.2@uni.massey.ac.nz	
Supervisors	
Dr Maggie Hartnett Massey University Institute of Education Private Bag 11 222 Palmerston North Phone (06) 356 9099, Ext 84409 Email: m.hartnett@massey.ac.nz	Dr Ute Walker Massey University School of Humanities, Media and Creative Communication Private Bag 11-222 Palmerston North Phone 0800 627 739 Ext 84964 Email: u.walker@massey.ac.nz

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application SOB 21/39. If you have any concerns about the conduct of this research, please contact Dr Gerald Harrison, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83570, email humanethicsouthb@massey.ac.nz.

Thank you for considering this request.

Yours sincerely,

Vicky (Yi) Liu

Student ID: _____

Appendix J: Consent Form for School in the Case Studies

Use of Digital Technologies in Language Class Teaching

Consent Form: Principal & Boards of Trustees of School

I have read and understood the Information Sheet. I have had the details of the study explained to me, any questions I had have been answered to my satisfaction, and I understand that I may ask further questions at any time. I have been given sufficient time to consider whether to participate in this study and I understand participation is voluntary and that I may withdraw from the study at any time.

I agree this research can be conducted in one class in the school under the conditions set out in the Information Sheet.

Declaration by the Principal and/or Boards of Trustees of School

I _____ [full name] _____ hereby consent to take part in this study.

Signature: _____

Date: _____

Appendix K: Information Sheet for Students in the Case Studies

Use of Digital Technologies in Language Class

Who am I and what is this research about?

Thank you for considering being a part of this research. My name is Yi (Vicky) Liu, a doctoral student in the Institute of Education, Massey University. In this study, I am interested in understanding how you use and perceive digital technologies for language learning in the classroom. Digital technologies refer to apps and/or sites. This research is being supervised by Dr Maggie Hartnett and Dr Ute Walker.

Why are you being asked to take part?

I am inviting you to take part in this study within your language class as you:

- are a language learner at Year 9 or Year 10;
- have prior experience in using apps and/or sites for language learning in class.

What benefits will the research bring?

This study can provide you with an opportunity to share your thoughts about and experience of using apps and/or sites for language learning. Your input may also help develop conclusions which can be useful for educators about ways in which digital technologies can be integrated in teaching and learning languages. You will be provided with a summary of the research findings when it is concluded.

What will you be asked to do and what will my role be?

- a. I would like to conduct three classroom observations in your language class. During these observations, I will observe what apps and/or sites are used and how these are used in the class. I will not take part in any teaching activities or evaluate you in any way. You will not be asked to do extra work and you will only engage in your classroom activities as normal. If there is any inconvenience caused by COVID-19, I will shift these observations to online virtual language classes.

- b. You are invited to participate in one group-based discussion with other classmates (ideally five to eight students). This discussion will take place in a classroom after school for a maximum of 45 minutes and be audio-recorded. For this discussion, I will invite you to share an example of how you used apps and/or sites for learning the new language. For example, you might bring a piece of work or show an activity you did on an electronic device. Such examples will be helpful for starting a discussion. If there is an inconvenience caused by COVID-19, this discussion will be conducted via videoconferencing (e.g., Zoom) and audio-recorded.

Note: As this group-based discussion will be happening after school, you and your parents may need to make alternative travel arrangements so you can get home safely after the group-based discussion.

As part of your consent to participate in the group discussion, you will be asked to maintain confidentiality about what is discussed. I will explain this in more detail before we start the discussion.

If you have any concerns or questions about this project, you can contact me or my supervisors to discuss these. Contact details are as follows:

Student	
Yi (Vicky) Liu Massey University Institute of Education Email: Vicky.Liu.2@uni.massey.ac.nz	
Supervisors	
Dr Maggie Hartnett Massey University Institute of Education Private Bag 11 222	Dr Ute Walker Massey University School of Humanities, Media and Creative Communication

Palmerston North	Private Bag 11-222
Phone (06) 356 9099, Ext 84409	Palmerston North
Email: m.hartnett@massey.ac.nz	Phone 0800 627 739 Ext 84964
	Email: u.walker@massey.ac.nz

What will happen to the data?

The information collected from our discussion will be managed with utmost care, and no information will be given to any other person outside my study. Data will be kept on my personal password-protected laptop, which is solely used by myself to ensure that all information given during the discussion is kept private and confidential. No names or other identifying details will be used in the project report. The findings of this study will be presented as part of my PhD thesis and may also be used in conference presentations and journal publications.

What rights do you have?

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- refuse to answer any questions;
- withdraw from the study up until when the data are analysed;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used;
- be given access to a summary of the project findings when the study is concluded.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application SOB 21/39. If you have any concerns about the conduct of this research, please contact Dr Gerald Harrison, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83570, email humanethicsouthb@massey.ac.nz.

Thank you for considering this request.

Yours sincerely,

Vicky (Yi) Liu

Student ID: _____

Appendix L: Consent Form for Students in the Case Studies

Use of Digital Technologies in Language Class

I have read and understood the Information Sheet. I have had the details of the study explained to me, any questions I had have been answered to my satisfaction, and I understand that I may ask further questions at any time. I have been given sufficient time to consider whether to participate in this study and I understand participation is voluntary and that I may withdraw from the study at any time.

1. I agree to be observed in my classes.
2. I agree to attend the group-based discussion.
3. I understand that I have an obligation to respect the privacy of the other members of the group by not disclosing any personal information that they share during our discussion.
4. I understand that all the information I provide will be kept confidential to the extent permitted by law, and the names of all people in the study will be kept confidential by the researcher.

Note: There are limits on confidentiality, as there are no formal sanctions on other group participants from disclosing your involvement, identity or what you say to others in the focus group. There are risks in taking part in focus group research and taking part assumes that you are willing to assume those risks.

5. I agree to participate in classroom observations and the focus group under the conditions set out in the Information Sheet.

Declaration by the student:

I _____ [full name] _____ hereby consent to take part in this study.

Signature: _____ **Date:** _____

Appendix M: Focus Group Confidentiality Agreement

Use of Digital Technologies in Language Class

CONFIDENTIALITY AGREEMENT

I (Full Name - printed)

agree to keep confidential all information concerning the project ‘the perceptions and practices of second language teachers regarding digital technologies for language teaching.

I will not retain or copy any information involving the project.

Signature:

.....

Date:

.....

Appendix N: Information Sheet for the Parents in the Case Studies

Use of Digital Technologies in Language Class

Who am I and what is this research about?

Thank you for considering your child being a part of this research. My name is Yi (Vicky) Liu, a doctoral student in the Institute of Education, Massey University. In this study, I am interested in understanding how your child uses and perceives digital technologies for language learning in the classroom. Digital technologies refer to apps and/or sites. This research is being supervised by Dr Maggie Hartnett and Dr Ute Walker.

Why is your child being asked to take part?

I am inviting your child to take part in this study within his/her language class as he/she:

- is a language learner at Year 9 or Year 10;
- has experience in using apps and/or sites for language learning in class.

What benefits will the research bring?

This study can provide your child with an opportunity to share his/her thoughts about using apps and/or sites for language learning, especially in the context of the current pandemic and the greater demand for digitally facilitated learning. His/her input may also help develop conclusions which can be useful for educators about ways in which digital technologies can be integrated in teaching and learning languages. Your child will be provided with a summary of the research findings when the study is concluded.

What will your child be asked to do and what will my role be?

- a. I would like to conduct three classroom observations within your child's language class. During the observations, I will sit quietly at the back of the classroom and take notes, observing what apps and/or sites are used and how these are used by the teacher and the students. I will not take part in any teaching activities or evaluate

your child in any way. Your child will not be asked to do extra work and will only engage in the classroom activities as normal. If there is an inconvenience caused by COVID-19, I will shift these observations to online virtual language classes.

- b. Your child will be invited to one group-based discussion with his/her classmates (ideally five to eight students). This discussion will take place in a classroom after school for a maximum of 45 minutes and be audio-recorded. For this discussion, your child will be encouraged to bring a piece of work showing his/her practices or use of the target language via apps and/or sites. Such examples will be helpful for starting a discussion. If there is an inconvenience caused by COVID-19, this discussion will be conducted via videoconferencing (e.g., Zoom) and audio-recorded.

Note: As this group-based discussion will be happening after school, you and your child may need to make alternative travel arrangements so your child can get home safely after the group-based discussion. Closer to the group discussion, I will send both an email and text reminder to you. The message will include a request to confirm your receipt of the reminder and that your child has a safe way to get home. This reminder will be sent twice: a week before and a day before the focus group is conducted. On completion of the focus group, I will text parents to ensure your child safely returned home.

Please do not hesitate to contact either me or supervisors at any time if you have any questions or concerns about the project. Contact details are as follows:

Student
Yi (Vicky) Liu Massey University Institute of Education Email: Vicky.Liu.2@uni.massey.ac.nz

Supervisors	
<p>Dr Maggie Hartnett</p> <p>Massey University Institute of Education</p> <p>Private Bag 11 222</p> <p>Palmerston North</p> <p>Phone (06) 356 9099, Ext 84409</p> <p>Email: m.hartnett@massey.ac.nz</p>	<p>Dr Ute Walker</p> <p>Massey University School of Humanities, Media and Creative Communication</p> <p>Private Bag 11-222</p> <p>Palmerston North</p> <p>Phone 0800 627 739 Ext 84964</p> <p>Email: u.walker@massey.ac.nz</p>

What will happen to the data?

The information collected from the discussion will be managed with utmost care, and no information will be given to any other person outside my study. Data will be kept on my personal password-protected laptop, which is solely used by myself to ensure that all information given during the discussion is kept private and confidential. No names or other identifying details will be used in the project report. The findings of this study will be presented as part of my PhD thesis and may also be used in conference presentations and journal publications.

What rights do you have?

You are under no obligation to accept this invitation. If you allow your child to participate, you have the right to:

- withdraw from the study up until when the data are analysed;
- ask any questions about the study at any time during participation;
- provide information on the understanding that you and your child's names will not be used;
- be given access to a summary of the project findings when the study is concluded.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application SOB 21/39. If you have any concerns about the conduct of this research, please contact Dr Gerald Harrison, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83570, email humanethicsouthb@massey.ac.nz.

Thank you for considering this request.

Yours sincerely,

Vicky (Yi) Liu

Student ID: _____

Appendix O: Consent Form for Parents

Use of Digital Technologies in Language Class

I have read and understood the Information Sheet. I have had the details of the study explained to me, any questions I had have been answered to my satisfaction, and I understand that I may ask further questions at any time. I have been given sufficient time to consider whether my child participate in this study and I understand participation is voluntary and that I may withdraw from the study at any time.

1. I agree to my child being observed in his/her classes.
2. I agree to my child attending the group-based discussion.
3. I agree to the group-based discussion being audio-recorded.
4. I agree to my child participating in this study under the conditions set out in the Information Sheet.

Declaration by the parent of the participating student:

I _____ [full name] _____ hereby consent to my child taking part in this study.

Signature: _____

Date: _____

Appendix P: Interview Questions for Teachers in the Case Studies

Interview Guide

Part 1 Questions about your perceptions and use of digital technologies and online resources in language teaching

1. What are the common technologies or online resources you used in the language class?
 - Are there any particular digital technologies or online resources you think they are very helpful for your language teaching? Why are these technologies helpful?
 - Are there any particular digital technologies or online resources you think they are not helpful for your language teaching? Why are these technologies not helpful?

2. How would you describe yourself as a technology user (experienced, novice, etc.)?
 - Please explain why you describe yourself this way.
 - How often do you use technologies in your language class?

3. What positive experiences have you had using digital technologies and online resources in your language teaching?
 - Could you describe some details or examples?
 - Why do you feel that experience positive?

4. Have you had any challenging experiences with using digital technologies and online resources?
 - Why do you think this happened?
 - What did you respond?

Part 2 Teacher's use and perceptions of digital technologies for second language teaching objectives

If I noticed the teacher used digital technologies and online resources for helping students to practice their pronunciation in the class observations, I will ask the following questions:

5. How important do you think it is to help students be competent in correct pronunciation of the target language? (not applicable for NZSL)
 - Can you explain why you think in this way?
 - I noticed you used ... (technologies). Why did you choose to use these technologies for improving students' pronunciation? (For this question, field notes of class observations will help the teacher to recall their memories.)
 - How helpful do you think these digital technologies and online resources are for this teaching goal?

If I noticed the teacher used digital technologies and online resources for practicing vocabulary in the class observations, I will ask the following questions.

6. How important do you think it is to help students be competent in using vocabulary correctly? Can you explain why you think in this way?
 - Can you explain why you think in this way?
 - Why did you choose to use these technologies for helping students to practice vocabulary? (For this question, field notes of class observations will help the teacher to recall their memories.)
 - How helpful do you think these digital technologies and online resources are?

If I noticed the teacher used digital technologies and online resources for learning and/or practicing the grammar in the class observations, I will ask the following question.

7. How important do you think it is to help students be competent in using the grammar of the target language?
 - Can you explain why you think in this way?
 - Why did you choose to use these technologies for helping students to learn and/or practice the grammar? (For this question, field notes of class observations will help the teacher to recall their memories.)

- How helpful do you think these digital technologies and online resources are?

If I noticed the teacher used digital technologies and online resources for enhancing students' language coherence in the target language in the class observations, I will ask the following questions.

8. How important do you think it is to help students be competent in showing coherence in the target language (i.e. clear connection and flow of ideas)?
 - Can you explain why you think in this way?
 - Why did you choose to use these technologies for enhancing students' language coherence in the target language? (For this question, field notes of class observations will help the teacher to recall their memories.)
 - How helpful do you think these digital technologies and online resources are for this teaching objective?

If I noticed the teacher used digital technologies and online resources for learning or practicing strategies to help compensate for communication breakdowns in the class observations, I will ask the following questions.

9. How important do you think it is to help students be competent in using strategies to help compensate for communication breakdowns (verbal and non-verbal strategies)?
 - Can you explain why you think in this way?
 - Why did you choose to use these technologies for this teaching objective? (For this question, field notes of class observations will help the teacher to recall their memories.)
 - How helpful do you think these digital technologies and online resources are for this teaching objective?

If I noticed the teacher used digital technologies and online resources for enhancing students' knowledge and information about the target culture in the class observations,

I will ask the following questions.

10. How important do you think it is to help students be competent in knowledge and information about the target culture, such as history, geography, festivals and customs?

- Can you explain why you think in this way?
- Why did you choose to use these technologies for this teaching objective? (For this question, field notes of class observations will help the teacher to recall their memories.)
- How helpful do you think these digital technologies and online resources are for this teaching objective?

If I noticed the teacher used digital technologies and online resources for helping students appropriately use the rules and conventions of the language in different sociocultural context in the class observations, I will ask the following question.

11. How important do you think it is to help students be competent in appropriately using the rules and conventions for how the language is used in different sociocultural contexts (e.g. showing politeness)?

- Can you explain why you think in this way?
- Why did you choose to use these technologies for this teaching objective? (For this question, field notes of class observations will help the teacher to recall their memories.)
- How helpful do you think these digital technologies and online resources are for this teaching objective?

If I noticed the teacher used digital technologies and online resources for helping students to understand and make comparisons between different cultures in the class observations, I will ask the following question.

12. How important do you think it is to help students be competent in understanding and making comparisons between different cultures (e.g. the target culture and the students' own)?

- Can you explain why you think in this way?

- Why did you choose to use these technologies for this teaching objective? (For this question, field notes of class observations will help the teacher to recall their memories.)
- How helpful do you think these digital technologies and online resources are for this teaching objective?

If I noticed the teacher used digital technologies and online resources for allowing students to communicate and interact with people from other cultural backgrounds in the class observations, I will ask the following question.

13. How important do you think it is to help students be competent in communicating and interacting with people from other cultural backgrounds?
 - Can you explain why you think in this way?
 - Why did you choose to use these technologies for this teaching objective? (For this question, field notes of class observations will help the teacher to recall their memories.)
 - How helpful do you think these digital technologies and online resources are for this teaching objective?

If I noticed the teacher used digital technologies and online resources for increase more social interaction in the target language in the class observations, I will ask the following question.

14. How important do you think it is to help students be competent in using digital environment for social interaction in the target language?
 - Can you explain why you think in this way?
 - Why did you choose to use these technologies for this teaching objective? (For this question, field notes of class observations will help the teacher to recall their memories.)
 - How helpful do you think these digital technologies and online resources are for this teaching objective?

15. How do you evaluate the general role of digital technologies and online resources in your language teaching?
- How do you evaluate the digital technologies and online resources for different language activities in class? (Listening, reading ...)
16. Do you have anything else to add in terms of your use and perceptions of digital technologies for your language teaching objectives?

[Optional questions]

17. Have you participated in any training to do with integrating the digital technologies and online resources with language teaching so far? If yes, could you describe what you have taken part in?

Appendix Q: Focus Group Guide

Focus Group Guide

Note:

Before the group discussion, I need to clarify that what digital technologies and online resources involve. Then I need to mention that this discussion focuses on students' use of these technologies in the language class. Their use of digital technologies outside of class are not the focus in this discussion.

Focus Group Interview Questions

1. What made you choose to learn another language?
 - What do you want to learn from this language class? In other words, what are your learning goals of language learning? (Explanation if necessary: listening, speaking, writing, reading, learning about other cultures)
2. What apps or sites do you use in your language class?
 - Did these apps or sites help your language learning?
 - How do these help your language learning?
 - How often do you use them for your language learning in the class?
 - What kinds of things do you use them for? Can you give some examples?
3. What are the advantages when you use apps or sites for your language learning in the class? If so, can you give some examples?
4. Is there anything you struggled with when you use the apps or sites for your language learning? If so, can you give some examples?
5. [Optional question] What are the disadvantages when you use apps or sites for your language learning in your class?
6. [Optional question] If you could recommend some digital technologies and online resources for the language learning in your class, what would you recommend? And why?
7. What else do you want to add about the apps and sites you used for your language learning?

Appendix R: Ethics Approval Document



Date: 24 August 2021

Dear Vicky Liu

Re: Ethics Notification - SOB 21/39 - **The Perceptions and Practices of Second Language Teachers Regarding Digital Technologies for Language Teaching**

Thank you for the above application that was considered by the Massey University Human Ethics Committee: Human Ethics Southern B Committee at their meeting held on Tuesday, 24 August,

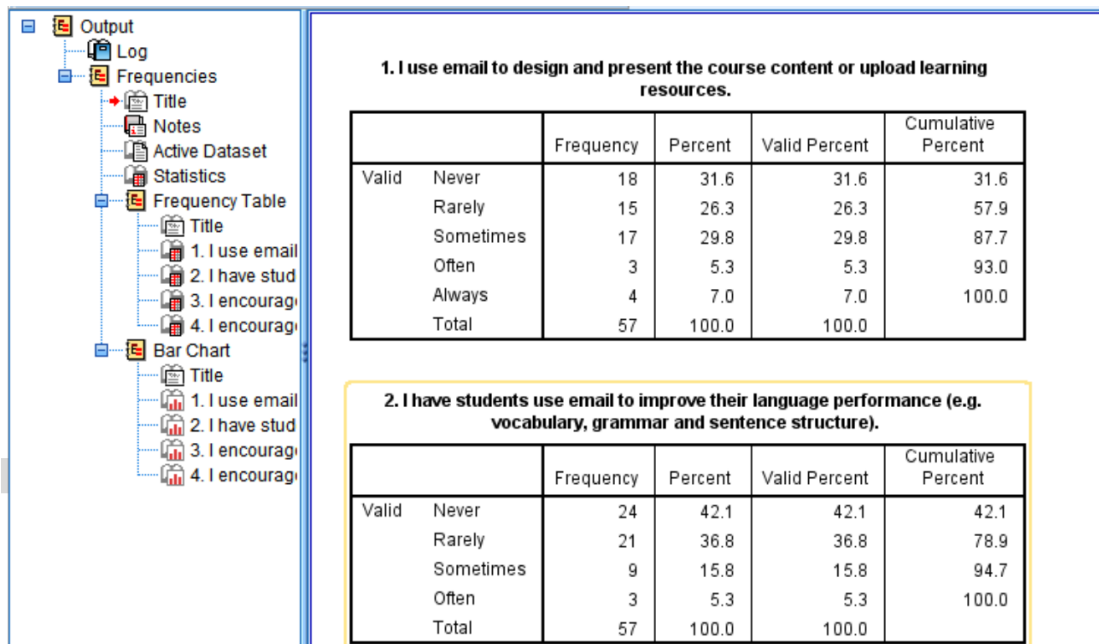
Approval is for three years. If this project has not been completed within three years from the date of this letter, reapproval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

Professor Craig Johnson
Chair, Human Ethics Chairs' Committee and Director (Research Ethics)

Appendix S: Example of SPSS Analysis



Appendix T: Example of NVivo Codes

Name	Files	References	Created on	Created by
Student	0	0	29/11/2022 9:58 am	VL
Students' behaviours	9	70	29/11/2022 9:59 am	VL
Students' perceptions	3	351	29/11/2022 9:58 am	VL
Teacher	16	490	29/11/2022 9:57 am	VL
Teachers' perceptions	10	354	29/11/2022 9:58 am	VL
Teachers' use	9	136	29/11/2022 9:58 am	VL
Teachers' objectives and behaviours of developing students' CCs	0	0	19/12/2022 4:14 pm	VL
Digital competence	5	17	19/12/2022 4:14 pm	VL
Discourse competence	5	14	19/12/2022 4:14 pm	VL
Intercultural communicative competence	6	28	19/12/2022 4:14 pm	VL
Linguistic competence	6	38	19/12/2022 4:14 pm	VL
Strategic competence	3	6	19/12/2022 4:14 pm	VL

Appendix U: Example of Lesson Plan Coding

The image shows a screenshot of a lesson plan document with a coding interface overlay. The lesson plan text is on the left, and the 'CODE STRIPES' panel is on the right. The lesson plan includes a title, date, topic, preparation for assessment, learning outcomes, and success criteria. The coding interface shows a list of code stripes with corresponding colored lines in the text.

Lesson Plan – (Name of the high school)

Date: Wednesday 1st June

Topic: Celebrations and Events

Preparation for Assessment NCEA NZSL 1.2: Interaction in NZSL

Learning Outcomes

1. Invite Others, accept and decline invitations to their home
2. Give and ask for email addresses and contact details
3. Describe identifying features of their home e.g., colour of their house or levels (1 or 2 storey)
4. Practise dialogue – recorded

Success Criteria

1. Can spontaneously invite someone to an event or celebration with NZSL vocab
2. Sign email addresses and phone numbers using the correct NZSL Grammatical structures
3. Give one or two details about their home
4. Work towards having extended interactions for over 1 minute in pairs.

CODE STRIPES

- Teacher
- Teachers' perceptions
- Potential of Digital Technologies
- Presenting teaching Content
- Linguistic competence
- teachers' attitudes towards linguistic competence
- Case 1 Sign Language Class
- Discourse con
- Teachers' atti

Appendix V: Example of Observation Note Coding

The screenshot displays a coding interface with two main components: a text editor on the left and a 'CODE STRIPES' panel on the right.

Text Editor: The text is from an observation note titled 'Observation CS1-L3-Lisa'. The text is as follows: "[Starting the lesson and reviewing vocabulary] First, Lisa greeted each student in sign language. Then she showed a slide about breakfast/lunch and circled each food item with her cursor. The students had just learned these words yesterday: bread, toast, butter, banana, egg, cheese, tomato, lettuce and ham. During this revision, Lisa demonstrated the sign language for each food. The students and Olivia followed along with her to review the sign language. After reviewing the foods on this slide, Lisa showed the next slide on foods for dinner, which included pictures of peas, broccoli, carrots, rice, potatoes, kumara, meat: fish, chicken and steak (caw, lame, beef). During this process, Jack was sitting in front of the table, closer to the camera, so his movements were clearly visible, and he looked confident as he showed the gestures for these words. Leo and

CODE STRIPES Panel: This panel shows a list of codes with colored horizontal bars indicating their application to the text. The codes are:

- Teachers' behaviours with DfS (blue)
- Teachers' behaviours with DfS (blue)
- Presenting learning content (red)
- Enhancing learning progress and outcomes (yellow)
- Enhancing language input (green)
- Classroom based interaction (purple)
- Teachers' use (orange)
- Teacher (grey)
- classroom based interaction (purple)
- Video communication log (grey)
- Facilitating language learn (green)
- Visualised (grey)
- Students' behaviours (purple)
- Encount (grey)
- Concentrating on tasks (red)
- Encount (grey)