An Exploratory Study of Motivation and Self-Regulated Learning in Second Language Acquisition: Kanji Learning as a Task Focused Approach

A thesis presented in fulfilment of the requirements for

the degree of Master in

Second Language Teaching at

Massey University,

Manawatu, New Zealand

Akie Hirata

2010

ABSTRACT

This study aimed to identify motivational factors affecting self-regulated learning (SRL) in the context of second language acquisition. Rather than investigating learners' overall disposition toward their learning, it focused on a particular task, the learning of kanji in Japanese, in order to provide a clearer picture of the complex relationship between motivation and SRL. Using quantitative methods, the underlying structure of motivation and SRL was explored and the relationships among the extracted factors were examined.

On the basis of a self-administered questionnaire specifically developed for this study, the data were obtained from 381 tertiary students studying Japanese at one of the seven cooperating institutions in New Zealand. Principal components analyses identified three motivational orientations (intrinsic, instrumental mastery, and performance orientation), four sources of motivation (self-efficacy, self-concept, extrinsic value, and intrinsic value), and four types of self-regulation (behavioural, environmental, cognitive, and metacognitive regulation) involved in kanji learning.

The results of correlational analyses revealed a number of significant relationships suggesting the interdependence of the identified constructs. However, instrumental mastery, performance orientation, and extrinsic value did not predict students' use of SRL. Further investigation of individual and situational factors indicated that learning opportunities outside the classroom possibly confounded the significant relationships between these non-predictors and SRL.

On the other hand, intrinsic orientation, self-concept, self-efficacy, and intrinsic value were identified as significant predictors of SRL in general. These significant predictors displayed a unique contribution to different types of SRL. The results show that intrinsic interest in kanji learning is necessary for cognitive and metacognitive regulation. A sense of positive self-concept, on the other hand, influences environmental regulation while self-efficacy beliefs facilitate behavioural regulation.

Overall, self-concept was found to be the best predictor of the use of SRL. However, self-efficacy is another important factor since students who used behavioural regulation tend to use a wider variety of strategies to self-regulate their own learning. In this study, the interactions of identified motivational constructs and their possible effects on SRL are discussed. The study concludes with a discussion of practical and theoretical implications of the findings along with suggestions for future research.

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CHAPTER 1: INTRODUCTION

1.1 Introduction to the Problem

Japanese orthography is highly irregular, consisting of two major types of script: logographic symbols *kanji* and phonetic symbols for syllables *kana*. In contrast to kana, learning kanji can be a very time consuming and difficult task[1]. According to the Japanese Ministry of Education, approximately 2,000 kanji are required for everyday communication (Ministry of Education, 2011). Learning kanji is, thus, like a marathon which requires high levels of regular memory maintenance and recall over a long period. Also, kanji are complex in nature as each kanji character usually has several meanings and pronunciations while different kanji characters often have same reading. As a result, I have observed that second language (L2)[2] learners of Japanese are less likely to be motivated to practise kanji regularly.

Nevertheless, as most teachers of Japanese would agree, I believe that kanji is an important part of learning Japanese and a good knowledge of kanji is unavoidable since it is almost impossible to find written materials containing no kanji, unless they are designed for special needs purposes. In addition, lack of knowledge in kanji not only limits students' ability to explore different types of materials but also slows down the rate of acquisition in general. Knowledge of kanji is, for example, required to reduce semantic ambiguity of homonyms that are prevalent in Japanese. In spite of the evident importance of kanji, at the tertiary level where I teach Japanese, other aspects of the language tend to be prioritized since the time allocated for instruction is usually very limited.

Because of time constraints, L2 learners of Japanese in instructed settings are often left to fend for themselves when it comes to kanji. However, tertiary students also have a busy life balancing academic and social demands. Since it is possible to substitute kana for kanji in writing, I have noticed that tertiary students learning Japanese as an L2 language are unlikely to engage in regular kanji practice outside the classroom. In addition, kanji learning is not only time consuming but also difficult especially for students who are from

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[1] For the purposes of this study, the term 'task' refers to a specific component of L2 learning such as the acquisition of vocabulary rather than a type of learning activities.

[2] In this thesis, the term 'second language' is interchangeably used with the term 'foreign language' and refers to any language other than the first language.

alphabetic backgrounds, or who are learning the language in environments where logographic symbols are unfamiliar. In New Zealand, students have reported that the difficulties associated with learning kanji are one of the main reasons for discontinuing their study (McLauchlan, 2007).

In order to address these aspects of my teaching context, I started looking for effective kanji instruction or learning strategies. However, over that period, I have come to realise that effective kanji instruction or learning strategies would be of little help if students do not come to class or do not implement the strategies. At the tertiary level, students' autonomy is particularly important because they have more freedom in their learning than students in other academic contexts with respect to, for instance, when and where to study and the pace of learning. If students have more freedom, they could potentially have a better chance to succeed when they accept the control of their learning. I started asking myself, how could I support students to regulate their kanji learning more effectively. It was this inquiry that persuaded me to explore the study of self-regulation.

Self-regulation refers to "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2005, p. 14). Our capacity to self-regulate a various aspect of our life is probably one of the most important qualities as human. Unlike many other animals, we do not just follow so called biologically pre-programmed natural instincts. Many of us, for example, try to be physically fit by doing exercises or staying away from unhealthy diets. However, the extent to which individuals self-regulate their own behaviour is said to be determined by why they are doing and what sources of motivation are available in the context. In this example, it may be illustrated as 'I want to be physically fit in order to maintain good health and it is important because I have a family to support.' The idea of motivation and self-regulation has cast light on why some students succeed in controlling their kanji learning while others do not.

Previous research has shown that there are considerable individual differences in the way students approach kanji learning. Several factors such as learners' orthographic backgrounds (Gamage, 2003; Matsumoto & Obana, 2001), age (Yamazaki, Ellis, Morrison, & Lambon Ralph, 1997), and the level of study (Okita, 1995) are suggested as influential. On the other hand, another empirical study has found that some of these factors

were also closely associated with learner motivation (Toyoda, 1995). This indicates that the effects of individual or situational factors on kanji learning processes may not be so bidirectional but mediated by motivational factors. The question of what these factors might be has motivated this study. This study is designed to explore and discover motivational factors affecting self-regulation in kanji learning.

1.2 Background of the Study

Although very little investigation has been conducted on self-regulation of learning or self-regulated learning (SRL) in the area of L2 acquisition, considerable research has been devoted in general academic contexts (Rao, Moely, & Sachs, 2000; Shell & Husman, 2008; Wolters & Pintrich, 1998; Zusho, Pintrich, & Coppola, 2003). In academic contexts, SRL is seen as self-directed processes in which students monitor, control and evaluate not only their cognition but also their affects, behaviour, and certain aspects of the environment (Pintrich, 2005). Thus, SRL involves more than metacognition and is thought to cover a more conscious process than autonomous learning. The processes involved in SRL are proven to facilitate transformation and acquisition of new information and skills. However, for these to occur, certain forms of motivation are not only necessary but fundamental (McCombs & Marzano, 1990).

Theories of SRL have long suggested that learner motivation plays a crucial role in facilitating SRL which in turn affects learning outcomes. Nevertheless, since SRL is a difficult construct to define theoretically and operationalize empirically, there are many models of SRL that propose different attributes (Zimmerman, 2001). According to Pintrich (2004), however, all models of SRL assume that: firstly, learners are active participants in their learning; secondly, the processes involve monitoring, controlling and evaluating one's own affects, motivation, cognition, and behaviour as well as some aspects of the learning environment; thirdly, SRL is directed toward personally set goals with which learners can compare their progress for determining whether the process should be maintained or adapted.

A number of research studies have demonstrated that individuals who display these SRL characteristics have clearer goal orientation and positive motivational beliefs about their

learning (Zimmerman & Schunk, 2001). One of the important attributes identified from effective self-regulated learners is motivational orientation or one's subjective reason for pursuing an activity (Zimmerman & Schunk, 2001). Although the role of motivational orientation in SRL is discussed in literature using different constructs, mastery and performance goals seem to the most extensively studied orientation. The summary of research findings reported by Ames (1992) indicates that mastery goals which focus on the development or acquisition of new skills and information mediate SRL.

On the other hand, performance goals which are concerned with demonstrating competence are often associated with problematic aspects of SRL including avoidance of challenging tasks, and negative judgement of one's own ability (Ames, 1992). As a result, mastery goals tend to be favoured over performance goals in learning contexts. However, several researchers reject the idea that only mastery goals can produce positive impacts. Harackiewicz and Sansone (1991) argue that individuals with performance goals can be more optimally motivated in a university context in which grades are assigned on normative curves. Many contemporary goal theorists also agree that performance goals can be facilitative when an individual has a high level of perceived competence (Pintrich, 2005).

In the literature, there has been a tendency to conflate the mastery-performance dichotomy with an intrinsic-extrinsic distinction. As with the case of mastery goals, self-determination theory suggests that intrinsically motivated behaviour is more likely to be self-regulated because it fulfils the basic human psychological need to feel the self as the origin of action (Deci & Ryan, 1990). However, instead of suggesting extrinsically motivated behaviour as inherently ineffective, the theory explains that extrinsic motivation can lead to autonomous actions depending on the extent to which it is combined with intrinsic motivation. This implies that L2 learners' extrinsic reasons for learning an L2 can be facilitative in SRL when they are combined with intrinsic reasons.

In the field of L2 acquisition, however, learners' subjective reasons for learning an L2 have often been discussed as if they are either integratively or instrumentally orientated. The traditional educational model proposed by Gardner and his colleagues (1985) suggests that integrative orientation is an indicator of desires to interact with the target group as well as positive attitudes toward the learning situation, while instrumental orientation is motivated

by an anticipation of secondary benefits through learning an L2. Although the model has made a valuable contribution to our understanding of L2 motivation in social contexts, it has produced complex findings in a learning situation where integration with the target communities and cultures was not physically apparent. However, the interrelated concepts, such as learners' attitudes and desires captured by the model, continue to play an important role in L2 motivation research since no other academic subject provokes such unique psychological interactions in the learning process.

Nevertheless, motivational orientation is neither the only factor nor the most important factor affecting SRL. In academic contexts, as contemporary goal theorists indicate, a number of different motivational beliefs, such as perceived competence, are presumed to interact with motivational orientation to affect SRL. Of all competence related perceptions and beliefs, self-efficacy or beliefs about one's capability to produce given attainments (Bandura, 1997) is suggested as an important attribute of SRL. Researchers have consistently found that students' self-efficacy beliefs are positively correlated with their cognitive engagement and use of metacognitive strategies to self-regulate their learning (Pintrich & De Groot, 1990; Wolters, Yu, & Pintrich, 1996).

In some studies, gender has been found to be a factor affecting students' self-efficacy beliefs. It has been reported that, in general, female students tend to have a higher sense of self-efficacy in the domain of language studies (Britner & Pajares, 2006; Lent, Lopez, & Bieschke, 1991; Pajares & Valiante, 2001). If self-efficacy affects SRL, such differences may also be expected in the process of SRL. Nevertheless, expectancy-value theorists argue that not only outcome expectations including self-efficacy but also beliefs about the importance of a task to the individual are necessary to produce motivation affecting behaviour (Alderman, 2008, p. 246). This indicates that self-efficacy beliefs interact with task value beliefs to affect motivation for SRL.

Another construct closely related to self-efficacy and task value beliefs is self-concept which is traditionally seen as a global perception of self. Central to self-concept is a feeling about oneself involving subjective evaluation of self-worth which is sometimes referred to as self-esteem. In many studies, however, the terms self-concept and self esteem are used interchangeably, although the former tends to favoured (Schunk & Pajares, 2005, p. 88). Self-concept is particularly relevant to motivational orientation. Students with performance

goals, for example, strive to maintain their self-concept by outperforming others with little effort because exerting effort to achieve success can threaten the self-concept of ability (Ames, 1992). In this sense, one's self-concept may have a negative impact on SRL when it interacts with a certain type of motivational orientation.

However, a sense of self-concept is closely associated with self-efficacy beliefs in that individuals who invest their self-worth in an activity tend to have positive self-efficacy beliefs for the task (Pajares & Schunk, 2002). In addition, the functional value of self-concept for learning also exhibits some similarities with that of self-efficacy. As with the case of self-efficacy, high self-esteem is associated with a variety of metacognitive and cognitive strategies use (Borkowski, Carr, Rellinger, & Pressley, 1990) as well as persistence in learning (Baumeister, 1999). However, it is important to recognise that self-concept and self-efficacy are separate constructs since L2 learners who invest their self-worth in learning an L2 do not always feel competent in the activities.

One's self-concept can also be very much context specific since individuals' global perception of self is not always relevant to all aspects of their life. Individuals who invest their self-worth in L2 learning, for example, may have a weak sense of self-concept in one area of learning, such as a written component but they may have a strong sense of self concept in another area, such as spoken fluency. This can be the same for other motivation related constructs including self-efficacy, task value, and motivational orientation. Research evidence shows that motivational beliefs in general do not always correspond with that of a specific learning task. In Mori's (1999) study, for example, L2 learners of Japanese who believed learning kanji was a difficult task did not necessarily recognize learning Japanese, in general, as difficult.

The above suggests that studying motivation for L2 learning in general does not provide much useful information about how it relates to SRL in a particular task such as the acquisition of kanji. However, the majority of studies on motivation primarily focus on learners' overall disposition toward their learning. Several researchers have called for motivation research focussing on situation or task specific motivation, and demonstrated the effectiveness of narrowing down the concept of motivation. Tremblay, Goldberg and Gardner (1995) found that, while a more generalised form of motivation did not have a direct effect on the vocabulary learning, state motivation which focused on the learning

task and situation predicted the rate of acquisition. Dörnyei and Kormos (2000) reported similar findings and concluded that "it was the situation-specific rather than the general motives that had a particularly strong impact on the extent of the learners' task engagement" (p. 294).

Although breaking down one subject domain into even smaller segments is not exercised much in SRL research, this study employs a task focused approach to examine the effects of motivation on SRL. The main purpose of this study is twofold: (1) to explore Japanese language learners' motivational orientation, other sources of motivation, and self-regulation involved in kanji learning, and (2) to investigate the relationships between these constructs in an attempt to identify motivational factors affecting SRL. In order to provide a clearer picture of motivational factors contributing to SRL, this study utilises a quantitative approach conducting a questionnaire survey on L2 learners studying Japanese in the New Zealand tertiary sector.

Since it investigates SRL applied for an actual task taken from real language courses, the external validity of the research is expected to be high. Consequently, this makes it easier to apply the findings to the language classroom than those derived from traditional psychological studies. Identifying motivational factors affecting SRL can potentially contribute to the development and instruction of an important task to sustain students' involvement in a more motivating manner. This study opens a new window for SRL in the area of L2 learning and provides a valuable insight into how different forms of L2 motivation interact and mediate SRL. Findings also address the gaps within the existing literature to suggest where more in-depth investigation is needed. When considering these potential contributions, research on motivation and self-regulation becomes an issue worth studying in L2 learning contexts.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This review of literature consists of three major sections. The first section reviews research on motivational orientation which has evolved in the L2 field and other disciplinary areas within psychology, and discusses the possible influence on SRL. The second section looks at research examining other sources of motivational beliefs affecting SRL. The latter part of this section provides a review of studies which have investigated task- or situation-specific motivation, and argues that the role of motivation in SRL for a particular task cannot be understood if the study does not focus on a specific level or learning task. The last section discusses the functional value of motivation for SRL in the light of Zimmerman's cyclic model (Zimmerman & Camppillo, 2003). In this section, key components of SRL will be proposed and integrated into the model to identify major self-regulatory processes involved in the acquisition of kanji. The chapter concludes with a summary of research findings to date and highlights the research gaps within the literature.

2.2 Motivational Orientations

In spite of the familiarity of the concept, the term motivation is a difficult construct to define theoretically since it is intricately intertwined with the complex patterns of perceptions, feelings and beliefs that an individual has in a certain context. Although there are many theories of motivation that propose a slightly different definition, Dörnyei (2001b, p. 8) argues that most researchers would agree that motivation is concerned with the purpose, effort and persistence for activities. In learning contexts, motivation is often seen as something that energizes behaviour directed toward certain types of goals. Thus, motivational or goal orientation which concerns an individual's subjective reasons for pursuing an activity has been a central focus of SRL research. The following section provides a close examination of motivational orientation that L2 learners studying Japanese in an academic context may have for kanji learning, and discusses the functional implications for SRL based on the research findings both from the area of L2 acquisition and other disciplinary areas within psychology.

2.2.1 Motivational orientation in language learning

Early L2 motivation research focused on learners' overall disposition toward learning an L2 in social contexts and its relationship to achievement rather than actual learning processes. One of the influential starting points was made by Gardner and his colleagues (Gardner, 1985). Based on social-psychological explanations, they proposed a socio-educational model of L2 acquisition suggesting that L2 motivation is driven by two orientations: *integrative orientation* and *instrumental orientation*. The former concerns learners' openness to an L2 culture and the desire to interact or even identify themselves as members of the target community. On the other hand, the latter is associated with learners' willingness to gain a secondary benefit through learning an L2 such as an increased chance of a better job. From that point, Gardner's theory was the dominant model of motivation in L2 literature for several decades.

In their original model, integrative motivation was suggested to be a powerful predictor for successful L2 learning. Over the period, a number of studies conducted by Gardner and his associates demonstrated that integrativeness was positively related to L2 achievement (Gardner, 1985). However, a review of 13 different studies conducted by other researchers showed that only a minority revealed evidence of even a moderate relationship between integrativeness and achievement (Au, 1988). In addition, later research found that instrumental orientation is equally powerful especially where integration with the target communities and culture is not physically apparent (Gardner & MacIntyre, 1991; Oxford & Shearin, 1994). Consequently, in the early 1990s, the socio-educational model was challenged because of the lack of pedagogic relevance in foreign language learning contexts (Crookes & Schmidt, 1991).

Many subsequent studies failed to provide a clear picture of L2 learners' disposition toward integrative motivation in foreign language learning settings (Brown, 2007, p. 171). In addition, identifying the target language group to assess L2 learners' attitudes for their integrative motivation often appeared to be difficult particularly when research focuses on an international or official language such as English which is spoken by people from different regional and cultural communities. As a result, several researchers questioned the validity of integrative motivation in certain contexts, and the role assumed to be played by integrative motivation in L2 research began to diminish (Dörnyei, 2009, p. 24).

Nevertheless, although a lot of arguments have been made as to whether instrumental or integrative motivation is more or less important in successful L2 learning, it is important to notice that integrative and instrumental motivation are neither mutually exclusive nor the only motivation an L2 learner may have. When learning an L2, learners do not always have only one type of motivation but rather a combination of different types of motivation.

Dörnyei (1990) argued that the concept of integrative motivation in foreign language learning is not as limited to direct integration into the target community as Gardner and his colleagues initially proposed, but rather reflects learners' appreciation of cultural products associated with the language and conveyed by different types of mediums such as mass media. This reinterpretation of integrativeness led him to reform the concept of integrativeness and he was able to demonstrate that integrative motivation is indeed more strongly associated with a higher level of language attainment than instrumental motivation even in a foreign language learning context (Dörnyei, 1990). Based on this finding, Dörnyei (2003, p. 6) later suggested that the motivational dimension captured by integrativeness is more relevant to one's basic identification process involved in the self-system representing ideas of what learners want to or should become in the future.

In the light of research on self theories, Dörnyei (2009) has recently proposed an L2 motivational self-system which distinguishes between different types of selves. For example, the ideal L2 self which conflates with integrative motivation represents ideas about how learners would like to be as a result of learning an L2. On the other hand, the ought-to L2 self is more closely related to instrumental motivation representing ideas about what they believe they should be. A series of studies presented by Dörnyei provided empirical evidence showing that the new conceptualisation better explains L2 motivation in a broader context. However, all research findings conducted by Dörnyei and his colleagues are based on learning English as a foreign language. As a world language, English may convey more powerful and positive information about future pragmatic incentives than any other language. Clearly, we need further investigation to determine whether this reinterpretation applies to the learning of another language.

Nevertheless, the findings supported the usefulness of reconceptualising L2 motivation in the light of theories and models of the self-system. The reinterpretation of integrativeness has offered a number of possibilities to explain the complex findings of motivation

research especially in foreign language learning contexts without discarding the traditional model of L2 motivation. Indeed, these two frameworks can be seen as complementary rather than competing (MacIntyre, Mackinnon & Clément, 2009). The complementary aspect of the L2 motivational self-system highlights the benefit of integrating the self theories into L2 motivation research to link learners' desires and actions for a better understanding of how L2 motivation contributes to SRL.

2.2.2 Self-determination approach to motivational orientation

Many models of the self-system emphasize a sense of social evaluation of one's self relative to others, such as ability and physical appearance, because of the theoretical origin which emerged from the areas of social-developmental psychology where the influences of social forces on psychological processes are the central concern. Nevertheless, Deci and Ryan (1990, p. 238) suggest that self is not merely an outcome of social evaluation but represents intrinsic growth processes in which individuals internalise and integrate externally controlled regulation into their sense of self. In other words, learning an L2 as a compulsory school subject, for example, is said to be an externally controlled regulation but the learner may gradually develop a sense of personal pleasure and voluntarily engage in related activities as they internalise L2 learning into their sense of self.

Based on self-determination theory, Deci and Ryan (1990) argue that the degree of regulation of behaviour will be greater when they are self-determined and not externally controlled because this fulfils one of the important human psychological needs to feel self as an origin of the action. Self-determination theory attempts to explain human motivation using a more general concept from empirical psychology which distinguishes between *intrinsic* and *extrinsic* motivation. Intrinsically motivated behaviours seek an activity for the inherent satisfaction of the activity itself (e.g. personal enjoyment) whereas extrinsically motivated behaviours are those driven by the anticipation of rewards (e.g. good grades) or the avoidance of undesirable outcomes (e.g. punishments).

Deci and Ryan (1990) further suggest that intrinsically motivated behaviour represents a prototype of self-determined actions that people do naturally when feel free to follow inner interests. Thus, intrinsically motivated behaviour which does not require any separate

motivating consequences is thought to be more self-regulated than extrinsically motivated behaviour. Although behavioural psychologists have demonstrated extrinsic motivation is also important for learning, there is research evidence suggesting that introducing an external reward may undermine intrinsic motivation, presumably by shifting the perceived origin of action from self to an external cause (Deci & Ryan, 1990, p. 249). This implies that extrinsic motivation may hinder SRL for L2 acquisition.

Nevertheless, rather than suggesting extrinsically motivated behaviours as inherently non-autonomous, self-determination theory suggests that extrinsic motivation can in fact lead to autonomous behaviours but varying in degree. For example, learning an L2 for a better employment opportunity and learning an L2 to avoid unwanted outcomes such as a punishment from an authority figure are both considered to be extrinsically motivated. Yet, in the former case, the L2 learners feel themselves as the origin of their actions whereas the latter case involves compliance with an external control. This indicates that intrinsically and extrinsically motivated behaviours are not two opposing constructs but a bipolar continuum between self-determined and externally controlled regulation (Deci & Ryan, 1990).

Based on the extent to which motivation is self-determined and thus integrated into one's self, four types of extrinsic motivation have been commonly studied in the intrinsic-extrinsic motivation literature: external, introjected, identified, and integrated regulation (Vallerand & Ratelle, 2002) that can be applied in L2 learning. The least self-determined form is *external regulation* where language learning is controlled by anticipation of possible outcomes such as a course credit or employment opportunity. The next stage of internalisation processes is *introjected regulation* where learners accept norms and regulate language learning to maintain or enhance self-esteem or avoid internal pressures such as feeling shame or guilt.

The more self-determined form of extrinsic motivation is *identified regulation* which occurs when learners feel a sense of choice in learning an L2 and value the activity in relation to personally set goals within that aspect but it is not yet fully integrated into their other values, needs and self-concepts. The most self-determined form of extrinsic motivation is *integrated regulation* but the importance of learning an L2 is still placed on outcomes rather than pure interest in the activity itself. These different types of constructs

indicate that extrinsic motivation can facilitate SRL to the extent to which it is internalised into one's self-system or combined with intrinsic motivation.

In the field of L2 motivation, there has been a tendency to conflate the intrinsic/extrinsic distinction with the integrative/instrumental distinction (Ushioda, 2008, p. 22). This is because, like intrinsic motivation, integrative motivation is assumed to be closely bound with affective domains including personal interest and positive feelings or attitudes. However, Gardner (1985) pointed out that both integrative and instrumental motivations reflect learners' extrinsic orientation since the language is learned as a means to achieve personally valued outcomes rather than out of pure interest. This is plausible since it is possible that integratively motivated L2 learners may derive little intrinsic pleasure from the actual L2 learning processes.

Although both integrative and instrumental motivation may reflect learners' extrinsic orientation, the function of these types of motivation for SRL can be quite different. Noels and her colleagues (Noels, Clément, & Pelletier, 2001) investigated different motives of L2 learners of English and found a high correlation between instrumental motivation and external regulation as well as integrative motivation and the integrated regulation. This suggests that integrative motivation is a more intrinsically orientated form of motivation than instrumental motivation which is the least self-determined motivation. Thus, integrative motivation may be more facilitative than instrumental motivation in self-regulation of L2 learning.

Nevertheless, the extrinsically orientated nature of instrumental motivation should not be considered inherently ineffective in all learning contexts. Wolters (2004, p. 247) found that certain types of extrinsic goals were positively associated with self-reported effort and persistence for learning in academically competitive environments such as university settings. In addition, cumulative research in L2 literature indicates that, whatever its source, those with strong motivation are likely to succeed (Ushioda, 2008). Thus, we cannot overlook the function of extrinsic motivation in SRL. This is particularly true when L2 learning is undertaken in an academic context in which students have to study for a final exam and extrinsic motivation may be unavoidable.

2.2.3 Achievement orientated motivation

In many academic contexts, learning behaviour is directed toward different types of achievement goals. Within the traditional goal theory, motivation is conceptualized as goal-directed behaviour in response to achievement situations (Ames, 1992). Although there are many different types of achievement goals, a *mastery* and *performance* goal dichotomy appears to be the most representative and extensively studied orientation in various disciplines, especially educational psychology.

Mastery goals are concerned with developing skills or acquiring information where the purpose of the learning lies in the attainment of a sense of mastery. In contrast, the purpose of adopting performance goals entails demonstrating competencies in order to outperform others or please other authority figures. With subtle theoretical differences, mastery and performance goals are occasionally referred to as learning and performance goals or task-involved and ego-involved goals respectively but the basic assumption lies in the distinctive characteristics between developing or demonstrating competence (Elliot, 2005).

Similar to the other two sets of motivational orientations discussed earlier, a number of researchers have linked the mastery/performance orientation distinction to the intrinsic/extrinsic orientation distinction (Ames, 1992; Barron & Harackiewicz, 2000; Wolters, et al., 1996). As a result, a mastery goal orientation which is more intrinsic in nature was posited to be an optimal form of motivation for learning while a performance goal orientation which is more likely to foster extrinsic motivation is presumed to be undesirable. Ames (1992) supported the notion that mastery goals outperform performance goals in learning and went so far as to say that "it is a mastery goal orientation that promotes a motivational pattern likely to promote long-term and high-quality involvement in learning" (p. 263). Creating the classroom learning environment to enhance students' adoption of mastery goals and minimizing their adoption of performance goals was suggested for successful learning outcomes.

Consistent with this view, a mastery goal orientation appears to be positively associated with students' use of SRL. The summary of research on goal orientations in SRL, presented by Pintrich (2005, p. 480), shows a positive correlation between mastery goal orientation and a wide variety of strategies used during SRL. In particular, mastery goals

relate positively to learners' attempts to monitor and control their cognition with various learning strategies and to seek ways to increase their understanding. This suggests that L2 learners endorsing a mastery goal orientation are more likely to self-regulate and succeed in their learning. In addition, students with mastery goals reported frequent use of deeper cognitive processing and displayed higher self-efficacy and positive value beliefs about their tasks.

However, research presents conflicting results for the effects of performance goals on learning. For example, they sometimes correlated negatively with cognitive, motivational and behavioural consequences (Ames, 1992; Zimmerman & Schunk, 2008) but at other times they produced no consequences in certain academic contexts (Elliot, 2005) or even increased academic performance (Barron & Harackiewicz, 2000). Although there is little debate about the positive effect of mastery goals, several researchers have started questioning the proposal that performance goals are always undesirable.

Harackiewicz and Sansone (1991) argued that the effects of performance goals depend on the contexts in which students pursue their goals. For example, students endorsing performance goals may be more optimally motivated at higher levels of education where excellence is determined in terms of individuals' achievement relative to others. In support of this view, Barron and Harackiewicz (2000) demonstrated that university students who adopted performance goals achieved higher academically although students with mastery goals developed more sustained interest in their course. They concluded that both mastery and performance goals guide positive consequences but affected different indicators of academic success.

Other theorists pointed out that the conflicting results in this area were caused by the overly simplified conceptual framework, and extended the construct of performance goal orientation (Elliot, 1999, p. 178). The trichotomous achievement goal framework introduced two forms of performance goals: *performance-approach* and *performance-avoidance* both of which are concerned with demonstrating competence, but the former entails the desire to outperform others whereas the latter focuses on the desire to avoid appearing incompetent than others (Elliot & Harackiewicz, 1996). It was hypothesised that achievement driven individuals with high competence perceptions are likely to orient

toward success and adopt a mastery or performance-approach goal whereas those with low competence perceptions are likely to adopt a performance-avoidance goal.

In spite of its popularity in educational psychology, no study has thoroughly investigated the role of achievement goal orientation in the area of L2 learning. This is probably because learning an L2 is considered to be more situated in social contexts rather than academic ones. However, the reality is that a number of students are undertaking L2 learning in achievement-driven contexts as in the case of this study. Thus, it is not very surprising that some L2 learners are more strongly motivated toward performance goal orientation than a more socially orientated form. In this sense, it is beneficial to look further at the effects of performance goal orientation on motivation and actual learning processes.

In general, research findings in educational psychology show that performance-avoidance goals produce more negative impacts on learning processes than the other form of performance goal orientation. Performance-avoidance goals are associated not only with low levels of perceived confidence but also other problematic aspects of learning such as surface cognitive processing and disorganisation (Elliot, McGregor, & Gable, 1999), procrastination and disengagement from challenging tasks (Wolters, 2004), and negative impacts on intrinsic motivation (Cury, Elliot, Fonseca, & Moller, 2006). In a recent publication, Fryer and Elliot (2008, p. 57) commented that up until now no research found a positive relationship between performance-avoidance goals and favourable learning processes.

Research on performance-approach goals, on the other hand, provides a more complex picture of outcomes. For example, performance-approach goals predicted students' use of cognitive and metacognitive learning strategies in many studies (Elliot, et al., 1999) but not in another (Middleton & Midgley, 1997), and a positive association with persistence in learning was found among university students but not among secondary students (Wolters, 2004). It was argued, however, negative consequences would be only expected in a situation in which performance-approach goals were underpinned with aversive affects without any facilitative motivation (Elliot, 1999). This suggests that a close examination of learners' cognitive processes, such as perceptions and beliefs about their competence, is necessary to elucidate the function of motivational orientation in SRL.

2.3 Sources of Motivational Beliefs

The initial impetus in L2 motivation research was grounded in social psychology. However, during the 1990s, as a result of the cognitive revolution in mainstream psychological research, researchers in the field of L2 learning began to integrate several influential theories of cognitive psychology into the tradition and added a valuable contribution to our understanding of L2 motivation. Cognitive theories of motivation assume that people's perceptions or beliefs play a crucial role in determining their goals, and affect how they react in relation to these goals. In other words, the amount of effort individuals expend to achieve their goals is determined by the complex network of perceptions and beliefs resulting from an interpretation of available information within a context.

In this regard, motivation is not seen as a static trait of a learner, as is often the case in the traditional L2 motivation research, but rather constructed by learners who actively process and interpret various kinds of information available to them in the learning context. The following section presents research on important sources of motivational beliefs and discusses their effects on self-regulation focusing on three constructs: self-efficacy, self-concept, and task value. It then examines research on task or situation specific motivation in comparison to research on more generalized motivation, and highlights the usefulness and importance of narrowing down the focus of L2 motivation in research to identify factors affecting SRL.

2.3.1 Self-efficacy

Of all competence related perceptions and beliefs, self-efficacy is probably the most extensively studied construct in achievement-driven contexts. Self-efficacy refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Self-efficacy beliefs are not merely outcome expectations about what will happen as a consequence of behaviour but may actually prevent people from taking action because individuals who value possible outcomes do not necessarily engage in that activity when they believe they lack the capability to succeed. In addition, although the term self-efficacy is often used to specify

the level of perceived competence and strength of the beliefs, it does not primarily focus on perceptions of knowledge and skills in general but rather what individuals believe they can achieve with their knowledge and skills under certain circumstances (Muddux & Gosselin, 2003, p. 219). Thus, self-efficacy beliefs are very much context specific involving self-evaluation of competence to execute behaviour in pursuit of subjective goals.

The notion of personal agency and control is central to self-efficacy based on the premise that humans strive to exercise control over events. Bandura (1995, p. 2) claims that perceived self-efficacy affects almost every aspect of human lives and determines the amount of effort expended in performing the behaviour required to attain certain goals. In order words, people's motivation, affective states, behaviour and personal accomplishments are based on what they believe they are capable of. For this reason, how L2 learners regulate their learning can be better predicted by their perceived capability to succeed in a task rather than their aptitude or intellectual ability for learning an L2. This also helps to understand why individual L2 learners who share some backgrounds such as skills, intellectual abilities, and motivational orientations often guide their learning quite differently.

Early studies on self-efficacy provided a valuable insight into how students direct their learning behaviour at different stages of learning. First, self-efficacy beliefs influence the choice an individual makes and the courses of action he or she pursues (Bandura, 1997). Students are likely to select tasks in which they feel competent and avoid those in which they do not. Self-efficacious students are more likely to accept a difficult task as a challenge to be mastered while students with low self-efficacy may see it as a threat to be avoided. Second, self-efficacy beliefs determine how much effort students expend on an activity and how long they persevere with it. For example, in the face of obstacles, learners with high self-efficacy beliefs tend to sustain their sense of commitment by increasing effort in order to avoid feeling guilty since they believe they are actually capable of achieving their goals (Bandura, 1997). Learners with low self-efficacy, on the other hand, are unlikely to expend their effort because they believe attaining their goals is already outside of their control. In this regard, the self-efficacy mechanism plays a vital role in the motivational process since most researchers would agree motivation is, as Dörnyei (2001b, p. 8) points out, a driver behind why people decide to do something, how long they are willing to sustain the activity, and how hard they are going to pursue it.

Considering this shared agreement on motivation, the effects of self-efficacy beliefs are, to some extent, observable. However, they also interact with other affective factors mediating motivational processes that are not so easily perceived by external observers. A low sense of self-efficacy, for example, may increase students' vulnerability to achievement anxiety. Meece, Wigfield and Eccles (1990) found that students' who had weakened their self-efficacy beliefs through negative academic performance became more anxious about academic demands than other students. The influence of L2 learners' past experience has not been studied thoroughly in L2 research though previous successful or unsuccessful learning events could have affected L2 learners' perceived competence for similar tasks.

Bandura (1997) proposed that previous performance or mastery experience is one of the most powerful sources of self-efficacy beliefs. After the completion of an academic task, students interpret and evaluate the results of their action. Their self-efficacy beliefs can be strengthened or weakened according to the judgements they make. When they believe that their efforts lead to successful outcomes, their confidence to accomplish another similar task will be fostered. On the other hand, when they believe that their efforts did not produce desired outcomes, their confidence to succeed in similar tasks will be diminished. This may trigger a sense of helplessness and the worst scenario can be frequent disengagement or complete withdrawal from the related activities.

The influence of mastery experience on self-efficacy highlights the importance of focusing on the historical account of the learning experience of an individual L2 learner. For example, learning logographic symbols such as *kanji* in Japanese can be a new experience for many learners of Japanese from alphabetic backgrounds. On the other hand, those who already have some knowledge of kanji because of their first language or learning environment may have sufficient mastery experience to develop stronger self-efficacy beliefs. This implies that novice learners with an alphabetic background may have lower self-efficacy than advanced learners. Nevertheless, as their learning progresses, novice learners may develop the necessary skills or strategies and improve their self-efficacy perceptions. Yet, as the complexity of the task increases, it may also damage learners' efficacy depending on how individuals interpret the results of their performance.

Research has shown that there are some considerable individual differences in how mastery experiences are interpreted. In general, it has been found that male students

reported stronger mastery experiences and lower anxiety in the domains of mathematics and science whereas female students reported more mastery experiences and lower anxiety in language studies (Britner & Pajares, 2006; Lent, et al., 1991; Pajares & Valiante, 2001). In the area of language arts, in particular, gender differences are also found in other motivational constructs (Pajares & Valiante, 2001): these include students' perceived value, achievement goals, and self-efficacy for applying self-regulatory strategies. Furthermore, students who reported a strong sense of confidence in applying self-regulatory strategies were often intrinsically motivated, used more learning strategies in general and academically achieved more highly than the other students (Pajares & Valiante, 2001).

In the field of L2 acquisition, the investigation into self-efficacy is largely limited to research on language learning strategy use. Nevertheless, some of these studies provide important implications for the topic of the current research. Yang (1999), for example, investigated how self-efficacy beliefs influence L2 learners' engagement in their own practice, and found that self-efficacious students used all types of learning strategies examined in the research, and applied them more frequently than those with a low sense of self-efficacy.

Similarly, researchers have consistently found that students' self-efficacy beliefs are positively correlated with their cognitive engagement and use of metacognitive strategies to self-regulate their learning (Pintrich & De Groot, 1990; Wolters, et al., 1996). Self-efficacious students also tend to report more that they derive feelings of enjoyment from practising English (Yang, 1999). This indicates that self-efficacious learners are more likely to be motivated intrinsically. By extending the original socio-educational model of L2 acquisition, Tremblay and Gardner (1995) examined the relationships among many motivational constructs including self-efficacy. In this study, self-efficacy was shown to be influenced by language attitudes that in turn affected motivational behaviour. Thus, self-efficacy is found to be a mediator of the attitude/behaviour relationship.

In addition to the mediating role, many self-efficacy theorists believe self-efficacy is the major determinant of academic performance. Bandura (1997) presented extensive evidence to support self-efficacy as a powerful predictor of personal accomplishment, and similar evidence in academic contexts is being accumulated to the present date. Pajares (1996)

claims that research on self-efficacy beliefs in academic contexts is currently abundant and the empirical connection to achievement has now been reasonably secured.

Despite the abundant evidence in general academic subjects, the number of studies on the relationship between self-efficacy and L2 achievement is very limited. From these limited studies, we can see some evidence to support the prediction that high self-efficacy leads to successful learning outcomes (Chen, 2007; Hsieh, 2004) but there are no identifiable obvious trends (Huang & Chang, 1998). Mills, Pajares and Herron (2007), for example, examined the influence of self-efficacy on the achievement of intermediate French students at different tertiary institutions. They found that students' self-efficacy for success in achieving a higher grade was positively correlated with their final grade but was not a significant predictor when other variables, such as French anxiety in reading and listening, were controlled. These research findings suggest that the effect of self-efficacy on achievement may not be so much bidirectional but rather may interact with other affective variables and together mediate learning behaviour and actual performance. Thus, self-efficacy is neither the only influence on behaviour nor the most important factor influencing motivation and SRL.

2.3.2 Self-concept

In achievement driven settings, self-concept which is traditionally seen as a global perception of self is suggested as another important influential factor affecting motivation and SRL. While self-efficacy focuses on competence related perceptions, the focus of self-concept is a feeling about oneself involving subjective evaluation of self-worth (i.e. self-esteem) and a mental picture of how an individual sees oneself (i.e. self-image). However, many studies have not empirically separated the evaluative perceptions of self and have used the terms self-concept and self-esteem interchangeably, although the former term tends to be favoured (Schunk & Pajares, 2005, p. 88).

Because of the conceptual similarity, one's self-concept or self-esteem often appears to be associated with self-efficacy beliefs. Students with a high sense of self-esteem tend to have positive self-efficacy beliefs and approach new tasks with confidence (Pajares & Schunk, 2002). As with self-efficacy beliefs, self-esteem seems to predict the use of metacognitive

and cognitive strategies (Borkowski, et al., 1990, p. 74). In addition, the effect of self-esteem on motivation may be quite similar to that of self-efficacy. According to the summary of findings provided by Baumeister (1999, p. 7), high self-esteem is generally correlated with greater persistence, especially in the face of difficulties, and people with low self-esteem tend to experience motivational conflicts where they want to succeed but are sceptical about being successful. Several researchers also argue that students with high self-esteem are more likely to succeed in learning since they hold a clearer sense of direction regarding their goals (Dörnyei, 2005, p. 213).

However, despite the fact that self-concept and self-efficacy are often closely related, it is important to acknowledge that they are two separate but interacting constructs that can represent different phenomena. Bandura (1997) points out that the beliefs about one's capability (i.e. self-efficacy) do not always correspond to the feeling about oneself (i.e. self-concept). Learners who judge themselves hopelessly inefficacious in learning an L2, for example, do not necessarily damage their self-concept if they do not value the knowledge or skills of the L2. Similarly, self-efficacious L2 learners do not necessarily have a strong sense of self-concept if they do not take any pride in performing well in that task. In addition, these two constructs can lead to different consequences in learning.

Although many researchers now agree that self-efficacy beliefs are positively associated with personal accomplishment, research results for self-concept or self-esteem on outcomes are inconsistent and inconclusive. Mone, Baker and Jeffries (1995), for example, examined university students' self-esteem and self-efficacy prior to three exams throughout the semester. In this study, self-efficacy predicted all three exam performances but self-esteem was not correlated with any of them. Reviewing studies on self-esteem, Baumeister, Campbell, Krueger and Vohs (2003) found that self-esteem was sometimes correlated with academic performance but only modestly and at the other time had no or even negative correlation. They concluded that there is insufficient evidence to support the claim that high self-esteem leads to successful learning. Nevertheless, since Mone et al.'s (1995) research along with many other studies reviewed by Baumeister et al. (2003), focussed on a global self-concept, this conclusion may not apply to a specific component of self-concept.

Even where students' global self-concept is implicated in the L2 learning abilities, it may not be related to all aspects of the process. For example, it is possible that an L2 learner who holds a positive self-concept in writing may have a negative one in another area such as speaking. This indicates that measuring L2 learners' self-concepts in general does not provide much useful information about the effect of self-concept on motivation and SRL for a particular task. Therefore, investigating self-concept at the appropriate level of specificity is not only necessary but required to elucidate the impacts of self-concept on motivation and SRL for a specific aspect of L2 learning such as the learning of kanji in Japanese.

Although the influence of self-concept on achievement remains unclear, one's self-concept seems to play an important role in motivation and self-regulation for L2 learning. Dörnyei (2009) argues that having a vivid and positive future self-image should enhance motivation since humans are naturally motivated to reduce the discrepancy between their subjective self-guides and self-concept. Since all possible selves are future orientated and involve some changes from the present, he claims that L2 learners who have a vivid future self-image are more likely to be motivated in order to achieve the level of this possible-self. In other words, it is the clarity and detail of the possible self which creates incentive for motivation to control and regulate current actions and behaviour.

However, L2 learners need more than a vivid positive self-image to activate and enhance the motivational and self-regulatory processes. Oyserman and James (2009) argue that possible selves are unlikely to trigger self-regulated behaviour when the gap with actual selves are too close or too distant; when subjective experience is interpreted as meaning that enough effort has been already expended; and when they are not congruent with other aspects of self-concept. If possible selves do not differ much from the actual-self, increasing effort seems to be unnecessary. On the other hand, if they are too distant, an individual may interpret this as meaning the possible self is too hard to attain and the connection with the current state may be psychologically less meaningful.

Similarly, the motivational value of self-concept or self-esteem on self-regulation may not be linear but rather an inverted U-shaped function. Surprisingly, research has reported that high self-esteem individuals often showed poor self-regulation, especially in ego-threatening conditions (Baumeister, Heatherton, & Tice, 1993; Smith, Norrell, & Saint,

1996). In an experimental study, Baumeister et al. (1993) tested the performance of individuals with high or low-esteem on a task involving one aspect of self-regulation called self-management. In the control condition, they found that high self-esteem individuals made more accurate predictions about their ability, set appropriate goals and managed their performance. However, in the ego-threat condition, they tended to overestimate their abilities and set unrealistically high goals resulting in self-regulation failure and poor performance. High self-esteem individuals, thus, can be effective self-regulators but also ineffective ones in a situation which triggers such feelings as shame, incompetence, and worthlessness.

Learning an L2 involves a number of ego-threatening activities including demonstrating newly acquired skills and knowledge in front of others. Many highly educated L2 learners experience situations in which their self-image may be threatened especially when they cannot make themselves understood in their L2. How individuals with high and low self-esteem deal with the situations can be quite different. Low self-esteem individuals tend to be more cautious and set safe and low goals to protect their self-image (Baumeister, et al., 1993). However, this minimises the value of success and reduces satisfaction even when goals are achieved. High self-esteem individuals, on the other hand, tend to set goals that may be actually higher than what they can achieve in reality and try to prove or enhance their self-image. Setting goals at the upper limit of one's capability may be desirable but unrealistically high goals increase the risk of failure.

Effective SRL involves generating self-satisfaction contingent on reaching learning goals as it helps learners direct their actions and encourages persistence in effort (Zimmerman, 2008). This process requires learners to accurately self-evaluate their ability and set appropriate goals. With this regard, competency related beliefs are important but individuals' levels of self-satisfaction also depend on their beliefs about the value attached to a task. For example, learners studying an L2 as a compulsory school subject not placing much value on success may experience weaker self-satisfaction even if they do well on the activities. Thus, the perceived value of a task is responsible for generating necessary self-satisfaction, and expectancy of success or self-efficacy do not produce much positive impact on motivation and SRL if no subjective value is attached to the task.

2.3.3 Achievement task value

Task value is one of the components of expectancy-value theory of motivation suggesting that our subjective value of a task together with expectations to succeed in that task determine the strength of motivation (Alderman, 2008, p. 246). The task value component focuses on one's beliefs about the importance of a task to the individual and relates to the question of "why do I want to perform this task?" in contrast to the question of "Am I capable of performing this task?" which relates to self-efficacy beliefs, one aspect of the expectancy component. Expectancy-value researchers assert that both expectancies and values are necessary and a total absence of either component will not lead to motivation. For example, L2 learners who believe that they are capable of acquiring new vocabulary can still have low motivation if they do not value the activity or knowledge. The extent to which a task is valued is suggested as key to explain students' engagement in learning activities including self-regulation (Wigfield, Hoa, & Klauda, 2008).

Eccles-Pearson and her colleagues (Eccles-Parsons, et al., 1983) proposed that subjective task values can be conceptualized into four major areas: attainment value, intrinsic value, utility value and cost. They defined *attainment value* as perceived importance of performing well on a given task. The importance is also associated with confirming or disconfirming one's self-concept such as the perceived gender role. *Intrinsic value*, however, refers to the enjoyment an individual derives from performing a task. By contrast, *utility value* reflects the usefulness of a task for the individuals' short term and long term goals, which could include getting a degree or a certain type of job, rather than a genuine personal interest in the task. Finally, *cost* is determined by the negative sides of engaging in a task including the amount of time and effort needed to succeed in that task as well as destructive emotional reactions such as anxiety.

Theoretically, students who believe what they are learning is more important, more interesting, or more useful are more likely to engage in a task, persist longer at the task, and expend greater effort toward completing the task than other students. Empirical studies in this field have consistently found a significant relationship between task value and behavioural choice. For example, a series of studies conducted by Eccles and her colleagues (Eccles, 2005) have found that students' valuing of skills in mathematics predicted their choices about enrolling in additional math courses more strongly than their

outcome expectancy beliefs. In contrast, research has found that perceived psychological cost was a negative predictor of university students' intention to attend graduate school (Battle & Wigfield, 2003).

With respect to students' effort, researchers have found that students who believed that the content of their subject area was interesting, important or useful employed deeper levels of cognitive processing and reported higher persistence in their course related work (Pintrich & De Groot, 1990; Pintrich, Roeser, & De Groot, 1994; Wolters & Pintrich, 1998). Pintrich and his colleagues consistently found that task value is the single best predictor of both cognitive and regulatory strategy use across different academic domains. Kitsantas and Zimmerman (2002) showed that learners who employed a variety of strategies to self-regulate their learning reported higher intrinsic and attainment values. Wolters and Rosenthal (2000) also demonstrated that students who reported using motivational regulation strategies had greater task values and a stronger focus on learning goals. In the area of L2 acquisition, research on task value is very limited but there we can see evidence indicating that L2 learners' use of metacognitive strategies, the core element of SRL, is most strongly affected by task value (Kline, 2006; Schmidt & Watanabe, 2001). These findings suggest that students with positive task value beliefs are more likely to be self-regulating in their learning.

On the other hand, the association between task value and learning outcomes has been found to be relatively weak with several studies failing to detect a significant or direct relationship (Eccles-Parsons, et al., 1983; Pintrich & De Groot, 1990; Wolters & Pintrich, 1998). These studies, however, found that expectancy beliefs such as self-efficacy directly predicted actual performance. It appears that task value is important in the initial stages of learning but once students are involved, it does not predict learning outcomes and expectancy beliefs become more important in controlling actual performance (Wolters & Pintrich, 1998). Nevertheless, expectancy-value theorists suggest that subjective task value may also well develop from competence assessments (Eccles, 2005). This means that students who expect to succeed in an academic task are more likely to place value on that task than those who lack confidence. Consistent with this view, research shows that changes in students' expectancy beliefs are associated with changes in their valuing of different academic tasks (Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002).

However, it appears that not all students who expect to succeed in a particular subject area decide to engage in the related activities. A longitudinal study, for example, shows that intellectually able students who are successful in math class are unlikely to enrol in the advanced classes when they feel that skills in math are not important, useful or enjoyable for them (Eccles, 2005). In this research, the enrolment decisions were mediated by gender differences with male students more likely to place greater value on mathematics than female students. Similarly, male students attached greater importance to sport than female students and engaged more actively in physical activities. Thus, gender differences are found to be an important variable which affect individuals' task value beliefs and achievement choices. Such individual differences may have lowered the predictability of task value for learning outcomes. Nevertheless, research findings suggesting that subjective task value is the strongest indicator of students' involvement highlight the importance of carefully looking at the role played by value beliefs in SRL.

Although many researchers have acknowledged the expectancy-value theory of motivation in the L2 literature (e.g, Dörnyei, 2001b; Oxford & Shearin, 1996; Tremblay & Gardner, 1995), it is quite surprising to notice that very little empirical work is available on L2 learners' value beliefs. Simply acknowledging the importance of theory in the literature does not tell us much about how it relates to L2 motivation, how L2 learners develop their motivation and how we can help them become motivated. A number of studies have investigated students' value beliefs in general academic subjects, but the achievement value associated with L2 learning can be quite different because learning an L2 involves more than acquiring and processing new skills and information; it also includes the judgement of various peripheral values that are unique to the language, situation and activity.

Different languages have, for example, distinct material benefits stemming from the levels of proficiency that largely depend on where and how widely the language is spoken. In addition, L2 learners' value beliefs can be influenced by their attitudes toward the target culture and people and are often based on their learning opportunities and experience, and the political relationship between their own and the target culture. Moreover, it is very likely that even an individual learner has different value beliefs that can vary from one aspect of L2 learning to another. For example, learners of Japanese who value spoken

aspects of the language may engage in oral activities more actively than kanji practice if they do not value the written aspects.

All these factors are likely to affect achievement value in L2 acquisition and they can be considered both context and task specific. This indicates that L2 learners' value beliefs can be better understood through an investigation at the appropriate level of specificity. Indeed, it is difficult to assess L2 learners' value beliefs without taking their task-specific beliefs and other situation-specific factors into consideration. As with the other motivational constructs discussed earlier, taking a task focused or situated approach is necessary to identify L2 learners' valuing of different tasks. By identifying L2 learners' valuing of an important task, we can investigate the impacts on SRL in order to find ways to enhance positive beliefs so that we can help them become more effective for the task.

2.4 Task Specific Motivation

Research on L2 motivation has mainly focused on learners' overall disposition toward their learning. Although this highlights several important implications about motivational influences on learning processes, L2 learners are unlikely to engage in SRL equally for all language domains. Dörnyei (2001a, p. 47) has pointed out that certain motivational perceptions and attributes can be generalized across learning situations but other motivational factors may vary according to the particular learning event. It is tempting to assume that students are either 'motivated' or 'not motivated' in one way but the reality is that they can be motivated in multiple ways. For example, all integratively motivated L2 learners do not necessarily have the same degree of interest across different aspects of learning. This suggests that the validity of a study investigating students' generalised L2 motivation in an attempt to identify the impacts on actual learning processes within a given task, such as vocabulary acquisition, is doubtful.

Although breaking down one academic subject domain into even smaller segments has not been attempted much in SRL research, L2 researchers have paid increasing attention to the analysis of a specific task or situation over the past decade (Dörnyei & Kormos, 2000; Oxford, Cho, Leung, & Kim, 2004; Tremblay, et al., 1995; Ushioda, 2009). Tremblay et al. (1995) highlighted the duality of generalized and specific motivation in L2 learning where

they distinguished between *trait* and *state* motivation. Trait motivation refers to relatively stable and enduring motivational attributes such as general attitudes toward L2 learning and target community groups. On the other hand, state motivation refers to more temporal responses to the learning situation including actual tasks learners are engaging in. The role of trait and state motivation was investigated in L2 vocabulary acquisition. It was found that although trait motivation was significantly related to state motivation, it had no direct effect on the vocabulary learning while state motivation, by contrast, had a significantly correlation (Tremblay, et al., 1995).

Similar findings were reported by Dörnyei and Kormos (2000). They explored various affective and social variables to identify factors that determine L2 learners' actual engagement in communicative tasks. The results showed that the most important factor affecting task performance was motivation which they called situation-specific motivation such as attitudes toward the tasks and the course learners were undertaking. In addition, students who reported negative attitudes toward the tasks but had a positive disposition toward the course appeared to be more active than those who had unfavourable attitudes toward both these variables. However, no significant correlation was found with more generalized motivation such as incentive values of the language and attitudes toward the target community members, key attributes of instrumental and integrative motivation, respectively. They concluded that "it was the situation-specific rather than the general motives that had a particularly strong impact on the extent of the learners' task engagement" (p. 294).

The adaptation of a situated approach to L2 motivation research has offered a useful paradigm in which motivational variables influencing actual learning processes for a particular task can be identified. From a theoretical point of view, this is a logical step because it helps to break down the complex motivational constructs and language learning processes into researchable segments (Dörnyei, 2003). From a pedagogical point of view, this is beneficial in certain L2 educational settings particularly where the declining number of enrolments is causing some problems in maintaining viable classes. In New Zealand, for example, where the poor retention rate for learning Japanese as a school subject has become a recent feature of most secondary schools, students reported that the difficulty associated with learning *kanji* is one of the main reasons for discontinuing their study (McLauchlan, 2007). By adopting this paradigm to identify key motivational constructs,

we can find ways to administer an important task in a more motivating manner to sustain students' involvement and support them in becoming more effective self-regulated learners.

2.5 Self-Regulated Learning (SRL)

One of the important consequences of L2 learners' motivational orientation and beliefs is the degree to which they self-regulate their own learning. Researchers have devoted much effort to answer the question of how students become more effective self-regulated learners as the process has been shown to facilitate the chance of successful learning. The construct of self-regulation, therefore, has received increasing attention in research over the past two decades. Self-regulation refers to "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2005, p. 14).

In academic contexts, self-regulation of learning or SRL is seen as comprising self-directed processes in which students monitor, control and evaluate their affects, cognition, behaviour as well as certain aspects of the environment (Pintrich, 2005). These processes help learners to acquire, store and transform new information and skills effectively. However, for this to occur, positive motivational beliefs are not only necessary but primary (McCombs & Marzano, 1990). Once initiated, motivational beliefs are presumed to affect self-regulatory processes reciprocally in different phases of SRL. Using Zimmerman's cyclic model of self-regulation (Zimmerman & Camppillo, 2003), the following section examines different phases of SRL in relation to the motivational constructs discussed earlier. It then presents the components of SRL developed for the current study and identifies major self-regulatory processes relevant to the acquisition of kanji.

2.5.1 Cyclic processes of SRL

SRL is considered as a cyclical and recursive process because it facilitates the adaptation of learning processes in order to increase the effectiveness of learning and this effectiveness in turn increases motivation to self-regulate subsequent learning. From this SRL perspective, Zimmerman and his colleagues have developed a cyclic model which

distinguishes three phases of self-regulatory processes: forethought, performance and self-reflection phases (Zimmerman & Camppillo, 2003). They argued that, to some extent, all learners self-regulate their learning, but effective self-regulated learners proactively display a high quality of self-regulation in the forethought phase whereas poorly self-regulated learners react mainly in the self-reflection phase.

During the *forethought phase*, students analyse a task and prepare to engage in the task by setting a goal and selecting strategies for the attainment of that goal. Based on research findings, the cyclic model suggests that goal setting and strategic planning are closely associated with motivational beliefs. Bandura and Schunk (1981), for example, showed that appropriate goal setting before actually engaging in a task enhances positive motivational beliefs. They found that students instructed to pursue proximal rather than distal goals significantly developed self-efficacy and intrinsic interest in mathematic activities. A subsequent study also found that personally set grade goals were associated with the levels of students' self-efficacy beliefs (Zimmerman & Bandura, 1994). Similar results were found with respect to strategic planning in that learners focusing on techniques or procedures rather than performance reported higher self-efficacy beliefs and intrinsic interest in a task (Kitsantas & Zimmerman, 2002). These findings indicate that motivational beliefs play an important role in the forethought phase to help learners become proactive.

During the *performance phase*, students control and observe their learning and performance by implementing strategies selected in the forethought phase. Learners who did not actively engage in the forethought phase were less likely to test the effectiveness of a variety of strategies. In the field of L2 acquisition, where research on language learning strategies is fruitful, there is evidence indicating that L2 learners' motivational beliefs influence their strategy use. For example, the degree of expressed motivation to learn an L2 was the single most influential factor affecting university students' choice of language learning strategies (Oxford & Nyikos, 1989). Of the different types of strategies, cognitive and metacognitive strategy use was most affected by L2 motivation (Schmidt & Watanabe, 2001). Although these studies did not directly investigate the influence of L2 motivation on self-regulatory processes, the findings imply that L2 motivation plays a crucial role in the performance phase.

During the *self-reflection phase*, students evaluate and react to their learning and performance. Zimmerman (2008) argues that proactive learners who set specific goals during the forethought phase are able to evaluate their performance against their goals in this phase. However, those who do not have specific goals have to rely on social comparisons. This implies that, consequently, proactive learners are likely to endorse mastery goals while those who react in the self-reflection phase can be more orientated toward performance goals. In general, research indicates that mastery goals have a more positive influence on learning processes and outcomes than performance goals (Ames, 1992). Schunk's study (1996) also supported this finding but interestingly, regardless of the type of achievement goals, when students were given frequent opportunities to evaluate their progress, they displayed higher levels of self-efficacy, motivation and achievement. Thus, motivational beliefs and self-regulatory processes in the self-reflection phase are interdependent and together influence actual performance.

One of the major self-regulatory processes in the self-reflection phase is affective reactions associated with an individual's performance. Feelings of satisfaction or dissatisfaction are, for example, important sources of self-regulation since people are naturally motivated to pursue courses of action that produce positive outcomes and avoid those that produce negative ones (Bandura, 1991). The cyclic model of self-regulation indicates that goal setting in the forethought phase can have consequences for affective reactions in the self-reflection phase because appropriate goals are necessary to produce a necessary level of self-satisfaction. For example, learners with low self-esteem tend to set unrealistically easy goals to protect their positive self-image, but this can minimise the value of success and consequently produce weaker self-satisfaction (Baumeister, et al., 1993). When people derive a sufficient sense of self-satisfaction conditional on reaching their goals, they motivate themselves and expend effort to achieve desirable outcomes (Bandura, 1991).

Finally, self-reactions during the self-reflection phase are presumed to influence self-regulatory processes in the forethought phase for the subsequent learning. Zimmerman and Kitsantas (1999) provided empirical support by demonstrating that students' positive self-satisfaction not only strengthened their self-efficacy beliefs related to future effort to learn but also increased their intrinsic interest in the task. The cyclic nature of this model suggests failing to be proactive in the forethought phase relegates learners to reactive forms of self-regulatory processes in the performance and self-reflective phases (Kitsantas

& Zimmerman, 2005). When proactive learners were compared with reactive learners, researchers found significant differences in their self-regulation for all three phases. The study showed that proactive learners displayed clearer goal setting, better strategy planning and use, and reported adaptive inferences (Cleary & Zimmerman, 2001).

The strength of this model lies in its ability to explain the cyclic interdependence of motivational beliefs and self-regulatory processes, and the shifts in learning over protracted periods. It reveals that having positive motivational beliefs during the forethought phase is crucial to functioning successfully in SRL. However, since this model focuses more on the process, it is not very clear what learners are actually self-regulating in their own learning. Since motivational beliefs and self-regulatory processes are interdependent and cannot be enhanced if they are treated in isolation, it is important to identify major components of self-regulatory processes that are specific to a task students are undertaking in a particular learning context. For the current research, it is the acquisition of kanji in Japanese as an L2 at higher levels of education.

2.5.2 SRL components

Over the past two decades, many models of SRL have been proposed from different theoretical perspectives. In addition to Zimmerman's cyclic model of self- regulation (Zimmerman & Camppillo, 2003), these include Pintrich's general framework for SRL (2004), Boekaerts' model of adaptable learning (Boekaerts & Niemivirta, 2005), and Winne and Hadwin's four-stage model of SRL (Winne & Hadwin, 1998). Although these models propose a slightly different construct and process, it is important to notice that they all share some basic assumptions. One of the most general but important assumptions is that learners are considered as active participants in their learning potentially monitoring, controlling and evaluating certain aspects of their cognition, behaviour, affects and environment for the attainment of their goals.

Based on this general assumption, SRL is hypothesized to delineate the following four components in this study: (1) *cognitive/metacognitive regulation*, (2) *affective regulation*, (3) *behavioural regulation*, and (4) *environmental regulation*. These components are integrated into the three phases of self-regulation in order to identify major self-regulatory

processes involved in the acquisition of kanji. Table 2.1 shows the major self-regulatory processes identified for each component and the three phases of SRL to develop instruments assessing Japanese language learners' use of self-regulation in kanji learning. Although different self-regulatory processes are displayed in separate cells, it should be noted that they are not necessarily independent or sequential but may occur simultaneously with other self-regulatory processes in another cell.

Table 2.1
Major Self-Regulatory Processes in the Components and Phases of SRL

Components	Phases		
	Forethought	Performance	Self-reflection
Cognitive/Metacognitive regulation	Perceptions of previous experience Goal setting Strategic planning	Implementing strategies Monitoring and controlling progress	Performance evaluation Strategic adaptation
Affective regulation	Perceptions of possible outcomes and costs Motivational beliefs	Monitoring and controlling emotion and motivation	Affective responses
Behavioural regulation	Preparation for behavioural engagement	Undertaking and controlling planned commitments Noticing behavioural changes	Behavioural adaption Defensive reactions
Environmental regulation	Observations on available resources and learning contexts	Managing resources Identifying problems Seeking help	Environmental restructuring Disengagement

Note: The four components identified are integrated in the three phases of self-regulation proposed by the cyclic model (Zimmerman & M. Camppillo, 2003).

The top row in Table 2.1 concerns cognitive and metacognitive processes learners engage in to facilitate the acquisition of new skills and information. By analysing prior experience and knowledge, learners set a specific goal and select appropriate strategies in relation to that goal. Before learning kanji, for example, learners of Japanese need to explore their prior experience and existing knowledge, and analyse how many new kanji they have to learn and which strategies can be applied. Cognitive strategies used for learning kanji during the performance phase can range from simple repetition to more elaborate forms

such as organisational or association strategies making use of the stroke or elements of kanji.

Research shows students' choice of kanji learning strategies is influenced by not only motivation but also their first language and level of study (Gamage, 2003; Okita, 1995; Toyoda, 1995). Nevertheless, numerous studies suggest that appropriate use of strategies is more important than the type or number of strategies being used (Pintrich, 2005, p. 460). Thus, in order for cognitive strategies to be effective, metacognitive processing which enables learners to not only select strategies but also sense problems prompting them to switch from one strategy to another is necessary. Metacognitive processing also helps learners to break down a larger task by, for example, setting smaller achievable goals and keeping study records to assist them in task completion and evaluating their learning and performance.

As with cognitive and metacognitive processing, learners' ability to control aspects of their affect and motivation is another important component of SRL. The component of affective regulation focuses on perceptions of learners' motivational beliefs, their intention to maintain positive emotional and motivational states, and their affective responses to their learning and performance in SRL. The process of motivational beliefs in the forethought phase may happen without much conscious thought, but there are many strategies learners can purposefully use to control their affect and motivation during the performance phase. Interest enhancement or learners' attempts to modify boring tasks to increase immediate enjoyment (Wolters, 2003) are, for example, particularly relevant to the learning of kanji which involves a lot of practice and memorisation over a long period of time. Several studies found that students who employ this strategy persist longer at a repetitive task (Sansone, Wiebe, & Morgan, 1999), use more metacognitive monitoring (Wolters, 1999), and report greater task value (Wolters & Rosenthal, 2000).

Although cognitive, metacognitive and motivational processes are often the central concern of SRL research, learners' attempt to control their own behaviour is not included in all models of self-regulation because it does not explicitly involve regulation of the personal self (Pintrich, 2005, p. 466). However, an individual's choice of delayed or immediate action taking account of the foreseeable consequences can be considered as important self-regulation. For this reason, the component of behavioural regulation focuses

on learners' decisions to volitionally engage in learning tasks and their ability to keep the planned learning commitment. The behavioural regulation in the forethought phase may be considered more metacognitive and not behavioural regulation per se, but the metacognitive process used to control behaviour can be reasonably classified in this row. Through behavioural regulation, learners need to notice changes in their behaviour and adapt or defensively react to the situation.

Nevertheless, the factors affecting self-regulation in learning do not always come from within an individual but can also come from the learning context. For example, L2 learners need to observe changes in the learning context, identify the problems these changes might have in their learning, and adapt their learning environment. The component of environmental regulation, thus, concerns the individual's attempt to monitor and control contextual variables including time management. Just as with the behavioural regulation in the forethought phase, perceptions of learning contexts can be considered more metacognitive processes but they are placed in this cell because they focus on contextual control rather than the internal mechanisms of an individual.

A number of studies revealed that effective self-regulated learners use time management skills to enhance learning and performance in various learning contexts (Britton & Tesser, 1991; Lynch & Dembo, 2004; van Den Hurk, 2006). On the other hand, poor time management is identified as a contributing factor to students' unsuccessful achievement and withdrawal from a course (Fitzgibbon & Prior, 2003, as cited in Goldfinch & Hughes, 2007). Withdrawal or disengagement from a task may be the worst case scenario, but if learners are unable to cope with other academic or social demands and adapt their learning schedule, they are more likely to procrastinate or become unmotivated in their learning. Nevertheless, in the face of difficulties, learners may seek help from others to avoid unfavourable consequences. Help-seeking is another area of environmental regulation involving the use of others such as their peers and instructors for learning support. It appears that knowing when and from whom to seek help is one of the characteristics of good self-regulated learners (Pintrich, 2005, p. 468).

Several characteristics of effective or less effective self-regulated learners have been suggested in SRL literature. However, many contemporary theorists in this field assume that SRL is malleable rather than unchangeable. Pintrich (1995), for example, argues that

all students have the potential to control their own learning and that strategies for SRL can be developed through appropriate opportunities. In addition, there is empirical evidence supporting the idea that strategies for effective SRL can be taught and learned through instruction in many academic contexts (Zimmerman & Schunk, 2001). Research studies have demonstrated that students who received instruction incorporating the opportunity to use SRL not only improved their performance but also started endorsing intrinsic orientations and showed an increase in perceived confidence as well as positive task value beliefs (Chang, 2005; Young, 1996).

Nevertheless, individual characteristics of learners also seem to influence how students engage in SRL. Zimermann and Martinez-Pons (1990) examined this issue with students from three different grade levels. They found that, compared to boys, girls employed significantly more monitoring and planning strategies including goal setting, environmental structuring, and record keeping. The grade level was also significant in the number of different strategies used for SRL. Other studies have reported significant individual differences in SRL between expert and novice learners (Cleary & Zimmerman, 2001; Kitsantas & Zimmerman, 2002). In general, expert learners displayed significantly higher quality of planning strategies in the forethought phase including more specific goals setting and technique orientated strategic planning. Although the current study has been inspired by the need for more research on the role of L2 motivation in SRL, it is beneficial to take some individual differences into consideration to increase our understanding as to the antecedents of self-regulation in L2 learning.

2.6 Summary

This chapter reviewed studies on motivational orientation related to learners' subjective reasons for pursuing L2 learning and other key sources of motivational beliefs in academic contexts. The possible effects of motivational factors on SRL were discussed in the light of the findings from earlier research. In the latter part of this chapter, four components of SRL were proposed based on the assumptions shared by different models of SRL, and integrated into Zimmerman's cyclic model as a basis for identifying major self-regulatory processes involved in kanji learning.

The review of literature revealed that considerable research has been devoted to the study of SRL in general academic contexts. However, the processes involved in L2 learning may be quite different from ones already studied. Learning an L2 is not merely an acquisition of new skills or information but a complex process involving various aspects of human, social and environmental factors. Thus, simply generalising available findings in this field poses some questions. Nevertheless, research evidence indicating that SRL increases the chance of successful learning suggests that it is certainly an important area of study in the field of L2 acquisition, especially when a context requires students to take more control over their learning. There is a need for more research on motivation and self-regulation in L2 learning.

Although motivation has been widely recognised as an influential factor in successful L2 learning, how it relates to the actual learning process is not thoroughly understood. In addition, the large body of L2 motivation research has focused on L2 learners' overall disposition toward their learning; this makes it difficult to obtain a clear picture of motivational factors affecting actual learning processes. From the literature review, it is obvious that the role of motivation in SRL is not straightforward and cannot be understood if an investigation does not focus on an appropriate level of specificity in L2 learning.

Although breaking down one academic subject domain into even smaller segments has not often been attempted in SRL literature, the review of literature shows that task or situation specific motivation may better explain learner involvement in actual learning processes. Taking kanji learning as a basic level of analysis, this research breaks down the complex construct of motivation into researchable segments in order to provide a clearer picture of motivational factors contributing to the prediction of self-regulation in L2 learning for an important task. By identifying motivational factors affecting self-regulation in L2 learning, we can find ways to systematically design and administer an important task in a more motivating manner to encourage students' involvement in the task and become effective in their learning.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter begins with an overview of the research questions followed by a discussion of the reasoning behind the choice of data collection techniques. It then describes the steps and procedures used to collect data as well as the characteristics of the participants. The following section closely looks at the instruments specifically developed for this research and reports on the reliability and validity where relevant. The chapter concludes with the description of the overall procedures employed for data analysis.

3.2 Research Questions

This research was designed to assess Japanese language learners' motivational orientations, other key sources of motivational beliefs, and their use of SRL for the acquisition of kanji. It aimed at identifying motivational factors affecting self-regulation in kanji learning to provide a better understanding of the complex relationships between motivation and SRL. Specifically, the following research questions were addressed:

1. What are the motivational orientations and key sources of motivational beliefs that learners of Japanese may have for kanji learning?
2. How do learners of Japanese self-regulate their kanji learning?
3. What are the relationships between motivation and SRL?
4. Which motivational factor best predicts students' use of self-regulation in kanji learning?

3.3 Selection of Data Collection Techniques

In order to identify an appropriate data collection technique, previous research on SRL was examined. It revealed that students' uses of SRL have been measured by a variety of techniques including structured interviews, think-aloud protocols, observation, and trace methodologies (Winne & Perry, 2005). However, self-reported measures have been the

most utilised approach in identifying different facets of SRL in relation to other important constructs. The two predominating measures are the Learning and Study Strategies Inventory (LASSI: Weinstein, Zimmerman, & Palmer, 1988), and the Motivated Strategies for Learning Questionnaire (MSLQ: Pintrich, Smith, Garcia, & McKeachie, 1991). A number of studies using these instruments have provided valuable information about learners' perceptions and how they relate to their SRL (Duncan & McKeachie, 2005; Olaussen & Bråten, 1992).

Nevertheless, self-reported measures are not exempt from criticism. The major concern of this approach in SRL studies has been the accuracy of learners' perceptions. This limitation is mostly salient in studies involving younger students who have difficulties in generalising their typical approach across time and different learning tasks within one domain (Perry & Winne, 2006). Perceptions of older students, on the other hand, appear to be more accurate (Darrow & Marsh, 2006). Since the current research focuses on motivation and SRL of tertiary students with a task focused approach, this limitation is minimized. However, the choice of instrument should also be made in terms of the objectives of the investigation and availability of resources.

One of the underlying general objectives of the current study is examining the generalisability of available research findings to the context of L2 learning. The researcher is aware that using self-reported measures alone may not be sufficient to provide a complete picture of the complex relationships between motivation and SRL. However, this approach is still considered appropriate to evaluate the generalisability and identify where more in-depth investigation is needed since it is more likely than other paradigms to produce reliable and replicable data that can easily be compared and contrasted.

In addition, the profound regional variation in ethnic composition in New Zealand (Statistics New Zealand, 2006) further suggests that including students from diverse local areas is necessary for samples to be more representative. Considering the available resources, self-reported measures are thought to be one of the most cost effective methods as it is often easier than other paradigms to administer from geographically remote locations without the researcher's presence. Furthermore, this method is feasible when collecting a large amount of data for necessary statistical power within the limited time available for this research. Taking all these situational factors into consideration, a

quantitative approach making use of a questionnaire survey was selected as the most appropriate data collection technique for the current piece of research.

3.4 Procedures

The self-administered questionnaire was developed by the researcher and piloted in August 2008 with students enrolled in an introductory Japanese course at Massey University in Palmerston North. It revealed that the number of students learning Japanese at a single New Zealand tertiary institution was relatively small. This number was not ideal to investigate the underlying motivational and SRL components or test the validity of the instrument. For this reason, a variety of tertiary institutions offering Japanese programmes in New Zealand were contacted via email in early 2009 and asked to consider taking part in this research. They also received an outline of the research and the questionnaire for their review. Over this period, the researcher gained ethical approval from the Massey Human Ethics Committee Southern B for the research design. The letter of approval is provided in Appendix A.

Of all the institutions contacted, seven decided to cooperate in this research and provided emails indicating their permission and support to collect data from their students once the ethical approval was gained. Where requested, individual instructors of Japanese were also contacted and asked for their permission and support. One of the instructors did not provide permission to access his or her students and therefore the third year students of Japanese at this particular institution were not included. In order to reduce the time commitment from the staff members at cooperating institutions, all necessary materials to conduct the questionnaire survey were prepared in hard copy by the researcher.

Based on the information provided, the required number of self-administered questionnaires and information sheets as well as a postage paid courier bag in which to return a set of completed questionnaires were posted to each institution. For ethical reasons, blank sealable envelopes for respondents to place their completed questionnaire in before handing it in were also included in this package. At the end of a class period during July and August of 2009, students received the questionnaire and information sheet explaining the purpose of the study, their rights as a participant as well as the chance to

win a Japanese-English dictionary which was included as appreciation for their time and effort (see Appendix B). Students were instructed to complete and return the questionnaire within a few weeks in the subsequent classes if they decided to participate in the research.

This timing of the questionnaire distribution was set for several reasons. Firstly, students were expected to have completed at least one semester of instruction involving kanji by this time. Secondly, it was necessary to wait until students were settled in the course as they often change or withdraw from the course before this period. Thirdly, it was desirable to complete the data collection before students were going to be occupied with other academic requirements, such as exam preparation.

All the institutions were able to return the collected questionnaires in the supplied courier bag to the researcher by the middle of September, 2009. In total, approximately 900 questionnaires were distributed and 384 completed questionnaires were returned. One might notice the procedure followed might have elicited responses from students who were more motivated or highly self-regulated learners but the response rate of 43 % indicated a fairly good cross selection of students.

All returned questionnaires were given unique codes for the purpose of the prize draw. These codes were printed on a piece of paper and separated out and then placed in an envelope. One of the research supervisors who had no idea whose codes they were picked one of them from the envelope. The draw was made in the school office at 2pm on the 19th of October, in the presence of a school secretary. The winner was contacted via email and accepted the offer. Once the prize was posted and received by the winner, the information collected from the questionnaires was coded and computed for all relevant variables with statistical software SPSS Version 18.

3.5 Participants and Settings

The participants in this study were 381 students of Japanese from seven tertiary institutions in New Zealand ranging mostly in age from 18 to 20 ($n = 221$). There were 201 females (53%), 131 males (34%) and 49 unknown in gender (13%). Some students ($n = 3$) were excluded because they did not complete more than half of the questionnaire or indicated

Japanese was their first language. The three major first languages reported were English ($n = 215$), Chinese ($n = 80$), and Korean ($n = 45$). Mandarin and Cantonese were grouped together as Chinese because some respondents did not distinguish between these two languages. Table 3.1 summarises the characteristics of participants.

Table 3.1
Characteristics of the Participants

Category	Level	Number	Proportion[1]
Gender	Female	201	.53
	Male	131	.34
	Unknown	49	.13
Age	-17	4	.01
	18-20	221	.58
	21-23	80	.21
	24-26	35	.09
	27-29	12	.03
	30+	26	.07
	Unknown	3	.01
First Language	English	215	.56
	Chinese	80	.21
	Korean	45	.12
	Taiwanese	2	.10
	Others	31	.08
	Unknown	8	.02
Level of Study	Year 1	216	.57
	Year 2	97	.26
	Year 3	63	.17
	Unknown	5	.01
Major	Japanese	191	.50
	Other	180	.47
	Unknown	10	.03
Study status	Full-time	353	.93
	Part-time	25	.07
	Unknown	8	.01
Study mode	Internal	361	.95
	Extramural	20	.05
Opportunity	Yes	198	.52
	No	175	.46
	Unknown	7	.02

Note: $n = 381$

[1] The total proportion of each category might not be 1 because of the rounding at the second decimal point.

Half of the participants ($n = 191$) reported that they were learning Japanese as a major in their study programme but the majority of participants ($n = 276$) had never visited Japan. Nevertheless, approximately half of the participants ($n = 198$) reported that they had some opportunities to read or write kanji outside the classroom mostly for socialising or leisure purposes such as exchanging letters and reading Japanese magazines. The participants differed in levels of learning but all were expected to be learning kanji in their course at the time of participation.

Of seven cooperating institutions, four were located in the North Island and three were located in the South Island. Although all cooperating institutions differed in size in terms of the number of students of Japanese they had, they all allowed students to take a Japanese course on a part-time base. However, the majority of the participants were full-time students ($n = 353$). In addition, there was only one institution offering an extramural mode through which students can learn Japanese by distance. As a result, almost all participants ($n = 361$) were learning Japanese through an internal mode where the instruction took place in regular contact classrooms.

Since the number of participants was seriously imbalanced in subgroups of the study status, modes of study, and age, it was decided not to include these variables for further analyses because of the cost of low statistical power. The influence of individual characteristics related to research question one and two were examined based on participants' first language, level of study, major, and opportunity to use kanji outside the classroom. Depending on their first language, participants were divided into two groups: kanji background and non-kanji background. Participants whose first language was Chinese, Korean, or Taiwanese were considered to be from kanji backgrounds ($n = 127$) as they use a similar writing system as kanji in contemporary everyday written communication whereas the others were grouped as non-kanji backgrounds ($n = 246$).

3.6 Instruments

Since there is no existing measurement of SRL which asks respondents about a specific learning event, such as kanji learning, it was necessary to develop instruments which met the objectives of the current study. A self-reporting questionnaire survey containing a

variety of statements to assess motivational orientation, key sources of motivational beliefs and SRL use was developed by the researcher (see Appendix C). It consisted of three parts: a 'motivation and kanji learning' questionnaire, a 'student information' questionnaire, and a 'general background' questionnaire, which all took approximately 15 minutes to complete. In August 2008, the questionnaire survey was piloted with 19 students enrolled in the introductory Japanese course at Massey University in Palmerston North. The following describes the design and development of the questionnaire survey and reports the reliability and validity where relevant.

3.6.1 Motivation and kanji learning questionnaire

The motivation and kanji learning questionnaire was further divided into three scales: (1) motivational orientation, (2) motivational beliefs and (3) kanji learning strategies. In total, there were 52 items designed to assess variables related to each dimension on a 6-point Likert scale ranging from either 'strongly disagree' to 'strongly agree' or 'not at all true of me' to 'very true of me' depending on the nature of questions. Since this was a new questionnaire specifically developed for the purposes of this study, the reliability and validity of each scale were assessed through several statistical techniques in preparation for data analysis.

 (1) *Motivational orientation scale*

The pilot stage of the questionnaire assessed students' motivational orientation by a means of open ended questions. Initially, an open-ended question was considered to allow respondents some freedom without restricting their answers but it resulted in oversimplified information. To overcome this problem, 13 items to rate the degree of agreement on a 6-point scale were developed after careful examination of existing literature (e.g., Deci & Ryan, 1990; Elliot & Harackiewicz, 1996; Gardner, 1985) and included in this study. Table 3.2 presents the number and examples of the items that were presumed to capture five types of motivational orientation.

Table 3.2

Motivational Orientations, the Number of Items, and Sample Statements

Orientation	Number of items	Example Statements
Intrinsic	3	…[a]it is a challenge that I enjoy.
Mastery	2	…I want to master Japanese.
Performance	2	…I want to do better than someone else in this course.
Instrumental	4	…I have a better chance of employment.
Integrative	2	…I can communicate better with people who have knowledge of Japanese.

Note: [a]Each statement is preceded by the phrase either *I am learning kanji so that, I am learning kanji because,* or *I am learning kanji to.*

Students were asked to rate all items because motivational orientation was assumed to be a multidimensional construct in this study. Also, motivational orientation is generally concerned with the reasons for engaging in an activity, and thus all these statements started with a phrase either 'I am learning kanji to', 'I am learning kanji because' or 'I am learning kanji so that.' The 13 items were subject to a principal components analysis (PCA) for an exploratory purpose in order to examine the dimensionality and increase the structural validity of the motivational orientation scale.

Prior to the analysis, the factorability of the 13 items from the motivational orientation scale was assessed with several well-recognised criteria. Firstly, the sample size ($n = 381$) exceeded the recommended number of 300 (Tabachnick & Fidell, 2001, p. 588). Secondly, inspection of the correlation matrix showed the presence of a number of coefficients of .3 and above, indicating high concurrent validity across several of the items. The Kaiser-Meyer-Olkin value was .83, exceeding the recommended value of .6, and Bartlett's Test of Sphericity showed statistical significance ($\chi^2 = 1419.54$, $df = 78$, $p < .000$), suggesting the factorability of the correlation matrix. Given these overall indicators, PCA was conducted with all 13 items.

PCA extracted three components with eigenvalues exceeding 1, explaining the 56.1% of the total variance. Each component contributed 32%, 14% and 10% of the variance respectively. The scree plot for factor analysis is presented in Appendix D. To aid the interpretation of the three components, varimax rotation was performed. The rotated solution revealed the presence of good structure showing a number of strong loadings with certain items substantially loading only one component. The value of loading indicates the degree an item contributes to its component and thus suggests a good convergent validity

of the scale. However, three items had cross-loading above .4 on two components, potentially lowering the discriminate validity. Table 3.3 presents the varimax rotation of the three component solution for the 13 items from the motivational orientation scale.

Table 3.3

Factor Loading for the 13 Items in the Motivational Orientation Scale based on a
Principal Components Analysis with Varimax Rotation

	Component		
	1	2	3
…[a]it is a challenge that I enjoy.	.78[b]		
…it makes me feel satisfied.	.69		
…I enjoy studying Japanese.	.69		
…better understand Japanese culture that I am interested in.	.65	.35	
…I want to master Japanese.		.75	
…I really want to be able to read and write Japanese well.	.37	.67	
…I can communicate better with people who have knowledge of Japanese.	.36	.62	
…I have a better chance of employment.		.56	.31
…I want to use it when I travel to Japan.	.45	.53	
…I want to do better than someone else in this course.			.76
…I can impress others.	.55		.64
…I want to receive a better grade.		.50	.57
…it is a requirement.	-.38		.50

Note: [a]Each statement is preceded by the phrase either *I am learning kanji so that, I am learning kanji because,* or *I am learning kanji to.*
[b]Factor loadings < .3 are suppressed.

All intrinsic orientation items were loaded on Component 1. Similarly, all mastery orientation items and two instrumental orientation items were loaded on Component 2. On the other hand, integrative orientation items were loaded on either Component 1 or 2. One of the integrative orientation items "…to better understand Japanese culture that I am interested in" had a primary loading on Component 1 whereas the item "…I can communicate better with people who have knowledge of Japanese" was loaded more on Component 2. This suggested that learning kanji to understand Japanese culture was a more intrinsically orientated form of motivation than the other. All performance goal items and those considered to be the least internalised form of motivational orientation, were loaded on Component 3. The pattern of component loadings suggested the following descriptive labels: *intrinsic orientation* (Component 1), *instrumental mastery orientation* (Component 2)*,* and *performance orientation* (Component 3).

In an attempt to assess the reliability, item analysis was further performed. The item "…it is a requirement" did not meet acceptable reliability (item-total correlation coefficient [r] = .17) and was therefore eliminated. The overall reliability of the motivational orientation scale was found to be good (Cronbach alpha [α] = .81; n = 12). The internal consistency reliability coefficients showed how consistently each construct was measured across the items within the scale. They were considered within the acceptable range for research with new measures: intrinsic orientation (α = .77; n = 4), instrumental mastery orientation (α = .72; n = 5), and performance orientation (α = .60; n = 3). This form of reliability tests how consistently an instrument measures a particular construct across its various items.

(2) *Motivational beliefs scale*

There were 19 items to assess Japanese language learners' key sources of motivational beliefs about kanji learning in this scale. However, four of the items developed to measure causal attributional beliefs were not used in data analysis of this research due to the theoretical difficulty of capturing causal attributions before any actual tasks were completed. This issue was not identified during the pilot stage of the research, and one possible reason for this was that the pilot study only involved 19 participants. With the larger number of participants, all attribution items suffered from low levels of item-total correlation coefficients of less than .20. This indicated that they were not measuring a common construct and therefore discarded. These were the items 16, 20, 23 and 26 in the questionnaire presented in Appendix C.

In the light of theories and models of motivation (e.g., Bandura, 1997; Baumeister, 1997; Dörnyei, 2001a, 2005; Gardner, 1985), the remaining 15 items were those developed to measure students' self-concept, attitudes toward kanji learning, and beliefs about self-efficacy and task value. During the pilot stage, since it was impossible to utilize sophisticated statistical techniques with the small sample size, the 15 items were subject to exploratory factor analysis in order to examine the dimensionality and increase the structural validity of the scale. Table 3.4 shows the number and examples of the items to rate on a 6-point Likert scale ranging from 'strongly disagree' to 'strongly agree.'

Table 3.4
Sources of Motivational Beliefs, the Number of Items, and Sample statements

Motivational Construct	Number of Items	Example Statements
Attitudes	4	I am interested in learning kanji in this course.
Self-efficacy	3	I'm confident I can meet the requirements for kanji in this course.
Self-concept	4	When it comes to kanji, I feel like I am a loser.*
Task value	4	I believe kanji taught in this course will be useful for me.

Note: *Negative worded statements which require reverse coding before data construction.

Prior to conducting PCA, the suitability of data from the 15 items of the motivational beliefs scale for using this method was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above, indicating high concurrent validity across several of the items. The Kaiser-Meyer-Olkin value was above the recommended acceptable level of 0.6 as the obtained value was .83, and Bartlett's Test of Sphericity was statistically significant ($\chi^2 = 2358.70$, $df = 105$, $p < .000$), suggesting the factorability of the correlation matrix. Given these overall indicators, PCA to extract factors was conducted with all 15 items.

PCA extracted four components with eigenvalues exceeding 1, explaining the 66% of the total variance. Each component contributed 38%, 12%, 9 % and 7% to the variance respectively. The scree plot for factor analysis is presented in Appendix D. To aid the interpretation of these four components, varimax rotation was performed. The rotated solution revealed the presence of good structure in which three components showed a number of strong loadings with certain items substantially loading only one component. However, four items had cross-loading above .4 on two components. Table 3.5 presents the varimax rotation of the four component solution for the 15 items from the motivational beliefs scale.

Table 3.5

Factor Loading for the 15 Items from the Motivational Beliefs Scale based on a Principal Components Analysis with Varimax Rotation

	Component			
	1	2	3	4
When it comes to kanji, I feel like I am a loser.*	.79[a]			
It is difficult for me to accomplish my goals in kanji learning.*	.75			
I don't think I can receive good marks for assessments focused on kanji.*	.72			
I believe I am good at learning kanji.	.67	.38		
I think learning kanji is fun.		.83		
I like learning kanji because I derive personal pleasure from it		.78		
I am interested in learning kanji in this course.		.73		
I think learning kanji is boring.*	.34	.71		
I wish I didn't have to learn anymore kanji.*	.42	.59		
I believe the kanji taught in this course will be useful for me.			.73	.36
I am certain I can master the kanji this course.	.53		.65	
I am confident I can meet the requirements for kanji in this course.	.57		.59	
I think I am able to learn kanji as well as most other students of Japanese.	.47		.54	
The benefit I get will not be as much as the time I devote to learning kanji.*				.79
I don't think knowledge of kanji is very important for my future.*				.75

Note: [a]Factor loadings < .3 are suppressed.

*Negative worded statements which require reverse coding before data construction.

All self-concept items had strong primary loadings on Component 1. Similarly, all self-efficacy times were loaded on Component 3 but had, for the most part, cross loadings on Component 1, suggesting a difficulty in discriminating these two constructs within a single scale. This was the same for the constructs of attitudes and intrinsic task values. All items presumed to capture positive attitudes were loaded on Component 2 with an item assessing intrinsic task value. Also, an item developed to assess utility task values was loaded on the same component as self-efficacy beliefs. This showed the possible close relationship between self-efficacy and utility task value beliefs. On the other hand, the rest of task value items had strong primary loadings on Component 4. The pattern of component loadings suggested the following descriptive labels: *self-concept* (Component 1), *intrinsic value* (Component 2), *self-efficacy* (Component 3), and *extrinsic value* (Component 4).

The reliability of the motivational beliefs scale was assessed by a means of item analysis. The overall reliability of the scale was found to be good, ($\alpha = .88$; $n = 15$) and the internal

consistency reliability coefficients of self-concept ($\alpha = .80$; $n = 4$), intrinsic value ($\alpha = .84$; $n = 5$), and self-efficacy ($\alpha = .78$; $n = 4$) were relatively high. However, Cronbach alpha for extrinsic value ($\alpha = .58$; $n = 2$) appeared to be slightly lower than recommend value of .6. Nevertheless, an acceptable level of internal consistency reliability should be dependent on a function of the context in which the value will be used. While interpretation resulting from this component should be exercised carefully, the Cronbach alpha for extrinsic task value is considered to be promising for an exploratory purpose.

(3) *Kanji learning strategies scale*

Based on the major self-regulatory processes presented in Table 2.1, the kanji learning strategies scale was developed to assess students' use of SRL. There were 20 items in this scale and again a 6-point scale was used but this time another scale description anchoring 'not at all true of me' and 'very true of me' was employed: it was hoped they would elicit responses related to what students were actually doing rather than what they believed they should do. At the pilot stage, this scale did not contain negatively worded statements. As a result, it observed an acquiescence bias in which the respondents tended to agree with the statements as presented rather than disagree. To cope with this problem, some items were negatively coded in the main study.

Although SRL was operationalised by the total scores obtained from this scale, an investigation into items which did not meet acceptable levels of reliability and an examination of the underlying components to test the structural validity were necessary for obvious reasons. The major self-regulatory processes in this study included four components: cognitive/metacognitive regulation, affective regulation, behavioural regulation, and environmental regulation. Table 3.6 presents the number and examples of items attempting to capture self-regulatory processes related to these components. The majority of the self-regulatory processes fell into the cognitive/metacognitive component since the cognitive and metacognitive strategies were the core elements of self-regulation in learning.

Table 3.6
SRL Components, the Number of Items, and Sample statements

Component	Number of Items	Example Statements
Cognitive/metacognitive	10	I use particular strategies or techniques to learn kanji that work for me.
Affective	3	When I feel stressed about kanji learning, I know how to reduce this stress.
Behavioural	4	When learning kanji, I keep working until I reach the goal that I have set.
Environmental	3	When the learning environment becomes unsuitable, I usually give up studying kanji rather than sorting out the problem.*

Note: *Negative worded statements which require reverse coding before data construction.

In order to assess the validity of the proposed components, the 20 items in the kanji learning strategies scale were subject to PCA. The suitability of this analysis was tested with the same criteria used for the other scales. The Kaiser-Meyer-Olkin value appeared to be .83, exceeding the recommended value of 0.6, and Bartlett's Test of Sphericity showed statistical significance (χ^2 = 1640.337, *df* = 190, *p* < .000), suggesting the factorability of the correlation matrix. Finally, inspection of the correlation matrix revealed the presence of many coefficients of .3 and above with the exception of two items 'When I find it difficult to study kanji by myself, I ask someone for help' and 'I learn all kanji in the same manner.' After testing the reliability, it was decided to exclude these items since they significantly reduced the overall reliability of the kanji learning strategies scale (*r* = .01 and *r* = .25). After removing these two items, PCA was conducted with the 18 remaining items.

PCA extracted four components with eigenvalues exceeding 1, explaining the 55% of the total variance. Each component contributed 26%, 10%, 6 % and 5% to the variance respectively. The scree plot for factor analysis is presented in Appendix E. To aid in the interpretation of these three components, varimax rotation was performed. The rotated solution revealed the presence of simple structure revealing that all four components showed a number of strong loadings with certain items substantially loading only one component. However, one item had cross loadings on three components. Table 3.7 presents the varimax rotation of the three component solution for the 18 items from the kanji learning strategies scale.

Table 3.7

Factor Loading for the 18 Items from the Kanji Learning Strategies Scale based on a Principal Components Analysis with Varimax Rotation

	Component			
	1	2	3	4
I use particular strategies or techniques to learn kanji that work for me.	.76[a]			
When learning kanji, I keep working until I reach the goal that I have set.	.75			
When I find kanji I don't understand but I should know I make sure I study it later.	.54			
I regularly test my knowledge of kanji.	.51			.41
I know how to cope with a sense of boredom in order to continue learning kanji.	.49	.33	.38	
When learning kanji, I often achieve my goal more quickly than I expected.	.38			
I organise the kanji I learn according to the meaning, shape and/or reading.		.72		
I make associations between new kanji and other kanji I already know.		.65		
When learning kanji, I visualise it in my head.		.55		
I compare and contrast kanji that are confusing.		.54		
I try and think of ways to make kanji learning more enjoyable.	.34	.47		
I often find that I don't spend enough time on kanji learning because of other activities.*			.70	
When the learning environment becomes unsuitable, I usually give up studying kanji rather than sorting out the problem.*			.66	
I often find it difficult to stick to a study schedule for learning kanji that I have set.*			.66	.40
Even if I am aware of how badly I have learned certain kanji, I usually can't be bothered to study it again.*	.41		.51	
When I feel stressed about kanji learning, I know how to reduce this stress.	.38		.43	
I have a set time each day/week which I spend learning kanji.				.77
I keep records of kanji I have and/or haven't mastered.	.36			.56

Note: [a]Factor loadings < .3 are suppressed.

*Negative worded statements which require reverse coding before data construction.

Although the current study initially did not distinguish metacognitive regulation from cognitive regulation, the results of factor analysis revealed that they were separate components. The more cognitive orientated items were loaded on Component 2 whereas those considered metacognitive were loaded on Component 4. Similarly, many behavioural regulation items were loaded on Component 1 while those involving a manipulation of environmental variables were loaded on Component 3. Interestingly, all affective regulation items were loaded on a different component from one another. The item 'I know how to cope with a sense of boredom in order to continue learning kanji' was loaded on Component 1, the item 'I try and think of ways to make kanji learning more enjoyable' was loaded on Component 2, and the item 'When I feel stressed about kanji learning, I

know how to reduce this stress' was loaded on Component 3. This suggested that affective regulatory processes in kanji learning were not an independent component but rather were relevant to different components of self-regulation.

The pattern of component loadings suggested the following descriptive labels: *behavioural regulation* (Component 1), *cognitive regulation* (Component 2), *environmental regulation* (Component 3), and *metacognitive regulation* (Component 4). Through the item analysis, the overall reliability of the kanji learning strategies scale was found to be good ($\alpha = .82$; $n = 18$). The internal consistency reliability coefficients of behavioural regulation ($\alpha = .77$; $n = 6$), cognitive regulation ($\alpha = .62$; $n = 6$), and environmental regulation ($\alpha = .64$; $n = 5$) were considered acceptable but the Cronbach alpha for metacognitive regulation ($\alpha = .51$; $n = 2$) appeared to be poor. Nevertheless, the item-total correlation coefficients of the 18 items for the kanji learning strategies scale were all above the recommended value of .30 including the metacognitive regulation items; $r = .39$ and $r = .45$ respectively. This indicates that the 18 items in this scale were likely to be measuring the same construct namely SRL. Yet, the data related to the metacognitive regulation should be interpreted carefully.

To summarise, the overall reliability of all scales in the motivation and kanji learning questionnaire was good with no item total correction coefficient below .30; motivational orientation scale ($\alpha = .81$), motivational beliefs scale ($\alpha = .88$), and kanji learning strategies scale ($\alpha = .82$). The internal consistency reliability of each component within each scale was for the most part above .60 and considered to be acceptable or promising for a new measure. Two components that had a low reliability were extrinsic task value ($\alpha = .58$) and metacognitive regulation ($\alpha = .51$). In addition, the discriminant validity of self-efficacy items and self-concept items was found to be poor. Since the underlying components were identified to compute composite scores for the data analysis, care must be taken when interpreting data involving these variables.

3.6.2 Student information questionnaire

The student information questionnaire asked respondents to provide information about demographic characteristics including their age, gender, and length of residence in Japan.

It also included questions about study background such as the level of learning, study location, full-time status, major, and mode of study. In case of the need to conduct a further investigation, there were some questions regarding contact details only if respondents were willing to participate. The information collected from the student information questionnaire was coded and computed for data analysis.

3.6.3 General background questionnaire

The general background questionnaire contained six questions related to reasons for learning Japanese in general and length of time learning Japanese as well as opportunities to write or read kanji outside the classroom. It also included questions about students' knowledge and proficiency of other languages including their L1. Most of the questions were open ended and they provided a valuable insight into the purpose of developing instruments during the pilot stage. However, some of the questions appeared to be redundant or inappropriate for a larger scale investigation because they produced oversimplified responses that were not easily coded or quantified.

3.7 Data Analyses

The information collected from 381 questionnaires was first coded for all relevant variables and computed for statistical analyses. An inspection of missing values or non-responses indicated that they occurred at random. It was then decided to manage the missing values using pairwise solutions which excluded the cases or respondents only when they were missing the data needed for the specific analysis. The statistical software SPSS Version 18 was used for all statistical analyses carried out in this study.

As a first step of data analysis, mean scores and standard deviations of each component of motivational orientation, beliefs and SRL scale were calculated to summarise the responses. The relationships among the motivational and SRL components were then examined using Pearson product-moment correlation coefficients. A series of multivariate analyses of variance (MANOVAs) and several independent-samples t-tests were performed to explore the influence of participants' individual characteristics on their motivational orientation, key sources of motivational beliefs, and SRL use with regard to

their gender, orthographic background (kanji and non-kanji backgrounds), level of study (1 year, 2 year and 3 year), major (Japanese major and non-Japanese major), and opportunity to use kanji outside the classroom (available and not available). To analyse the contribution of motivational constructs to the predictions of SRL use, multiple regression analyses were conducted as follow-up analyses. All statistical significances in this study were determined under two-tailed tests.

3.8 Summary

This chapter provided a full account of the study design including the reasoning behind the decisions made during various stages of the development and implementation of the study. It began with the outline of research questions and the description of procedures, participants and settings with explanations of how participants were categorised and which individual variables were retained for data analysis. In the following section, instruments used in the study were described in detail to discuss how each scale in the instruments was constructed. Specifically, the reliability and validity as well as some limitations of the instruments were examined and reported by exploring the underlying structure of each scale. The factor structure extracted in this section will be used for further investigation to answer the research questions using methods of data analysis presented at the end of this chapter.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter describes the statistical procedures followed and presents the major findings resulting from the data analyses. Structurally, this chapter is organised into four sections, each of which attempts to answer one of the research questions presented under section 3.1. In the first two sections, the descriptive statistics obtained from the motivation and kanji learning questionnaire are presented with correlational data in an attempt to explore participants' motivation and SRL for the acquisition of kanji. The interactions of motivational and SRL variables are examined in the third section. The last section presents the results of multiple regression analyses suggesting motivational factors that contribute to the prediction of SRL.

4.2 Research Question One

The first research question aimed at exploring the type and degree of motivational orientation and key sources of motivational beliefs that learners of Japanese may have for kanji learning. Descriptive statistics were first obtained for each component of the motivational orientation and motivational beliefs scales to summarise the responses. Pearson product-moment correlation coefficients were further computed at a level of significance (p) to explore the interdependence of the components. It should be noted that correlation coefficient analysis is a statistical technique to measure the interdependence of more than one variable (Pallant, 2005). The value of a coefficient does not indicate any causal relationship but rather explains how much a change in one variable can account for a change in another. Cohen (1988) suggests the following guidelines to determine the strength of a relationship with the coefficient: $r = .10$ to $.29$ (small); $r = .30$ to $.49$ (medium); $r = .50$ to 1.00 (large).

Initially, statistically significant correlations were found for almost all possible combinations of motivational variables. However, the large sample size was likely to detect a very small correlation as significant and produce Type I errors that are false rejections of a null hypothesis (Pallant, 2005). In order to reduce the risk of Type I errors, a

Bonferroni approach to set a more conservative alpha level for determining significance was used. For the 23 correlations, a *p* value of less than .002 (= .05/23) was required for significance in this approach. Table 4.1 shows the correlation matrix for all possible pairs of the motivational orientations (intrinsic, instrumental mastery, and performance orientation) and the key sources of motivational beliefs (self-efficacy, self-concept, intrinsic, and extrinsic value) along with their respective means and standard deviations on 6-point scales.

Table 4.1
Means, Standard Deviations, and Correlation Coefficients for Motivation Variables

	Mean	SD	1	2	3	4	5	6	7
1. Intrinsic orientation	4.14	1.01	-						
2. Instrumental mastery	4.67	.84	.58*	-					
3. Performance	3.36	1.07	.30*	.29*	-				
4. Self-efficacy	4.60	.87	.46*	.39*	.15	-			
5. Self-concept	4.21	1.07	.31*	.12	.08	.62*	-		
6. Intrinsic value	4.18	1.02	.69*	.43*	.06	.49*	.51*	-	
7. Extrinsic value	4.47	1.03	.24*	.38*	-.06	.28*	.19*	.30*	-

Note: *$p < .002$
Sample size ranged from 377 to 380 because of the pairwise solutions for missing values.

As shown in Table 4, the high mean scores for instrumental mastery orientation (*M* = 4.67) and self-efficacy beliefs (*M* = 4.60) indicate that participants in this study were highly self-efficacious with regard to the acquisition of kanji and were more strongly drawn to instrumental mastery orientation in which they were learning kanji to master Japanese and utilize the knowledge when they travel to Japan. It should be noted that, in this study, learning kanji for communicative purposes was also categorised in the instrumental mastery orientation as a result of the PCA.

On the other hand, learning kanji for better understanding of Japanese culture belonged to the intrinsic orientation which was the same as for learning kanji for personal pleasure. Since the mean difference between the instrumental mastery orientation and intrinsic orientation was relatively small, it could be reasonably concluded that participants tended to be drawn toward these two orientations. However, the mean score for performance orientation (*M* = 3.36) appeared to be close to the midpoint of the response scale, indicating they were less likely to be learning kanji to demonstrate competencies or outperform others.

Interestingly, however, the mean for extrinsic value approached the high end of the 6-point response scale. Although performance goals or orientations were often discussed in terms of the extrinsic nature of motivation, they were not necessarily attaining the same end in this study. This was probably because the extrinsic value in this study entailed more than demonstrating competence but included the attainment value or the relative importance of the task in one's future as well as the associated cost such as the time required to learn kanji. It appeared that participants in this study placed more extrinsic value than intrinsic values on kanji learning. Similarly, participants' self-concept was not as high as their self-efficacy beliefs. This means that although they were self-efficacious in general they might have a weaker sense of pride when performing well with this particular task.

Nevertheless, the correlation matrix in Table 4.1 revealed a positive strong relationship between self-efficacy and self-concept ($r = .62$), suggesting that self-efficacious learners also had a positive self-concept. On the other hand, a significant but weak correlation was found between self-concept and extrinsic value ($r = .19$). This showed that the influence of extrinsic value on self-concept, or vice versa, was relatively small. Although all correlations among the key sources of motivational beliefs were statistically significant, extrinsic value had the smallest correlation with all the other motivational beliefs.

Likewise, all correlations among three motivational orientations were significant, indicating the multidimensionality of the construct. However, performance orientation had no significant relationship with any of the four sources of motivational beliefs. In addition, instrumental mastery orientation was found to be independent of self-concept. This suggested that feelings about one's self in kanji learning did not necessarily correspond to students' disposition to be drawn to instrumental mastery orientation. In contrast, intrinsic orientation was associated with all sources of motivational beliefs with the coefficients all greater than or equal to .24.

MANOVAs were further conducted in order to examine if there were any differences in participants' motivational orientation and motivational beliefs based on their gender (male and female), orthographic background (kanji and non-kanji background), level of study (1 year, 2 year and 3 year), opportunity to use kanji outside the classroom (available and not available), and major (Japanese major and non-Japanese major). MANOVA compares the mean scores of more than two groups in order to examine whether any statistically

significant differences exist. It is considered more appropriate than other similar procedures such as analysis of variance when there is more than one dependent variable or component such as is the case in this study (Pallant, 2005). This is because conducting a number of analyses of variance for every component increases the risk of a Type I error. In other words, without a MANOVA, the chance of detecting significant differences is more likely when in fact there are no differences between groups. The mean differences were tested at a level of significance (p). Cohen (1988) suggests the following guidelines to determine the magnitude of differences in means: $\eta^2 = .01$ (small); $\eta^2 = .06$ (moderate); $\eta^2 = .14$ (large).

Several preliminary analyses were carried out to assess the normality, univariate and multivariate outliers, homogeneity of variances, and homoscedasticity of residuals for the suitability of using MANOVAs with the data. Using a Levene's test of equality of error variance, the preliminary analysis detected the violations of the assumption of homogeneity of variances for the data related to performance orientation of the two orthographic backgrounds, and those related to extrinsic value of the two major groups. To address the problems, an alpha level of .01, instead of .05, as recommended by Tabachnick and Fidell (2001), was used to determine significance for these variables in the univariate F-test during the MANOVA procedures. Otherwise no serious violation was found. A series of MANOVAs was conducted and the results revealed that there were no statistically significant differences in means of motivational variables based on participants' gender or level of study. However, several statistically significant differences were found for their orthographic backgrounds, opportunities to use kanji outside the classroom, and majors.

For the two orthographic backgrounds of participants, there was a statistically significant difference between the groups on the combined motivational variables, F (7, 361) = 7.52, p < .0005; Wilks' Lambda = .87; partial η^2 = .13. When the results for the motivational variables were considered separately, using Bonferroni adjusted alpha levels of .001 (=.01/7) for performance orientation and .007 (= .05/7) for the rest of the variables, the differences to reach statistical significance were performance orientation, F (1, 367) = 20.82, p < .0005, η^2 = .05, self-concept, F (1, 367) = 14.94, p < .0005, η^2 = .04, and extrinsic value, F (1, 367) = 8.18, p = .004, η^2 = .02. An inspection of the mean scores showed that participants with a kanji background were more strongly drawn to performance orientation (M = 3.70, SD = 1.19) and reported more positive self-concept (*M*

= 4.50, SD = 1.01) but lower extrinsic values (*M* = 4.26, SD = .1.05) than ones from a non-kanji background (*M* = 3.18, SD = .95; *M* = 4.05, SD = 1.07; *M* = 4.58, SD = 1.00).

Another MANOVA was conducted to test the mean differences between two groups of participants who indicated that they have opportunities to use kanji outside the classroom and those who did not. There was a statistically significant difference on the combined motivational variables, F (7, 362) = 6.77, p < .0005; Wilks' Lambda = .88; partial η^2 = .12. An inspection of each individual independent variable, using a Bonferroni adjusted alpha level of .007 (= .05/8), showed that there was no statistically significant difference for the performance orientation, F (1, 368) = 1.83, p = .18; partial η^2 = .01. However, the differences were significant for all the other motivational variables. Table 4.2 reports the results of the MANOVA as well as means and standard deviations of the seven motivational variables for the two groups.

Table 4.2
Results of the MANOVA for Motivation Variables on the Availability of Opportunities to use Kanji

	Available		No opportunity					
	Mean	SD	Mean	SD	*df*	*F*	*p*	η^2
Intrinsic orientation	4.37	.97	3.88	1.02	1	22.65	.000	.06
Instrumental mastery orientation	4.86	.79	4.46	.84	1	22.29	.000	.06
Performance orientation	3.44	1.12	3.29	1.02	1	1.83	.180	.01
Self-efficacy	4.76	.83	4.43	.89	1	12.99	.000	.03
Self-concept	4.35	1.04	4.04	1.08	1	8.04	.005	.02
Intrinsic value	4.47	.97	3.84	.98	1	38.20	.000	.09
Extrinsic value	4.66	1.00	4.25	1.04	1	14.51	.000	.04

As shown in Table 4.2, participants who had opportunities to use kanji outside the classroom were more strongly drawn to intrinsic and instrumental mastery orientations, and reported higher self-efficacy beliefs, intrinsic values and extrinsic values, and had more positive self-concepts than those who did not have such opportunity.

For the two major groups of participants, there was a statistically significant difference between the groups on the combined motivational variables, F (7, 361) = 7.52, p < .0005; Wilks' Lambda = .91; partial η^2 = .09. When the results for the motivational variables were considered separately, using a Bonferroni adjusted alpha level of .001 (=.01/7) for extrinsic value and .007 (=.05/7) for the rest of the variables, the only differences to reach statistical

significance were instrumental mastery orientation, $F (1, 367) = 20.82$, $p < .0005$, $\eta^2 = .05$ and extrinsic value, $F (1, 367) = 8.18$, $p = .004$, $\eta^2 = .02$. An inspection of the mean scores showed that participants whose major was Japanese were more strongly drawn to instrumental mastery orientation ($M = 4.78$, SD $= .86$) and extrinsic value was more important for them ($M = 4.67$, SD $= .93$) than those with a non-Japanese major ($M = 4.54$, SD $= .79$; $M = 4.27$, SD $= 1.10$).

4.3 Research Question Two

The second research question was similar to the first one in that it was concerned with the types and degrees of self-regulation applied by learners of Japanese for kanji learning. In line with the first research question, descriptive statistics were obtained for each component of the kanji learning strategies scale which in fact assessed respondents' use of SRL. Again, Pearson product-moment correlation coefficients were computed at a level of significance (p) to explore the interdependence of the components. Using a Bonferroni approach for the six correlations, a p value of less than .008 (= .05/6) was required for significance. Table 4.3 displays the correlation matrix for all possible pairs of SRL variables along with their respective means and standard deviations.

Table 4.3
Means, Standard Deviations, and Correlation Coefficients for SRL Variables

	Mean	SD	1	2	3	4
1. Behavioural regulation	3.80	.90	-			
2. Cognitive regulation	3.69	.92	.48*	-		
3. Environmental regulation	3.56	.91	.49*	.16*	-	
4. Metacognitive regulation	2.87	1.24	.45*	.34*	.28*	-

Note: *$p < .008$
    Sample size ranged from 379 to 381 because of the pairwise solutions for missing values.

As shown in Table 4.3, all means for SRL variables were just above or below the midpoint of the response scale and symmetrically distributed. The descriptive statistics indicated that participants varied in their degree of self-regulation in kanji learning but, in general, they did not report frequent use of a variety of strategies to regulate their learning processes. Nevertheless, behavioural regulation, which included working until reaching personally set goals and testing knowledge regularly, was the most utilised type of self-regulation.

Although the correlation matrix showed that all correlation coefficients were statistically significant, behavioural regulation, in particular, had moderately strong correlations with all the other SRL variables. Thus, participants who adopted behavioural regulation were also likely to use cognitive, environmental, and metacognitive regulation. Cognitive regulation embodying association and visualisation strategies seemed to be less frequently used than behavioural regulation, and environmental regulation including strategies such as time management less frequent again. The metacognitive regulation appeared be the least utilised type of self-regulation. This indicated that setting study schedules and keeping records to learn kanji were not such popular methods for the participants.

MANOVAs were further conducted to investigate whether there were any differences in participants' SRL based on gender (male and female), orthographic background (kanji and non-kanji background), level of study (1 year, 2 year and 3 year), opportunity to read or write kanji outside the classroom (available and not available) or major (Japanese major and non-Japanese major). The same preliminary analyses used for motivational variables were followed. Through the preliminary analyses, one multivariate outlier, a participant who achieved extremely unusual combinations of the scores, was detected and excluded with a $p < .001$ criterion for the Mahalanobis distance. Other than this, no serious violation was found. A series of MANOVAs revealed that there were no statistically significant differences in means of SRL variables based on participants' gender, level of the study, and major. However, several statistically significant differences were found for their orthographic backgrounds and opportunities to use kanji outside the classroom.

For the two orthographic background groups of participants, there was a statistically significant difference between the groups on the combined SRL variables, $F (4, 365) = 5.95$, $p < .0005$; Wilks' Lambda $= .94$; partial $\eta^2 = .06$. When the results for the SRL variables were considered separately, the only difference to reach statistical significance, using a Bonferroni adjusted alpha level of .01 (=.05/4), was environmental regulation, $F (1, 368) = 11.55$, $p = .001$; partial $\eta^2 = .03$. An inspection of the mean scores indicated that participants with a kanji background used more environmental regulation ($M = 3.79$, SD $= .77$) than ones from a non-kanji background ($M = 3.46$, SD $= .94$).

For two groups of participants, those who indicated that opportunities to use kanji were available outside the classroom and those who did not have such opportunities, there was a

statistically significant difference on the combined SRL variables, $F (4, 366) = 7.71$, $p <$ .0005; Wilks' Lambda $= .92$; partial $\eta^2 = .08$. When the results for the SRL variables were considered separately, using a Bonferroni adjusted alpha level of .01 ($=.05/4$), there was no statistically significant difference for the metacognitive regulation, $F (1, 369) = 3.44$, $p = .06$; partial $\eta^2 = .01$. The two groups differed in terms of their behavioural regulation, $F (1, 369) = 21.39$, $p < .0005$; $\eta^2 = .06$, cognitive regulation, $F (1, 369) = 11.80$, $p < .001$; $\eta^2 = .03$, and environmental regulation, $F (1, 369) = 18.93$, $p < .0005$; $\eta^2 = .05$. An inspection of the mean scores indicated that participants who had opportunities to use kanji outside the classroom employed more behavioural regulation ($M = 4.00$, SD $= .90$), cognitive regulation ($M = 3.84$, SD $= .88$), and environmental regulation ($M = 3.75$, SD $= .88$) than those who indicated no such opportunity was available ($M = 3.58$, SD $= .86$; $M = 3.52$, SD $= .92$; $M = 3.35$, SD $= .90$).

In order to examine whether these individual characteristics still impact on participants' overall use of SRL, the total mean scores of all items in the kanji learning strategies scale were calculated and compared for different groups of participants. As expected there was no difference in the overall use of SRL based on their gender, level of study, and major. However, the results of independent-samples t-tests revealed statistically significant differences for their orthographic backgrounds and the availability of opportunities to use kanji outside the classroom. An independent-samples t-test is similar to a MANOVA but is used to compare the mean scores of two groups of people.

The results of the t-test showed a statistically significant difference in the overall mean scores of SRL for the two orthographic groups ($t = 2.37$, df $= 371$, $p = .02$). Participants with a kanji background used more SRL in general ($M = 3.72$, SD $= .67$) than ones from a non-kanji background ($M = 3.54$, SD $= .70$). The mean difference between groups was .18 and the 95% confidence interval for the estimated population mean difference was between .31 and .33. In other words, when the sample size is large, approximately 95% of the sample mean should fall within the standard errors of the population mean. Hence, there was a difference that was significant at the 5 % level. The magnitude of the difference was, however, found to be small ($\eta^2 = .01$).

Another t-test also revealed a statistically significant difference for participants who indicated that opportunities to use kanji were available outside the classroom and those

who did not have such opportunities ($t = 5.27$, df = 372, $p < .0005$). Participants who had opportunities to use kanji outside the classroom used more SRL in general ($M = 3.77$, SD = .69) than those who did not have such opportunities ($M = 3.40$, SD = .66). The mean difference between groups was .37 and the 95% confidence interval for the estimated population mean difference was between .23 and .51. This time, the effect size was moderate ($\eta^2 = .07$).

4.4 Research Question Three

The third research question investigated the relationships between motivation and SRL. As a first step to address this question, the total mean score of all items in the kanji learning strategies scale was first calculated ($M = 3.6$; SD = .70) to operationalise the overall use of SRL in kanji acquisition. A Pearson product-moment correlation coefficient analysis was conducted at a level of significance (p) to examine the relationships between motivation and SRL variables. Although all correlation coefficients were not presented as some of them were already provided above, there were 55 possible combinations for the variables in this analysis and thus a p value of less than .0008 (= .05/55) was required for significance with a Bonferroni approach. Table 4.4 presents the correlation coefficients for all combinations of the seven motivational variables and the four SRL variables as well the overall use of SRL.

Table 4.4
Correlation Coefficients between Motivation and SRL Variables

	Int	InstM	Per	Eff	Con	IV	EV
Behavioural regulation	.46*	.30*	.18*	.52*	.46*	.47*	.21*
Cognitive regulation	.39*	.25*	.14	.30*	.17	.37*	.12
Environmental regulation	.23*	.11	.01	.40*	.56*	.38*	.19*
Metacognitive regulation	.26*	.15	.15	.11	.12	.22*	.06
SRL	.47*	.29*	.16	.50*	.49*	.51*	.21*

Note: *$p < .0008$
    Int = Intrinsic orientation; InstM = Instrumental mastery orientation; Per = Performance orientation; Eff = Self-efficacy; Con = Self-concept; IV = Intrinsic value; EV = Extrinsic value. Sample size ranged from 377 to 381 because of the pairwise solution for missing values.

As shown in Table 4.4, all correlations between motivational variables and SRL variables including the overall use of SRL were positive with some statistically significant

coefficients. First of all, the overall use of SRL had statistically significant relationships with all motivational variables except performance orientation. This indicated that whether participants were drawn to performance orientation or not did not have a strong influence on their use of SRL. For the different types of self-regulation, notably, all motivational variables significantly correlated with behavioural regulation.

Similarly, the relationships between environmental regulation and the four sources of motivational beliefs were all significant but only one orientation, intrinsic orientation, appeared to be associated with environmental regulation. On the other hand, cognitive regulation was influenced significantly by self-efficacy and intrinsic value beliefs, and was also related to intrinsic and instrumental orientations. Metacognitive regulation was found to be the least affected by motivational variables showing only two statistically significant but weak correlations with intrinsic orientation ($r = .26$) and intrinsic value ($r = .21$).

Looking at SRL from different types of motivation, intrinsic orientation and intrinsic value were correlated with all SRL variables including its overall use. This suggests that good self-regulated learners tended to place intrinsic value on kanji learning and were more likely to be drawn to intrinsic orientation. Since these two motivational constructs shared some conceptual similarities, similar effects on SRL might be expected. Nevertheless, it is also true that not all students who place intrinsic value on an activity decide to engage in that activity and endorse intrinsic orientation.

Similarly, the correlation coefficients for self-efficacy were, for the most part, significant with the exception of metacognitive regulation ($r = .11$, $p > .0008$). This indicated that self-efficacy beliefs had no significant effect on setting schedules and keeping records to learn kanji. In contrast, performance orientation had only one significant but weak relationship with behavioural regulation ($r = .18$), indicating that it had a very small contribution to self-regulation. In addition, apart from the overall use of SRL, both self-concept and extrinsic value had significant correlations with behavioural and environmental regulation but the correlations for extrinsic value were relatively weak. Further, although instrumental mastery orientation was significantly correlated with behavioural regulation ($r = .30$), cognitive regulation ($r = .25$), and the overall use of SRL ($r = .29$), the coefficients were found to be small as well.

4.5 Research Question Four

After the correlation coefficient analyses were carried out to examine whether there were significant relationships among the motivational variables and the SRL variables, a series of standard multiple regression analyses was conducted as follow- up analyses for research question four. It looked at contributions of motivational variables to the prediction of SRL in an attempt to identify the best predictors. Multiple regression analysis is a statistical technique which can be used to test how well a set of variables is able to predict a specific outcome (Pallant, 2005). In a multiple regression analysis, the contribution of each independent variable to explaining the dependent variable is indicated by the beta coefficient value (β), suggesting the larger the value, the stronger unique contribution.

Again, the suitability of employing this technique had to be examined. The correlation matrix in the previous section showed the multicollinearity of variables which was one of the assumptions to conduct multiple regression analyses, suggesting that the intercorrelation of independent variables should not exceed .70 (Pallant, 2005). Other assumptions such as the linearity and homoscedasticity of the data were checked from the residuals scatterplots which were generated as part of the multiple regression procedures. With the use of a $p < .001$ criterion for Mahalanobis distance, no univariate outlier or respondent with extremely unusual scores was found. This technique was then used to determine the relative contribution of each motivational variable to SRL and identify the best predictor of SRL to answer research question four.

Firstly, a multiple regression analysis was conducted to evaluate how well the motivational variables predicted SRL in general. The predictors were the three motivational orientations and four sources of motivational beliefs, while the criterion variable was the overall use of SRL. The linear combination of motivational variables was significantly related to SRL, $F (7, 369) = 33.45$, $p < .0005$. The R square value was .39, indicating that approximately 39% of the variance of the overall use of SRL can account for the linear combination of the motivational variables. However, although all motivational variables except performance orientation had significant correlations with the overall use of SRL, three variables; instrumental mastery orientation ($\beta = -.03$, $p = .57$), performance orientation ($\beta = .06$, $p = .16$), and extrinsic value ($\beta = .04$, $p = .41$), proved to be non-significant predictors. Self-concept was the best predictor of participants' use of SRL ($\beta = 21$, $p < .01$). The remaining

three variables, self-efficacy ($\beta = 19$, $p < .01$), intrinsic value ($\beta = 19$, $p < .01$), and intrinsic orientation ($\beta = 18$, $p = < .01$) had almost the same contribution.

In order to evaluate the contribution of motivational variables to each SRL variable, the same processes used above were followed. The linear combination of motivational variables was found to be significant for all SRL variables: behavioural regulation; F (7, 369) = 30.86, $p < .0005$, cognitive regulation; F (7, 369) = 12.15, $p < .0005$, environmental regulation; F (7, 369) = 26.47, $p < .0005$, and metacognitive regulation; F (7, 368) = 4.59, $p < .0005$. The results of these multiple regression analyses are summarised in Table 4.5.

Table 4.5
Standard Beta Coefficients predicting SRL from Motivation Variables

	SRL	Behavioural	Cognitive	Environmental	Metacognitive
Intrinsic orientation	.18**	.17**	.20**	-.02	.19*
Instrumental mastery	-.03	-.02	-.03	-.03	-.01
Performance orientation	.06	.08	.06	-.03	.10
Self-efficacy	.19**	.26**	.17*	.06	-.06
Self-concept	.21**	.17**	-.11	.46**	.05
Intrinsic value	.19**	.12	.21**	.12	.09
Extrinsic value	.04	.04	.00	.06	.01
R^2	.39***	.37***	.19***	.33***	.08***

Note: *$p < .05$; **$p < .01$; *** $p < .0005$
     The sample sizes ranged from 378 to 381 because of pairwise solutions for missing values.

As shown in Table 4.5, the model predicting behavioural regulation accounted for approximately 37% of the variance. Self-efficacy was the best predictor of behavioural regulation ($\beta = .26$, $p < .01$). Intrinsic orientation ($\beta = .17$, $p < .01$) and self-concept ($\beta = .17$, $p < .01$) had almost the equal contribution in explaining behavioural regulation. For cognitive regulation, the model accounted for approximately 19% of the variance. Intrinsic value ($\beta = .21$, $p < .01$) was the best predictor of cognitive regulation followed by intrinsic orientation ($\beta = .20$, $p < .01$). Also, self-efficacy was a positive predictor of cognitive regulation ($\beta = .17$, $p < .05$). For environmental regulation, the model accounted for approximately 33% of the variance but self-concept appeared to be the single significant contributor ($\beta = .46$, $p < .01$). For metacognitive regulation, only about .08% of the variance was accounted for by the motivational variables. It was found that intrinsic motivational orientation ($\beta = .19$, $p < .05$) was the single significant contributor. Lastly but

importantly, the three motivational variables, instrumental mastery orientation, performance orientation, and extrinsic value did not predict any type of self-regulation.

4.6 Summary

The above results showed that Japanese learners in this study were most strongly drawn to instrumental mastery orientation followed by intrinsic orientation and less likely to endorse performance orientation. Interestingly, however, participants with a kanji background were more inclined to performance orientation whereas those who had a positive self-concept tended to be drawn to intrinsic orientation. While intrinsic orientation had a significant positive relationship with all motivational constructs identified in this study, performance orientation was not correlated with any sources of motivation.

Nevertheless, apart from performance orientation, the results revealed the interdependence of the identified motivational constructs and the possible interactional effects on SRL. Self-efficacy, in particular, had the strongest relationship with self-concept which motivated participants to endorse intrinsic orientation. Participants who had an intrinsic interest in the task used a variety of strategies to self-regulate their kanji learning. As a result, self-efficacy, self-concept, and intrinsic orientation and value predicted participants' use of SRL in general.

Overall, self-concept was found to be the best predictor of SRL. However, all significant predictors made a unique contribution to different types of SRL. Intrinsic orientation predicted all types of self-regulation except environmental regulation which was only predicted by self-concept. Intrinsic value and self-concept were the best predictors of cognitive and behavioural regulation respectively. Since participants who used behavioural regulation employed a wider variety of strategies to self-regulate their kanji learning, self-efficacy was another important predictor of SRL.

Instrumental mastery orientation, performance orientation, and extrinsic value, on the other hand, appeared to be non-significant predictors. Participants with a kanji background achieved significantly higher scores on the response scale for not only performance orientation but also extrinsic value whereas those who reported opportunities to practise

kanji were available outside the classroom showed significantly higher intrinsic interest in the task. A detailed discussion of the major findings is provided in the next chapter in the light of the theoretical accounts and empirical studies presented in Chapter 2.

CHAPTER 5: DISCUSSION

5.1 Introduction

The main purpose of this research was exploring Japanese language learners' motivational orientation, key sources of motivational beliefs, and self-regulation for the acquisition of kanji. Ultimately, it attempted to identify motivational factors affecting self-regulation in L2 learning at a task level, namely learning a specific component of the language. This chapter provides a detailed discussion of the findings in the light of the theoretical accounts and empirical studies presented in Chapter 2. The discussion is organized into four sections, each of which concerns one or two of the research questions presented under section 3.1. The first three sections interpret and discuss the major findings focussing on the identification and interaction of motivational orientations, key sources of motivational beliefs and self-regulation. The final section of this chapter is devoted to a discussion which draws together all strands of the findings to form a coherent picture of motivational factors contributing to the prediction of SRL.

5.2 Motivational Orientation in Kanji Learning

This study provides theoretically-driven and empirically-based analyses that contribute to research on motivation in L2 learning at the level of a specific task. The variables used to assess students' orientation were developed based on a careful examination of theories and models of motivational orientation evolved both in the L2 field and other disciplinary areas within psychology (e.g., Deci & Ryan, 1990; Elliot & Harackiewicz, 1996; Gardner, 1985). Without restricting students' responses, it explored the possibility of a factor structure underlying all these variables. An exploratory factor analysis identified three dimensions that accounted for Japanese language learners' subjective reasons to pursue kanji learning: intrinsic motivational orientation, instrumental mastery orientation, and performance orientation.

The intrinsic dimension included learning kanji for the inherent satisfaction of the activity itself as well as a better understanding of Japanese culture. In the traditional socio-educational model of L2 acquisition, learning an L2 to understand the target culture was

grouped into integrative orientation together with learning an L2 to communicate with people who have knowledge of the target language (Gardner, 1985). However, in this study, the motivation to understand the culture was identified as intrinsic orientation whereas the desire to communicate with others was found to be instrumental mastery orientation. This suggests that learning kanji for a better understanding of the target culture is the more internalised form of motivation in terms of self-determination. In other words, L2 learners who have an interest in the target culture are more likely to feel self as an origin of the action and derive a sense of personal enjoyment than those learning kanji to communicate with others.

Although Gardner (1985) suggested that both integrative and instrumental orientations reflect L2 learners' extrinsic motives, the results of the current study support the prediction that certain types of integrativeness are more intrinsic in nature. At the same time, it shows that intrinsic orientation is a construct distinct from mastery goals. Although it is not uncommon to make a link between intrinsic orientation and mastery goals in motivation literature (Ames, 1992; Barron & Harackiewicz, 2000; Wolters, et al., 1996), when they are examined on a specific task, they represent separate dimensions. Nevertheless, the fact that students in this study are strongly drawn to both intrinsic orientation and instrumental mastery orientation confirmed the multidimensionality of motivational orientation, indicating that learners are drawn to not only one motivational orientation but a combination of different types of orientations (Dörnyei, 1994).

Particularly, students who had opportunities to use kanji outside the classroom were more strongly orientated toward both intrinsic and instrumental mastery orientations than other students. This highlights that opportunities to engage in the activity outside the classroom increases students' intrinsic interest and a sense of mastery. However, the results of MANOVAs showed that only instrumental mastery orientation was related to their decision to pursue the activity in their major field. In this study, the instrumental mastery dimension embraced both a sense of mastery and secondary benefits of engaging in the task. Although there has been a tendency to conflate mastery goals with intrinsic motivation, and instrumental orientation with extrinsic motivation, the results of this study showed that mastery orientation is not necessarily distinctive from instrumental orientation. At the level of a specific task, however, this finding is plausible because learning kanji to master the language also implies its secondary benefits.

According to self-determination theory, the variables included in the instrumental mastery dimension are considered to be more externally controlled forms of motivation and hence can be categorised as extrinsic motivation. Since the instrumental mastery dimension was the most commonly reported orientation, Japanese language learners in this population were said to be more extrinsically motivated to learn kanji. Nevertheless, intrinsically and extrinsically motivated behaviours are not opposing constructs but rather a bipolar continuum between self-determined and externally controlled regulation (Deci & Ryan, 1990). Thus, the instrumental mastery dimension in this study should not be regarded as purely extrinsic since it also involves one's sense of mastery.

On the other hand, students with performance orientation mainly focused on receiving a better grade to demonstrate their competencies or outperform their peers. In addition, although all motivational orientations were positively correlated in this study, the relationships found with performance orientation were relatively weak. This indicates that students endorsing performance orientation are less likely to focus on the mastery or intrinsic interest in the activity. Nevertheless, the performance orientation is the least adopted orientation by students in this population. Interestingly, however, the current research found that students with a kanji background are more likely to pursue performance orientation. This may be because performance orientation is more relevant to educational cultures these students have earlier experienced or those who already have sufficient knowledge see that kanji learning is not an intellectually stimulating task through which they can derive inherent satisfaction or gain secondary benefits.

5.3 Key Sources of Motivation in Kanji Learning

Motivational orientation is neither the only factor nor the most important factor influencing SRL. In academic contexts, a number of different motivational beliefs are presumed to interact with motivational orientation and influence students' use of SRL. Although there are many motivational beliefs that may affect SRL, this study focused on those considered to be more relevant to the learning of an L2 in academic contexts. It explored students' attitudes toward the task, their self-efficacy and task value beliefs, and self-concept using the variables developed in the light of SRL and L2 motivation literature (e.g., Bandura, 1997; Baumeister, 1997; Dörnyei, 2001a, 2005; Gardner, 1985). An exploratory factor

analysis identified four factors underlying the variables: self-efficacy, self-concept, intrinsic value, and extrinsic value.

Notably, students with intrinsic orientation displayed positive motivational beliefs for all these areas. Similarly, instrumental mastery orientation had a significant positive relationship with all motivational beliefs except self-concept. Thus, students who are highly self-efficacious, have a positive self-concept and task value in kanji learning tend to endorse intrinsic orientation; but if they do not invest their self-worth, they are drawn to instrumental mastery orientation. In contrast, performance orientation had no significant correlation with any of the four motivational beliefs including extrinsic value of the task. This indicates that performance orientation is not only distinctive from extrinsic value but also may have little direct impact on SRL.

Nevertheless, all possible pairs of motivational beliefs had a statistically significant positive correlation, indicating the interdependence of the identified constructs. In general, students in this study were highly self-efficacious with regard to the acquisition of kanji and placed more extrinsic than intrinsic value on the activity. Although previous research has identified four separate components of task value: intrinsic, attainment, and utility value, and cost (Eccles-Parsons, et al., 1983), this study found that the cost of engaging in the activity and attainment value are not distinctive but both represent extrinsic value. In addition, the utility value is clustered together with self-efficacy beliefs, indicating that students who believe the knowledge of kanji is useful also believe they are capable of succeeding in the task. Consistent with this finding, self-efficacy had a significant positive correlation with instrumental mastery orientation, in which a sense of mastery and utility value were embraced.

The conceptualisations of task value appear to be slightly different from the ones initially considered as they were more broadly identified into two dimensions rather than four. However, the significantly higher extrinsic value reported by students with a major in Japanese provided additional empirical evidence for a relationship between task value and behavioural choice (Wolters & Pintrich, 1998). This replicated the finding that students' enrolment decision was positively associated with the value they attached to skills or knowledge (Eccles, 2005) and negatively associated with their perceived cost of engaging in the activity (Battle & Wigfield, 2003). Apart from their extrinsic value, no significant

difference was found based on students' major. Although many self-efficacy theorists emphasise the importance of self-efficacy for the initiation of behaviour, the results of this study suggest that extrinsic value also plays a role in encouraging students to pursue their academic goals within the field at least when considered for a particular aspect of learning.

However, there was no difference in motivational beliefs based on their gender or level of study. This finding was somehow unexpected since a number of studies have reported that some of the key sources of motivation such as self-efficacy, goal orientation, and task value were mediated by gender differences or levels of study (Eccles, 2005; Okita, 1995; Pajares & Valiante, 2001). One possible reason for the contradicting finding is that unlike many other studies, this study investigated motivation for a particular task. As several researchers have demonstrated that task specific motivation can vary from more generalised or overall motivation (Dörnyei & Kormos, 2000; Tremblay, et al., 1995), these characteristics of learners may have less impact on motivation for a particular task.

On the other hand, students who use kanji in their first language or have opportunities to use kanji outside the classroom reported a significantly higher positive self-concept than others. Students who had opportunities to use kanji outside the classroom, in particular, also indicated significantly higher self-efficacy and intrinsic value beliefs. These findings are consistent with previous research suggesting that a higher sense of self-concept is associated with positive self-efficacy (Pajares & Schunk, 2002), and that self-efficacious L2 learners tend to derive more feelings of enjoyment from engaging in the activity (Yang, 1999). In the current research, since the variables that measured students' intrinsic value were clustered together with those initially developed to capture their attitudes toward the task, the finding is similar to Tremblay and Gardner's (1995) study showing that self-efficacy interacts with L2 attitudes.

Nevertheless, self-efficacy of students with a kanji background did not differ significantly from those with a non-kanji background in spite of their higher sense of self-concept. The fact that students with a kanji background invested their self-worth in kanji learning was not very surprising because the logographic characters were already part of their life. However, the lack of differentiation of their self-efficacy was unexpected because they were likely to have more mastery experience, one of the most important sources of self-efficacy suggested by Bandura (1997). In addition, this particular group of students

reported significantly lower extrinsic value than students with a non-kanji background. Again, this contradicts the theoretical implication that attainment value is closely associated with self-concept (Eccles-Parsons, et al., 1983). Nevertheless, since the construct of extrinsic value in the current research embodied the negative aspect of engaging in kanji learning, students with a kanji background might think that spending their valuable time on something they already have sufficient knowledge of is costly rather than beneficial.

5.4 Self-Regulation in Kanji Learning

Motivational orientation and beliefs are presumed to interact and together affect how students self-regulate their kanji learning. Based on the general assumptions shared by different models of SRL, four components of self-regulation were proposed: cognitive/metacognitive, affective, behavioural, and environmental regulation. The four components of self-regulation were integrated into Zimmerman's cyclic model (Zimmerman & Camppillo, 2003) in order to identify major self-regulatory processes involved in kanji learning. The identified major self-regulatory processes were then used to develop variables assessing Japanese language learners' use of SRL for the acquisition of kanji. An exploratory factor analysis was conducted to explore the underlying structure of the observed variables and the results consisted of four components: metacognitive, cognitive, behavioural, and environmental regulation.

The factor structure extracted from the explanatory factor analysis was slightly different from the one initially proposed. Firstly, the results showed that cognitive and metacognitive regulation did not belong to the same dimension but two distinctive dimensions. Cognitive and metacognitive regulations are, however, difficult constructs to distinguish without empirical analysis as they may overlap considerably depending on the purpose of the application. One such example would be setting proximal study goals as a means of obtaining knowledge (cognitive regulation) or as a way of monitoring the learning processes (metacognitive regulation). Although cognitive and metacognitive regulation are closely dependent on each other, this study provides empirical evidence that certain types of self-regulation, such as keeping records and setting study schedules, can be studied separately from other cognitive regulation, as metacognitive regulation.

Secondly, the variables developed to assess students' capacity to monitor, control and regulate their affective or motivational states are categorised either on the basis of the behavioural, cognitive or environmental properties. For example, affective regulation used to manage a sense of boredom in order to continue working on the task was found to be part of behavioural regulation whereas affective regulation used to make the task more enjoyable was identified as an aspect of cognitive regulation. This indicates that affective regulation may not be an independent construct but rather intertwined with another type of self-regulation depending on the focus of the valence being regulated. Nevertheless, it should be noted that, for the most part, affective variables had a cross loading above .30 on a second factor, indicating that they are associated with more than one component of SRL.

In general, students in this population did not achieve a high score on the response scale for any components of SRL. The results show that students infrequently applied strategies to self-regulate their kanji learning. Nevertheless, behavioural regulation, which focussed on students' decisions to volitionally engage in kanji learning and their ability to keep the planned learning commitment, was found to be the most utilised type of SRL. The behavioural regulation, in particular, had a strong positive relationship with all the other forms of SRL. This suggests that students using behavioural regulation are also likely to use cognitive, environmental and metacognitive regulation. In other words, students who do not use behavioural regulation are unlikely to be cognitively, environmentally, or metacognitively active.

Nevertheless, some of the variables identified as behavioural regulation seem to be more metacognitive and not behavioural per se. For example, students' attempts to regularly test their knowledge may be considered as a metacognitive process. The results of an exploratory factor analysis, however, identified them with variables primarily focussing on behavioural regulation. This implies that metacognitive processes used to control behaviour may be reasonably classified as behavioural regulation.

On the other hand, environmental regulation included variables involving a manipulation of learning contexts. However, the item assessing students' help-seeking skills did not load on any of the components or even meet an acceptable level of internal consistency reliability and thereby had to be eliminated. Although several researchers suggest that help-seeking is an important part of SRL (Pintrich, 2005), students' help-seeking skills

may have quite unique characteristics from those that have been widely investigated in the SRL literature. Consequently, environmental regulation in this study focused more on monitoring and controlling contextual variables in order to manage one's own time for kanji learning than setting study schedules that belonged to metacognitive regulation.

Previous research has shown that there are some individual differences in SRL. Zimmerman & Martinez-Pons (1990) found that girls tended to employ significantly more monitoring and planning strategies including goal setting, environmental structuring, and record keeping than boys did. In their study, students' grade level was also associated with SRL strategy use in that higher grade students surpassed lower grade students. While such differences were not observed in this study, statistically significant differences were found between students who indicated that opportunities to use kanji were available outside the classroom and those who did not.

Apart from metacognitive regulation, students with opportunities to practise kanji outside the classroom indicated significantly higher use of all types of self-regulation including its overall use. Similarly, students with a kanji background, overall, used more SRL than those with a non-kanji background. With respect to different types of SRL, however, the only difference was found for environmental regulation. Again, students who use kanji in their first language tended to employ more environmental regulation than the other group of students. Pintrich (1995) argued that although all students have the potential to control their own learning, strategies for SRL are promoted through appropriate learning opportunities. The results of this study show that having opportunities to practise kanji outside the classroom optimally increases the use of SRL.

In addition, this particular group of students also displayed significantly positive motivational beliefs and were more strongly drawn to intrinsic orientation. The results of this study are compatible with those of previous research which demonstrated that providing students with adequate opportunities to use strategies for SRL increased their degree of intrinsic orientation, perceived confidence and task value beliefs (Chang, 2005). This indicates the reciprocal interrelationship between motivation and SRL, providing additional evidence to support the idea that positive motivational beliefs are necessary to promote the use of strategies for SRL (McCombs & Marzano, 1990; Zimmerman &

Schunk, 2008). Thus, motivation and SRL are not only closely related but co-constructed to affect actual L2 learning processes.

5.5 Interactions of Motivation and SRL

Both motivation and SRL are extensively studied areas of research and the empirical connection to academic achievement has been reasonably secured. However, how they interact to affect actual L2 learning processes is not well understood. This research attempted to disentangle the complex relationships between motivation and SRL to provide a clearer picture of motivational factors contributing to self-regulation in L2 learning at a task level. Through exploratory factor analyses, this research identified three motivational orientations (intrinsic, instrumental mastery, and performance orientation) and four sources of motivation (self-efficacy, self-concept, extrinsic value, and intrinsic value) relevant to self-regulation in kanji learning. In the following section, the interactions between these motivational factors and with SRL are discussed, and then the key motivational factors predicting the use of SRL will be identified.

The correlational analysis revealed that none of the relationships between motivational and SRL variables was statistically negative. This suggests that none of the motivational factors identified in this study dramatically undermine SRL for the acquisition of kanji. Notably, intrinsic orientation and value had a statistically significant relationship with all components of SRL including its overall use. This finding, however, might be expected since a number of researchers have obtained similar results showing that self-regulation of behaviour is likely when people are intrinsically motivated (Deci & Ryan, 1990; Kitsantas & Zimmerman, 2002; Kline, 2006; Pajares & Valiante, 2001; Pintrich & De Groot, 1990; Schmidt & Watanabe, 2001). Nevertheless, when applied to the acquisition of kanji, intrinsic orientation was found to embrace integrative motives to understand the target culture whereas intrinsic value included students' positive attitudes toward the task.

Particularly, intrinsic orientation and value were the only factors associated with metacognitive regulation. This indicates that intrinsic interest is necessary for students to be metacognitively active in the task. Students who were drawn to intrinsic orientation or placed intrinsic value on the task not only utilised a variety of strategies for SRL but also achieved higher scores on the response scale for self efficacy, self-concept, and extrinsic

value. This supports previous research, indicating that intrinsic motivation has a close link with self-efficacy (Kitsantas & Zimmerman, 2002; Yang, 1999; Zimmerman & Bandura, 1994; Zimmerman & Kitsantas, 1999), self-concept, and task value beliefs (Eccles-Parsons, et al., 1983). Because of the conceptual similarity, it may not be very surprising that intrinsic orientation and intrinsic value had similar effects on other motivational factors. However, the predictive values of these two constructs for SRL showed some differences.

Both intrinsic orientation and intrinsic value predicted students' use of strategies for cognitive regulation as well as the overall use of SRL but were not significant predictors of environmental regulation. These results are consistent with the findings reported by Pintrich and his colleagues (Pintrich & De Groot, 1990; Pintrich, et al., 1994; Wolters & Pintrich, 1998) demonstrating that motivation constructs related to intrinsic interest are important predictors of cognitive engagement and strategy use for SRL. On the other hand, only intrinsic orientation not intrinsic value predicted students' behavioural regulation and metacognitive regulation. The results were different from those of previous studies that have shown a strong association between task value and the use of strategies related to metacognitive regulation in L2 learning (Kline, 2006; Schmidt & Watanabe, 2001).

One possible reason for the contradicting evidence is that, unlike the current research, previous studies did not apply a consistent level of specificity to investigate L2 learners' motivation and their use of strategies. In Schmidt and Watanabe's (2001) study, for example, while students' motivation was assessed with their overall disposition toward L2 learning, the evaluation of the strategies used at times focussed on a particular learning task such as the acquisition of vocabulary. This could make it difficult to draw a clear conclusion about the relationship between motivation and learning behaviour.

In addition, previous research did not clearly distinguish students' motivational orientation or reasons for engaging in L2 learning from other sources of motivation. As a result, task value in Schmidt and Watanabe's (2001) study had a much wider conceptualisation in which intrinsic, instrumental, and integrative orientation, general interest in foreign languages and cultures, and the value attached to the language course were all lumped together. However, at higher levels of education where excellence is determined on normative curves, it is possible that students who hold intrinsic value can also be strongly drawn to instrumental mastery or performance orientation rather than primarily to intrinsic

orientation. Indeed, instrumental mastery orientation was the most frequently adopted orientation by students in the current study.

Similar to students with intrinsic orientation, those with instrumental mastery orientation indicated a number of positive motivational beliefs but did not invest their self-worth in kanji learning. This indicates that having a positive self-concept is necessary for students to be drawn to intrinsic orientation. Nevertheless, the results showed that instrumental mastery orientation mediated students' enrolment decision, suggesting its influence on behavioural choice. In support of this point, instrumental mastery orientation was found to be associated with behavioural and cognitive regulation as well as the overall use of SRL. Since instrumental mastery orientation in this study includes a sense of mastery, these findings are similar to those of previous research presenting that student with mastery or learning goals are likely to use deeper cognitive processing and hold positive self-efficacy and self-concept (Pintrich, 2005; Wolters & Rosenthal, 2000).

However, instrumental mastery orientation was independent of environmental and metacognitive regulation. This may be because instrumental mastery orientation also involved motivation to engage in the task for secondary benefits. The traditional but well known research evidence suggests that introducing extrinsic rewards may undermine self-regulation of behaviour (Deci & Ryan, 1990), presumably shifting the perceived origin of action from self to an external cause. Consistent with this view, students with instrumental mastery orientation tended to place higher extrinsic value on the task than other students. Noels, Clément, and Pelletier (2001) also demonstrated that instrumental motivation in L2 learning is closely associated with externally controlled behaviour which is considered as the lowest level of self-determination.

Nevertheless, extrinsically motivated behaviour should not be inherently ineffective in L2 learning since a number of studies indicate that, regardless of their motivational orientation, those with strong motivation are likely to succeed (Ushioda, 2008). The results of this study showed that, as with intrinsic value, students who placed higher extrinsic value on kanji learning displayed a number of positive motivational beliefs including self-efficacy, concept and intrinsic value that may facilitate SRL. However, the correlations with those motivational beliefs were not strong. In addition, extrinsic value had only a small correlation with behavioural and environmental regulation, and no significant correlation

with cognitive and metacognitive regulation. The relationship with the overall use of SRL was also found to be relatively weak, suggesting that extrinsic value has little positive impact on self-regulation in kanji learning.

In spite of several statistically significant correlations, the results of multiple regression analyses produced no predictive value of instrumental mastery orientation or extrinsic value for SRL. These findings were rather surprising because of the statistically significant relationships, and a sense of mastery or the strength of value beliefs could be expected to produce some positive impacts on SRL as indicated in previous research (Kitsantas & Zimmerman, 2002; Pintrich, 2005; Wolters & Rosenthal, 2000). However, engaging in a particular activity to master the subject area might be a less self-determined form of motivation since students do not always have a choice to select the task and some important tasks in L2 acquisition such as kanji learning are unavoidable. The results also suggested that the type of value beliefs, not only the strength, is responsible for encouraging students to implement strategies for SRL.

In addition, correlational data alone cannot be used to address causality, although a large body of L2 motivation research relies on it without further analysis involving more detailed statistical techniques. Significant correlations may easily result from the existence of confounding variables. For example, if the number of crimes recorded and ice cream sold are significantly correlated without affecting directly each other, there may be a third variable affecting both of these variables such as temperature. One possible confounding variable affecting both motivation and self-regulation in L2 learning is whether opportunity to experiment with newly acquired knowledge is available to students outside the classroom.

Nevertheless, unlike instrumental mastery orientation and extrinsic value, performance orientation had no significant correlation with any sources of motivational beliefs in this study. In addition, the only significant correlation performance orientation had with SRL was its weak relationship to behavioural regulation, implying that there is no or little impact of performance orientation on SRL. The results of multiple regression analyses revealed that performance orientation did not predict any types of self-regulation in this study. Harackiewicz and Sansone (1991) argued that students with a performance orientation can be optimally motivated at higher levels of education, as in the case of this

study, where excellence is determined in terms of individuals' achievement relative to others. However, performance orientation in the current research had almost no association with SRL, indicating that students with a performance orientation are unlikely to be effective self-regulated learners.

The more advanced achievement goal framework proposed by Elliot and Hrackiewicz (1996), however, suggests that high levels of perceived competence are necessary for performance orientation to produce favourable outcomes. However, performance orientation was found to be independent of perceived competence or self-efficacy beliefs in the current study. In addition, a particular group of students, those with a kanji background, tended to be drawn to performance orientation but their self-efficacy beliefs did not differ from those with a non-kanji background. Further, students who had opportunities to use kanji outside the classroom were found to be self-efficacious but they were unlikely to endorse performance orientation. These findings suggest that it is not very common for students with high levels of perceived competence to be drawn to performance orientation as the advanced achievement goal framework indicates. Thus, revising the traditional achievement goal framework may be less meaningful in the context of L2 learning.

Nevertheless, students' self-efficacy beliefs appeared to be an important contributor to self-regulation in kanji learning. The correlational analyses showed that the level of self-efficacy beliefs was positively correlated with most motivational and SRL factors. In addition, self-efficacy predicted not only the overall use of SRL but also behavioural and cognitive regulation. The results were consistent with previous studies indicating that self-efficacy beliefs are associated with a sense of commitment (Bandura, 1997) and cognitive engagement in learning (Pintrich & De Groot, 1990; Wolters, et al., 1996). However, self-efficacy was not a significant predictor of metacognitive and environmental regulation. Nevertheless, the fact that self-efficacy was the best predictor of behavioural regulation indicates its predictive role for SRL since the model accounted for the largest proportion of the total variance for behavioural regulation.

Although all correlations among motivational factors were statistically significant, self-efficacy particularly had a very strong relationship with self-concept. This indicates that, in general, students' perceived competence is closely associated with their feeling of self-worth as Pajares and Schunk (2002) suggested. As with self-efficacy beliefs, self-concept

was not only significantly correlated with but also predicted behavioural regulation as well as the overall use of SRL. However, unlike self efficacy beliefs, self-concept was found to be independent of cognitive regulation. Instead, it was correlated with and predicted environmental regulation. Since self-concept was the single predictor of environmental regulation, self-worth investment may be unavoidable for SRL to control contextual variables in L2 acquisition at a task level.

Environmental and behavioural regulation in this study focused on students' ability to monitor and control behavioural and environmental variables respectively in order to continue working on the task. Thus, the results were compatible with the summary of earlier studies provided by Baumeister (1999) indicating that high self-esteem is associated with greater persistence especially when facing difficulties. However, neither self-efficacy nor self-concept had a significant relationship with metacognitive regulation. The results did not support earlier research suggesting that positive self-efficacy or self-esteem is critical for the use of metacognitive strategies (Borkowski, et al., 1990; Pintrich & De Groot, 1990).

As noted earlier, the only motivational factor predicting metacognitive regulation in the current study was intrinsic orientation. Although the total variance of metacognitive regulation the model accounted for by motivational variables was not great, the predictive role of intrinsic orientation in SRL was clear and significant from the results of the present research. Thus, supporting students to develop intrinsic interest in the task may also assist them in becoming a metacognitively active learner. In addition to intrinsic orientation, self-efficacy, self-concept, and intrinsic value were also considered important predictors. These motivational factors did not differ much in their predictive values. However, self-concept explained the largest amount of the variance for the overall use of SRL. Hence, it is considered as the best predictor of SRL in the acquisition of kanji.

On the other hand, instrumental mastery orientation, performance orientation, and extrinsic value did not predict any types of self-regulation. Interestingly, these non significant predictors had no or little relationship with self-concept. In other words, students with positive self-concept were self-efficacious learners who placed more intrinsic value than extrinsic value on kanji learning. These students also tended to endorse intrinsic and instrumental mastery orientation rather than performance orientation. However, when they

lack a positive self-concept, they are more strongly drawn to instrumental mastery orientation. Thus, self-concept is one of the most important key contributors promoting or facilitating self-regulation for an important task in L2 acquisition.

5.6 Summary

In this chapter, the interpretation and explanation of identified motivation and SRL constructs resulting from the current research were provided. These constructs were compared and contrasted with earlier research to highlight supporting and contradicting evidence. In general, this study supported the self-determination approach to motivation suggesting that the more motivation is internalised into one's self-system, the greater the positive impacts on self-regulation. At a task level, however, mastery goals are found to be closely associated with instrumental orientation which is considered as less self-determined motivation in the literature. In addition, this study provided evidence that certain types of integrative motives are more intrinsic rather than extrinsic. Particularly, engaging in L2 activities to increase understanding of the target culture is found be more intrinsically orientated motivation than learning the L2 to communicate with others.

The instrumental mastery dimension was the most adopted orientation by students in this population. However, interestingly students with a kanji background tended to focus on performance orientation. Both instrumental mastery and performance orientations are considered to be more externally controlled motivation but the latter is found to be an indicator of the lowest level of self-determination. Nevertheless, neither orientation predicted any types of self-regulation. This was the same for extrinsic value, indicating the ineffectiveness of externally controlled motivation in SRL. Conversely, intrinsic orientation not only had a significant positive relationship with all the other motivational factors but also predicted most types of self-regulation identified in this study including its overall use.

Other significant predictors of SRL include self-efficacy, self-concept, and intrinsic value. The correlational analyses revealed that all these significant predictors were positively correlated. Particularly, a very strong relationship was found between self-efficacy and self-concept. Hence, self-efficacious learners were likely to invest their self-worth in kanji learning. These students were strongly drawn to intrinsic orientation but when they did not

invest their self-worth they tended to pursue instrumental mastery orientation. Notably, students who indicated that opportunities to practise kanji were available outside the classroom achieved a high score on the response scale for all these significant predictors. In addition, these students reported significantly more use of behavioural, cognitive, and environmental regulation use. Their overall use of SRL also surpassed that of other students.

Although the individual characteristics of learners, such as orthographic backgrounds and learning opportunities outside the classroom, were not the central concern of the current research, the findings provided valuable insight into SRL unique to the context of L2 learning. The findings suggest that providing opportunities to practise newly acquired knowledge outside the classroom helps students to pursue intrinsic orientation and increase their positive attitudes toward the task that in turn foster a sense of self-efficacy. This may be important for students whose first language shares some linguistic similarities with the L2 because they are more inclined to endorse performance orientation and place extrinsic value on the task which had no direct relationship with other sources of motivation as well as SRL.

Overall, self-concept made the strongest contribution to explaining SRL use for the acquisition of kanji. In addition, self-concept was the single significant predictor of environmental regulation. Similarly, only intrinsic orientation predicted metacognitive regulation. Nevertheless, behavioural regulation was most affected by motivational factors included in this study and had self-efficacy as the best predictor. On the other hand, cognitive regulation was best predicted by intrinsic value. The results showed that all significant predictors (intrinsic orientation, self-efficacy, self-concept, and intrinsic value) had a unique contribution to different types of self-regulation. This study attempted to identify possible underlying structures of motivation and self-regulation in L2 learning at a task level and discussed how they interact to affect each other in an attempt to provide a clearer picture of motivational factors contributing to the prediction of SRL.

CHAPTER 6: CONCLUSION

My research journey began with a question of how I could support my students in becoming more motivated to engage in regular kanji practice. This question led to the main objectives of the current research: exploring Japanese language learners' motivation and SRL for the acquisition of kanji; examining the underlying structures and relationships between these factors; and identifying motivational factors that contribute to the use of SRL. Although this study is only the first of many steps that need to be taken in order to find the right answer for my inquiry, the results have provided a valuable insight into motivation and SRL in an aspect of L2 acquisition. In this chapter, I strive to bring together the major findings and draw out the key messages that emerged from the study. This concluding chapter is divided into two sections: the first section summarises the major findings and discusses the theoretical and practical implications, while the following section identifies the limitations of the study and provides some recommendations for future research.

6.1 Theoretical and Practical Implications

This study assessed Japanese language learners' motivational orientation, key sources of motivational beliefs, and self-regulation for the acquisition of kanji. The results, after data analyses using PCA, identified three orientations (intrinsic, instrumental mastery, and performance orientation), and four key sources of motivation (self-efficacy, self-concept, intrinsic value, and extrinsic values), and four major types of self-regulation (cognitive, metacognitive, behavioural, and environmental regulation) involved in kanji learning processes. In general, it was found that L2 learners of Japanese in this population were self-efficacious with regard to the acquisition of kanji and placed more extrinsic value than intrinsic value on the task. They were most strongly drawn to instrumental mastery orientation followed by intrinsic orientation and less likely to endorse performance orientation.

The dimensions captured by motivational orientation in this study exhibited characteristics that are unique to L2 learning. Traditionally, both integrative and instrumental orientation were thought to reflect L2 learners' extrinsic motives (Gardner, 1985). However, this study

demonstrated that certain integrative motives are intrinsic in nature. Specifically, learning kanji for a better understanding of Japanese culture was found to be an aspect of intrinsic orientation whereas the desire to communicate with others was identified as instrumental mastery orientation. The correlational analyses showed that students with intrinsic orientation had significantly higher scores for all sources of motivation included in this study. However, if they lack a sense of positive self-concept in the task, they are more likely to endorse instrumental mastery orientation.

The instrumental mastery dimension is a new motivational orientation in L2 research introduced by this study. It is a unique orientation relevant to task specific motivation which embraces both a sense of mastery and secondary benefits of engaging in a particular task. Although many goal theorists argue that a desire to master a subject area produces a number of positive impacts on learning (Ames, 1992; Barron & Harackiewicz, 2000; Wolters, et al., 1996), the results of this study imply that the motivational value of a sense of mastery may not be so powerful when it applies to a specific learning task. Instrumental mastery orientation had several significant relationships with SRL but was found to be the non-significant predictor. This is probably because students do not always have a choice when selecting tasks and some important tasks, such as kanji learning, are unavoidable. As a result, the feeling of self as the origin of action will be minimised while the perceived practical benefits from the task, mastering the language, will be strengthened. Thus, this orientation is presumed to produce complex empirical patterns, similar to those found in research on instrumental orientation and mastery goals, depending on the extent to which motivation is internalised into the self-system.

Similarly, performance orientation did not predict any types of self-regulation. In addition, it had no significant relationship with any sources of motivation and SRL. The descriptive statistics showed that students in this population are unlikely to endorse performance orientation in kanji learning. However, interestingly, the results of MANOVA found that performance orientation was favoured by students with a kanji background, as with Chinese and Taiwanese participants. On the other hand, when students were categorised according to whether they had opportunities to practise their knowledge outside the classroom, they were more likely to be drawn to intrinsic and instrumental mastery orientation. Nevertheless, from the results of correlational analyses, it became clear that motivational orientation is a multidimensional construct indicating that L2 learners are

unlikely to be drawn to a single motivational orientation but rather a combination of different types of orientation.

Intrinsic orientation in this study not only had a significant relationship with SRL but also predicted most types of self-regulation. Particularly, intrinsic orientation was found to be the single predictor of metacognitive regulation, indicating that an intrinsic reason for engaging in the task is necessary to be metacognitively active. This implies that providing opportunities for students to develop intrinsic orientation is beneficial if we want to support them in becoming more effective self-regulated learners. The findings of this study suggest that this can be achieved by designing activities that increase students' cultural interest in kanji learning rather than those emphasising the functional importance of the communicative value. This may be particularly helpful for students with a kanji background as they were more inclined to endorse performance orientation which had no direct relationship with motivation and SRL.

Another construct closely related to intrinsic orientation in this study is intrinsic value which is students' valuing of intrinsic interest in the task. Although intrinsic orientation and task value share some conceptual similarities, it is important to recognise that they are two interacting separate constructs since students' value beliefs do not always correspond with their reasons for engaging in the task, especially at higher levels of education. Despite the conceptual similarity, intrinsic value appeared to be a less powerful predictor of SRL than intrinsic orientation. Nevertheless, it was found to be the best predictor of cognitive regulation. As with intrinsic orientation, on the other hand, students who placed intrinsic value on kanji learning also had a higher sense of positive self-concept.

Specifically, self-concept was the single predictor of environmental regulation which in fact was the only type of self-regulation not predicted by intrinsic orientation. The complementary aspect of the functional role of intrinsic orientation and self-concept in SRL implies that instruction incorporating strategies to enhance both self-concept and intrinsic interest in kanji learning may be a powerful facilitator of SRL. Nevertheless, providing a learning environment which protects students' self-concept also seems to be more important since the SRL capacity of students with a positive self-concept can be quite maladaptive in ego-threatening conditions (Baumeister, et al., 1993; Smith, et al., 1996). Thus, situations forcing students to compete against others for grades or rewards without

considering their effort should be avoided. This is important because self-concept is not only associated with intrinsic interest but also the best predictor of the overall use of SRL.

Nevertheless, the correlational analyses highlighted the interdependence of the identified motivational constructs indicating their interactional effects on SRL. One of the strongest relationships was found between self-concept and self-efficacy. This suggests that developing a positive self-concept when applying a task can strengthen self-efficacy beliefs or vice versa. In this study, self-efficacy was an important predictor of behavioural regulation which was most affected by motivational factors in this study. In addition, behavioural regulation, in particular, had a significant correlation with all the other types of self-regulation. This implies that self-efficacy enhancement motivates students to use a variety of strategies to self-regulate their own learning. Thus, providing sources of self-efficacy such as mastery experience in a classroom is desirable. Practically, this could be implemented by using more familiar learning activities for students to experience positive outcomes and increase their sense of further success.

In spite of a number of significant correlations among motivational and SRL factors, three factors; instrumental mastery orientation, performance orientation, and extrinsic value did not predict any types of self-regulation. The fact that these factors were correlated with SRL but not significant predictors implies the existence of a third variable affecting both motivation and SRL. One such confounding variable might be whether opportunity to experiment with newly acquired knowledge is available to students outside the classroom.

Students who had opportunities to practise kanji outside the classroom achieved significantly higher scores on the response scale for many motivational and SRL factors in this study. Although learning opportunities outside the classroom were not the central focus of this study, the results imply that increasing such opportunities may simultaneously foster both motivation and self-regulation in L2 learners. In this regard, students should be more encouraged to seek opportunities to use their L2 outside the classroom. However, limited opportunity for practising Japanese is one of the salient characteristics of this learning context. Therefore, institutional support, such as providing information about language exchange or reading materials that are appropriate for students' proficiency levels and interests, will be essential.

This study explored Japanese language learners' motivation and SRL for the acquisition of kanji, and then examined the underlying structures and relationships among the extracted constructs to identify motivational factors contributing to self-regulation in L2 learning for an important task. The results revealed that intrinsic orientation, self concept, self-efficacy beliefs, and intrinsic value influence were significant predictors of SRL in general. These significant factors made a unique contribution to different types of self-regulation.

The findings suggest that intrinsic interests, particularly those related to the target culture, enhance metacognitive and cognitive regulation. A sense of positive self-concept, on the other hand, influences environmental regulation while self-efficacy beliefs facilitate behavioural regulation. Although no single prescription can be given as the supporting factors are complex, teachers need to be aware of the importance of motivation in SRL, especially when the learning context requires learners to take more control over their learning. The following suggestions are put forward based on the practical implications of the current study.

- Teachers should be aware of the functional value of learners' cultural interest in the language learning process. They can select and adopt materials that are appropriate for the characteristics and backgrounds of learners to foster students' cultural interest.

- Teachers should provide a learning environment which does not threaten students' self-concept. They can avoid using activities that force learners to compete against others but utilise those in which the effort expended will be evaluated and rewarded.

- Curriculum design should incorporate self-efficacy protection and enhancement to offer conditions for learners to experience mastery. It can focus on developing a sense of familiarity in a task and producing recursive positive outcomes in a way that learners can feel they are capable of succeeding in the task.

- Learners should be more encouraged to experiment with their knowledge outside the classroom. In foreign language learning settings, institutional support would be very helpful. These include providing necessary information to find language

exchange partners as well as reading materials that are not readily available in the learning context.

Instrumental mastery orientation, performance orientation, and extrinsic value did not predict any types of self-regulation in this study. However, these non-significant factors had several significant relationships with SRL in general. This indicates that they may not be considered as inherently ineffective. The above suggestions are not conclusive since the nature of this study was exploratory and different findings may be obtained by including additional factors, extending the context, and/or improving the study design. Such limitations of the study will be considered in the following section along with some recommendations for future research.

6.2 Limitations and Recommendations

The results of this study were based on theoretically-driven analyses of data obtained from students who were actually learning kanji in real language courses. Although this makes it easier to apply the findings than those derived from traditional psychological research to the language classroom, one must consider the limitations when interpreting or generalising the results outside the research context. These are mainly related to the study design: it relied on quantitative methods, making use of only a questionnaire survey, and had no other means of data collection. Although this approach is considered appropriate in terms of the objectives and resources available, such as collecting a large amount of data needed for sophisticated statistical techniques within a short period of time, quantitative data can only provide a limited insight into the dynamic process of motivation and SRL.

Despite the fact that the results of this study contributed to L2 motivation research by identifying key sources of motivation affecting SRL, the antecedents of these significant or non-significant predictors were not clear. First of all, quantitative methods require averaging out all responses across a whole sample which makes it difficult to justify the subjective variety of individual life (Dörnyei, 2001b, p. 193). Several characteristics of learners, such as orthographic backgrounds or opportunities to practise kanji outside the classroom, were suggested as influential. However, there remains a potential ambiguity about these individual characteristics since not all students elaborated on their

opportunities to practise kanji outside the classroom in the questionnaire. This implies that some kanji background students may have responded to the question concerning learning opportunities outside the classroom simply because they use kanji in their first language.

Also, other individual characteristics and external factors that are not included in this study, such as past learning experience, cultural beliefs, and figures of significant others, may have affected students' responses to the questionnaire. In this study, for example, students with a kanji background tended to endorse performance orientation more strongly than other students. However, this finding might not result from their orthographic background per se but rather the orientation may be more strongly associated with the educational cultures they had earlier experienced. There is no doubt that future research utilising a combination of quantitative and qualitative methods, for example, utilising follow-up interviews, can provide far richer information to uncover the characteristics of individual learners and the dynamic role of motivation in SRL.

The second major limitation is associated with the instruments used to collect data. Since data was collected using self-administered questionnaires, the quality of the findings largely depended on the accuracy of learners' perceptions. As Perry and Winne (2006) point out, learners' perceptions may not be always accurate and can produce distorted data when the information they need to judge their learning process is not retrieved from memory. Thus, it is possible that data collected from students in this study may not actually represent their real learning processes. One possible solution to deal with this issue is making use of an observer or student diary to collect data on learning processes in real-time. It may be interesting to compare the data collected from different techniques using a within-subjects design, in which the same variable is repeatedly measured on the same participant, to evaluate the appropriateness and suitability for assessing students' use of SRL.

In addition, the design of the questionnaire could be improved to increase the reliability and validity. Since the questionnaire used in this study was specifically developed by the researcher to meet the objective and contexts of the study, the external reliability of the measure is unknown. In future research, the external reliability should be tested if independent researchers or studies generate the same constructs in similar settings. With respect to validity, there are several unsolved issues: first, low internal consistency

reliabilities of metacognitive regulation and extrinsic value items need to be solved to increase the construct validity; secondly, the elimination of cross loading items may be necessary as they lower the discriminant validity and make interpretation of the factors difficult; thirdly, the construct of SRL in this study did not include help-seeking skills in spite of the claim made by a number of researchers that an ability to seek help from others is an important aspect of SRL (Newman, 2008; Pintrich, 1995; Zimmerman & Schunk, 2008). Although a help seeking item had been included in the survey, it proved to have a unique property which did not load on any component and thus had to be excluded. Future research including this variable should provide additional insights into the underlying structure of SRL for L2 acquisition.

Another limitation is related to ethical constraints that made it difficult to use a random sample of students. As with many studies involving human subjects in social sciences, participants in this research were not randomly selected but rather all students learning Japanese at cooperating institutions were invited to voluntarily complete a questionnaire survey. Thus, the sampling of this population might have been biased since it can be argued that only a particular type of students, for example, those who are well organised or particularly interested in the subject area, participated in the study. Although the response rate (43 %) in this study indicated a fairly good selection of students, it would be ideal to adopt random sampling to deal with this problem in future research. However, since reducing the sample size restricts the use of advanced statistical techniques, a large number of participants should be recruited if researchers intend to employ a similar method. Also, researchers must be aware that this process requires additional time and support from cooperating institutions.

Seven tertiary institutions cooperated in this study. A problem associated with data collection involving different institutions was that it was difficult to identify students' level of study. In this study, they were determined by the year of students' Japanese course. However, the level of study might not correspond with the grade year across institutions. For example, from the researcher's knowledge, a textbook used in the third year level Japanese course at one institution was used in the second year class at another. Thus, although this study did not find any differences in motivation and SRL based on the level of study, further investigation is necessary to draw a clear conclusion. In addition, since all cooperating institutions were located in New Zealand, the findings of this study may not be

readily generalised outside this context. The fact that the learning environment outside the classroom influences students' self-regulation implies that there is a need to focus more on contextual variables. This study should be replicated in a variety of educational settings across different social and cultural contexts.

Finally, although this was never the purpose of this study, students' motivation and SRL were not linked with their learning outcomes. It is tempting to assume that L2 learners who use more strategies to self-regulate their own learning will produce better learning outcomes as many previous research studies in general academic contexts indicated. However, since almost no research has investigated the effects of SRL on L2 learning outcomes, this is another area which needs to be explored. This study is a first attempt to investigate the role that different aspects of L2 motivation play in SRL. By extending the area of the inquiry explored in this study, future research will have a great possibility to break new ground in both L2 learning and SRL theories.

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APPENDICES

Appendix A: Letter of Approval from MUHEC

Massey University

10 June 2009

Ms Akie Hirata
24D Fitchett Street
PALMERSTON NORTH

Dear Akie

Re: HEC: Southern B Application – 09/22
     Motivational beliefs and self-regulation in language learning

Thank you for your letter dated 8 June 2009.

On behalf of the Massey University Human Ethics Committee: Southern B I am pleased to advise you that the ethics of your application are now approved. 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

Dr Karl Pajo, Chair
Massey University Human Ethics Committee: Southern B

cc   Prof Cynthia White   Dr Gillian Skyrme
     School of Language Studies   School of Language Studies
     PN231   PN231

     Prof Paul Spoonley, HoS
     School of Language Studies
     PN231

_____
Massey University Human Ethics Committee
Accredited by the Health Research Council

Te Kunenga
ki Pūrehuroa

Appendix B: Information Sheet for Participants

SCHOOL OF LANGUAGE STUDIES
Private Bag 11 222
Palmerston North
New Zealand
T 64 356 9099
F 64 350 2271
www.massey.ac.nz

Massey University
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

Dear Respondent

My name is Akie Hirata. I am a Master of Arts in Second Language Teaching student at Massey University. As part of the degree requirement, I am conducting research investigating motivational beliefs and self-regulation of foreign language learning with a particular focus on kanji learning. With support from your institution, I am inviting you to participate in my study. Along with this letter is a questionnaire which will take approximately 15 minutes to complete. It would be much appreciated if you could complete and place it in a supplied envelope and then hand it in to your teacher as soon as possible. I would like to express my thanks to you for your time and help in making this research possible. Accordingly, I would like to offer respondents who returned their questionnaire a chance to win a brand new Japanese-English electronic dictionary which would be very useful for your study.

The questionnaire contains a variety of questions including a question asking you if you would like to be invited for a follow-up interview. The interview will take approximately one hour and all interview participants will be paid $20 in appreciation of their time and efforts. If there is more than the required number of respondents, only randomly selected respondents from different proficiency levels will be contacted and receive further information. The findings resulting from this research will be presented in my thesis and research presentations arising from it. Please email me to request a summary of the findings or receive information about the presentation if you are interested.

While your cooperation would be highly appreciated, your participation is absolutely voluntary and you may withdraw from the study at any time without giving reasons until the data analysis begins. The decision to withdraw or to not participate will not result in any penalties or loss of benefits to which you are otherwise entitled. Maintaining your confidentiality is a priority and I guarantee that no identifiable information about you or your institution will be shared in the event of any presentation resulting from the research. You may also decline to answer any question that you feel uncomfortable responding to. All information collected from participants will be stored in a secure location only accessible to the researcher and supervisors named below. Please do not hesitate to contact me if you have any further questions.

The information collected from this survey will be valuable to develop effective kanji learning instructions especially at the New Zealand tertiary sector. I hope you will take the time to complete this questionnaire as it will also help you examine your own kanji learning experiences. Please note, completion and return of the questionnaire implies that you have read the information in this letter and consent to take part in the research. Thank you for your time and consideration. Please keep this letter for your future reference.

Yours faithfully

Akie Hirata
MA student/Researcher
Massey University
Palmerston North
06-358-2131
polastar@hotmail.com

Prof. Cynthia White
Research Supervisor
Massey University
Palmerston North
06-356-9099 ext. 7711
c.j.white@massey.ac.nz

Dr. Gillian Skyrme
Research Supervisor
Massey University
Palmerston North
06-356-9099 ext. 7754
g.r.skyrme@massey.ac.nz

Appendix C: Motivation and Kanji Learning Questionnaire

Please rate how strongly you agree or disagree with each of the following statements. There are no right or wrong answers as many people have different opinions. Please answer as accurately as possible.

Motivational Orientations

Strongly Disagree------------------Strongly Agree

1. I'm learning kanji simply because it is a requirement.	1	2	3	4	5	6
2. I'm learning kanji because I want to master Japanese.	1	2	3	4	5	6
3. I'm learning kanji because I want to receive a better grade.	1	2	3	4	5	6
4. I'm learning kanji so that I have a better chance of employment.	1	2	3	4	5	6
5. I'm learning kanji because I really want to be able to read and write Japanese well.	1	2	3	4	5	6
6. I'm learning kanji so that I can communicate better with people who have knowledge of Japanese.	1	2	3	4	5	6
7. I'm learning kanji because I want to do better than someone else in this course.	1	2	3	4	5	6
8. I'm learning kanji because it is a challenge that I enjoy.	1	2	3	4	5	6
9. I'm learning kanji so that I can impress others.	1	2	3	4	5	6
10. I'm learning kanji to better understand Japanese culture that I am interested in.	1	2	3	4	5	6
11. I'm learning kanji because it makes me feel satisfied.	1	2	3	4	5	6
12. I'm learning kanji because I want to use it when I travel to Japan.	1	2	3	4	5	6
13. I'm learning kanji simply because I enjoy studying Japanese.	1	2	3	4	5	6

Motivational Beliefs

Strongly Disagree------------------Strongly Agree

14. It is difficult for me to accomplish my goals in kanji learning.	1	2	3	4	5	6
15. I think learning kanji is boring.	1	2	3	4	5	6
16. If I do well with kanji, it is because the kanji taught in this course is too easy.	1	2	3	4	5	6
17. I don't think knowledge of kanji is very important for my future.	1	2	3	4	5	6
18. I believe I am good at learning kanji.	1	2	3	4	5	6
19. I am interested in learning kanji in this course	1	2	3	4	5	6
20. It would be my lack of ability if I didn't master kanji in this course.	1	2	3	4	5	6
21. I don't think I can receive good marks for assessments focused on kanji.	1	2	3	4	5	6
22. I like learning kanji because I derive personal pleasure from it.	1	2	3	4	5	6
23. How well I achieve on a kanji test depends on the luck I have on the day.	1	2	3	4	5	6
24. I am confident I can meet the requirements for kanji in this course.	1	2	3	4	5	6
25. I think learning kanji is fun.	1	2	3	4	5	6
26. It would be my lack of effort if I didn't master kanji in this course.	1	2	3	4	5	6
27. I wish I didn't have to learn any more kanji.	1	2	3	4	5	6
28. I think I am able to learn kanji as well as most other students of Japanese.	1	2	3	4	5	6
29. I believe the kanji taught in this course will be useful for me.	1	2	3	4	5	6
30. I am certain I can master the kanji in this course.	1	2	3	4	5	6
31. The benefit I get will not be as much as the time I devote to learning kanji.	1	2	3	4	5	6
32. When it comes to kanji, I feel like I am a loser.	1	2	3	4	5	6

The following statements describe different kanji learning behaviours. Please circle the number which best describes you. Remember, there are no right or wrong answers. Please give your immediate reactions to each of the statements.

Kanji Learning Strategies

Not at all true of me------------------of me (Very true)

33. I regularly test my knowledge of kanji.	1	2	3	4	5	6
34. When learning kanji, I often achieve my goal more quickly than I expected.	1	2	3	4	5	6
35. I learn all kanji in the same manner.	1	2	3	4	5	6
36. When I feel stressed about kanji learning, I know how to reduce this stress.	1	2	3	4	5	6
37. When learning kanji, I visualise it in my head.	1	2	3	4	5	6
38. I keep records of kanji I have and/or haven't mastered.	1	2	3	4	5	6
39. I make associations between new kanji and other kanji I already know.	1	2	3	4	5	6
40. I have a set time each day/week which I spend learning kanji.	1	2	3	4	5	6
41. When the learning environment becomes unsuitable, I usually give up studying kanji rather than sorting out the problem.	1	2	3	4	5	6
42. I organise the kanji I learn according to the meaning, shape and/or reading.	1	2	3	4	5	6
43. I know how to cope with a sense of boredom in order to continue kanji learning.	1	2	3	4	5	6
44. When I find it difficult to study kanji by myself, I ask someone for help.	1	2	3	4	5	6
45. When I find kanji I don't understand but I should know I make sure I study it later.	1	2	3	4	5	6
46. I use particular strategies or techniques to learn kanji that work for me.	1	2	3	4	5	6
47. When learning kanji, I keep working until I reach the goal that I have set.	1	2	3	4	5	6
48. Even if I am aware of how badly I have learned certain kanji, I usually can't be bothered to study it again.	1	2	3	4	5	6
49. I often find it difficult to stick to a study schedule for kanji learning.	1	2	3	4	5	6
50. I compare and contrast kanji that are confusing.	1	2	3	4	5	6
51. I try and think of ways to make kanji learning more enjoyable.	1	2	3	4	5	6
52. I often find that I don't spend enough time on learning kanji because of other activities.	1	2	3	4	5	6

STUDENT INFORMATION QUESTIONNAIRE

Please use ☑ where appropriate. (Please note, no identifiable information about you or your institution will be shared in the event of any presentation resulting from the research)

Age: ☐ -17, ☐ 18 – 20, ☐ 21 – 23, ☐ 24 – 26, ☐ 27 – 29, ☐ 30+   Gender: ☐ Male, ☐ Female

Which year is your Japanese course considered to be in a degree study? ☐ 1st, ☐ 2nd, ☐ 3rd

Are you studying Japanese through a distance education course?   ☐ Yes, ☐ No

Are you a full-time student? ☐ Yes, ☐ No   Length of residence in Japan: _____

Institution: _____   Major(s) if any: _____

Name: _____   Email: _____

Would you like to be considered as a potential participant for a follow-up interview?

☐ Yes, ☐ No

In appreciation for your time and effort, you will receive $20 if you are contacted and decide to participate in a follow- up interview. It will take approximately one hour and will be conducted in your town at mutual convenience.

GENERAL INFORMATION QUESTIONNAIRE

1. How old were you when you first began learning Japanese? : _____

2. Why did you start learning Japanese?

   _____
   _____
   _____
   _____

3. Please describe the current reason(s) for learning Japanese if it differs from above.

   _____
   _____
   _____
   _____

4. Apart from the course, do you have any opportunity to read and/or write kanji?   Yes / No

   If yes, please describe the situation(s).

   _____
   _____
   _____
   _____

5. What is your first language(s)? : _____

6. Do you have knowledge of language(s) other than Japanese, English and your first language?

   Yes / No

   If yes, please specify the language and describe your written and spoken proficiency level of the language.

   _____
   _____
   _____
   _____

Please write any comment you want to add to this survey and/or research.

   _____
   _____
   _____
   _____

This is the end of the questionnaire. Please place this in the enclosed postage-paid envelope and place it in the mail. Thank you for spending your valuable time.

I wish you all the best in your study. ☺

Akie Hirata (MA Student/Researcher)
Massey University, Palmerston North
(06) 358-2131 / polastar@hotmail.com

Appendix D: Scree Plot for Motivational Items

Scree Plot for 13 Motivational Orientation Items

Scree Plot for 15 Motivational Belief Items
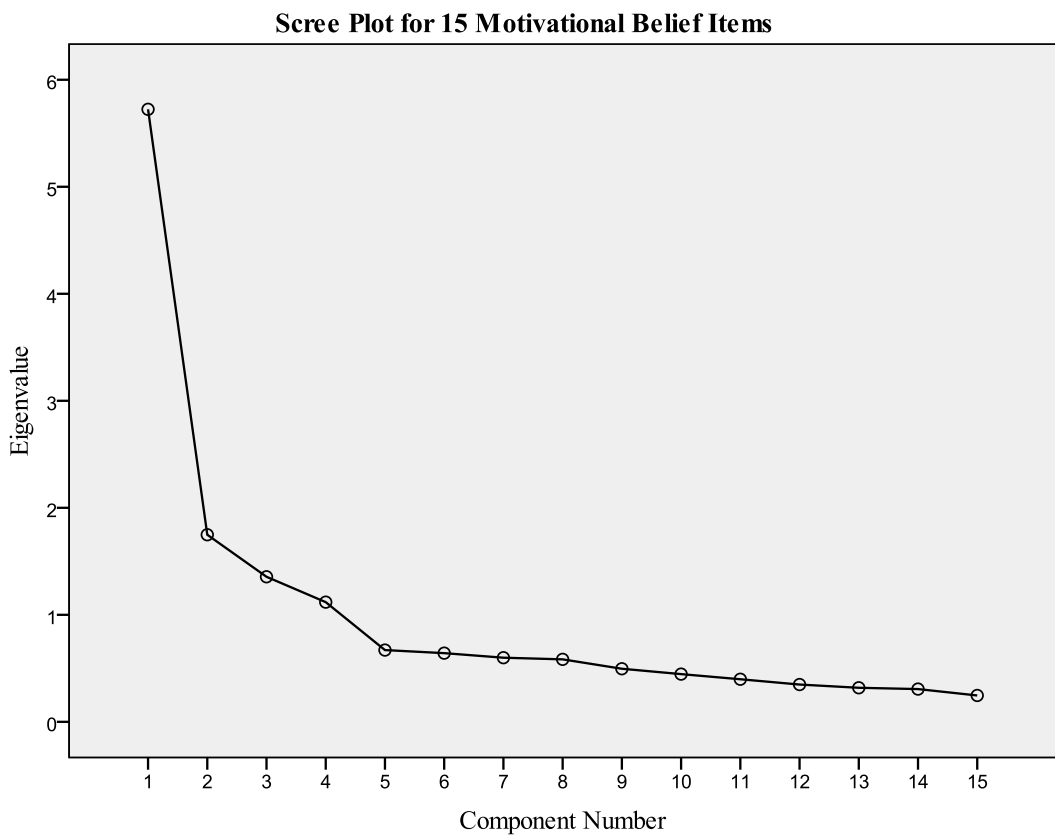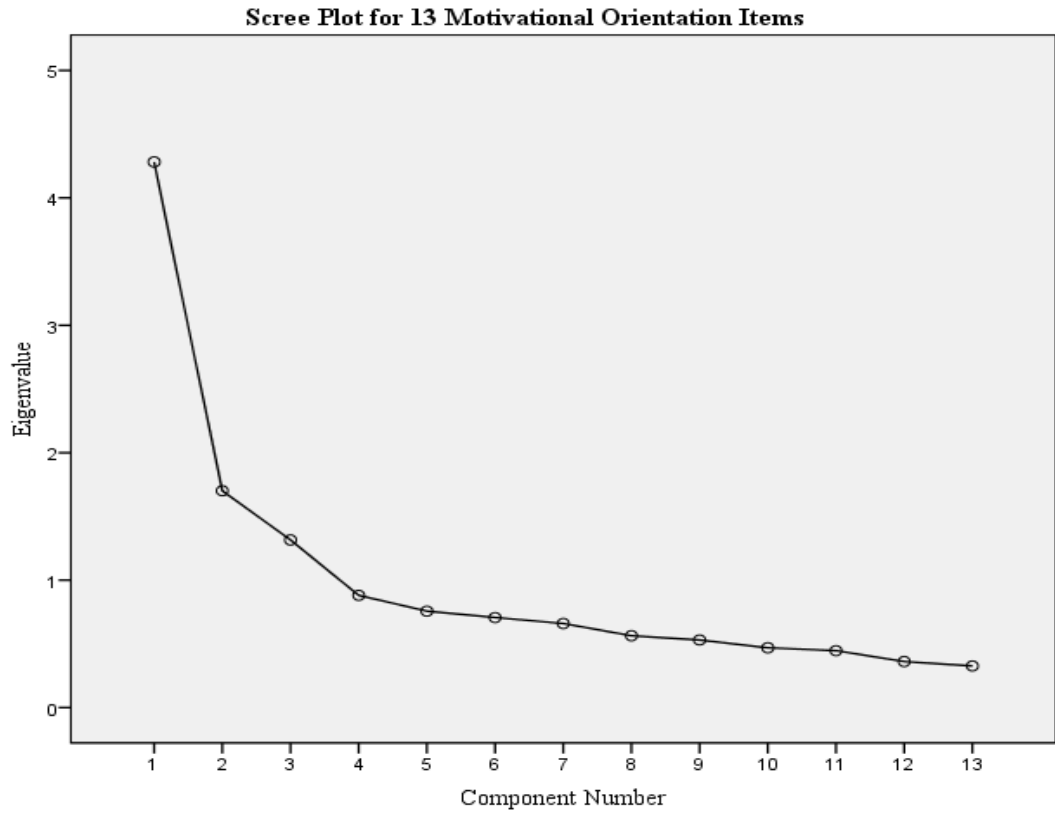
Appendix E: Scree Plot for SRL Items

Scree Plot for 18 SRL items