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“SING? NOT ME!”
A STUDY OF STUDENT TEACHERS’
SINGING SELF-EFFICACY

A thesis presented in partial fulfilment of
the requirements for the degree of
Master of Education
Massey University,
Palmerston North, New Zealand

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2000

ABSTRACT

This study documents the singing self-efficacy beliefs of 165 primary teacher education students at a New Zealand university. Quantitative and qualitative methodologies were used in order to establish a singing self-efficacy profile for the group under investigation, and to explore the factors which influenced the development of their beliefs. Participants completed a questionnaire containing Likert-scale items and open-ended questions. Data on gender, age and ethnicity were also collected. In-depth interviews were conducted with three students who identified as having low self-efficacy.

Analysis of the quantitative data revealed a wide range of singing self-efficacy beliefs. Although the study found no differences in self-efficacy on the basis of gender or age, Maori students appeared to hold more positive beliefs about their singing capability than European/Pakeha students. Three factors, other people, the self, and musical experiences, emerged as significant in the development of students' singing self-efficacy.

Because of the prevalence of performance-oriented goal structures in New Zealand school music programmes, and because of fixed rather than incremental conceptions of singing ability, individuals who learn to sing accurately early in their lives are more likely to develop high self-efficacy in singing. The study revealed little evidence of the impact of vocal development research on beliefs about singing capability.

Student teachers with low self-efficacy in singing often express anxiety about how they will meet the requirement to teach singing as part of the classroom programme. There is also a strong likelihood that teachers will perpetuate the practices which contributed to their own beliefs about singing capability. It is important therefore to understand how singing self-efficacy develops and to identify classroom goal structures which facilitate the development of both singing skills and positive singing self-efficacy.

PREFACE AND ACKNOWLEDGEMENTS

Much of the impetus for this study came from my personal experience of teaching music to preservice teacher education students. In class and informal discussions students gave vivid and often poignant descriptions of experiences which had contributed to their low self-efficacy in singing and which affected their attitude towards compulsory music curriculum courses. Many student teachers openly expressed their anxiety about attending the music curriculum course and the body language of others was reminiscent of patients in a dentists' waiting room. Unsolicited remarks such as "You'll have your work cut out to do anything with me" or "I haven't got a musical bone in my body" were frequently heard. Attendance at their first music lecture was often prefaced by students asking "Do I have to sing?" closely followed by an apprehensive "Do I have to sing by myself?"

As a teacher educator I was concerned about how students such as these could be helped to develop the confidence necessary to mount effective classroom music programmes for the children they would teach. As a music educator I was angered by the ill-informed practices which left so many individuals so unnecessarily damaged. As a human being, I was distressed that so many people should be denied the opportunity to participate in one of life's great pleasures – singing. These three passions motivated me to begin the study, sustained me through the long toil, and continue to absorb much of my thinking time.

I have many people to thank for their help over the months that this study has been taking shape. I am indebted to the students who participated so willingly in the study, and for the openness with which they responded. I also wish to recognise the many students who did not take part directly in this research, but whose stories motivated me to want to know more.

I wish to acknowledge the contribution of my initial supervisor, Professor Colin Gibbs, who gave generous guidance in the early stages of the study, and introduced me to self-efficacy theory. To Dr. Alison St George, my main supervisor, and Professor James Chapman, my second supervisor, I

extend my heartfelt thanks for their professional support, gentle challenging, and wise counsel. Thanks must also go to my music colleagues Graham Parsons and Guy Donaldson for their patience and support, and for contributing directly and indirectly to so many of the ideas contained in the pages of the thesis. I am grateful to the many friends and colleagues who have shown such interest in the study and so willingly shared their own stories.

Finally, to my husband John, our children, and our extended family, my deepest gratitude and love for their encouraging, cajoling, pleading, and bullying, always so lovingly delivered!

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CHAPTER ONE

INTRODUCTION

1.1 CENTRAL PURPOSE OF THE STUDY

It is well-documented that student teachers' attitudes and beliefs impact on both their own learning and that of their future pupils (Jeanneret, 1997; Nespor, 1987; Pajares, 1992; Schmidt, 1998). After observing, over a period of a decade, that student teachers beginning compulsory music curriculum courses frequently claimed they lacked musical ability, and expressed anxiety about how they would fare in the course, the researcher questioned how this lack of confidence would impact on the students' learning in the course, and on the children they would teach. The researcher's observations of her own five children's musical development contrasted sharply with the accounts of negative childhood experiences in relation to music, in particular, singing, related by many student teachers. The central purpose of this study therefore was to investigate a group of teacher education students' beliefs about their singing capability and to identify the factors which contributed to the development of these beliefs.

Self-system constructs provided a useful framework for investigating student teachers' beliefs about singing capability, and for understanding how various factors contributed to the formation of these beliefs. Self-efficacy theory, which focuses on domain-specific rather than global tasks, was more suited to the investigation than more general measures of self such as self-esteem and self-confidence.

Teacher education programmes must take account of the educational context for which they are preparing their students. Given that the cornerstone of most New Zealand primary school music programmes is singing, student teachers who lack belief in their singing self-efficacy are also likely to lack confidence in their ability to teach singing to the children in their care. In order to explore how such teachers could be helped, research relating to motivation,

classroom goal structures and conceptions of ability was applied to the issues under consideration.

1.2 BACKGROUND TO THE STUDY

The current state of singing in New Zealand is one of extremes. Membership of school, church and community choirs is high, and a survey of recreational activities by Creative New Zealand showed that over 900,000 New Zealanders are involved in a wide range of singing activities (Hoffman, 1999). There are many opportunities for individuals to pursue studies in singing, either privately or in a range of educational institutions. For primary and secondary school students, there are opportunities to participate in high profile choral festivals and there is keen interest and sometimes competition among pupils to take part. Two prestigious choirs, the New Zealand Secondary Students' Choir and the New Zealand National Youth Choir, have achieved significant international successes, and the qualifications and experience of aspiring members increase with each audition period.

On the other hand, there are indications that many students leave New Zealand schools with a lack of belief in their singing capability. Three stories from past student teachers illustrate the impact of previous experience on perceptions of capability and on the affective state associated with singing.

Tom related his experience as a 10-year-old. Part way through a singing session his teacher stopped the class and announced that someone was singing out of tune. Moving from the back row forward she then instructed each child to sing alone so she could identify the culprit. Tom was in the front row and by the time the teacher reached him he had convinced himself that he was the tuneless one and was too afraid to sing. From that day on he avoided singing around other people, and it was only when he shared this experience as an adult that he was able to begin to overcome his fear and anxiety.

Becky's mother was very proud when Becky was selected to be in the primary school choir and arranged for a number of family members to attend the school concert. When Becky arrived for the concert she was taken aside by the teacher and asked to do a special job. Her task was to hold a large cut-out of a tree while the choir sang. Although not explicit, the message to Becky was

clear - the teacher did not want her to sing because her voice was no good. She carried this belief into adulthood.

Helen vividly remembers the moment when she became aware of not being able to sing. Over thirty years later she cannot bring herself to recount the incident because the memory is too painful. However she has decided that in order to make adequate provision for the children she will teach she must address the fear. She is having individual singing lessons and for the first time in thirty years has sung in front of another person.

Such stories are not confined to curriculum music students. Some students who have elected to study music as their specialist subject have also identified as having low self-efficacy with regard to singing and have sought one-to-one help to overcome their fear. What is interesting is that low self-efficacy in singing does not always accurately reflect singing skill. Many students with low self-efficacy were able to sing tunefully, expressively and with pleasant vocal tone. It was their beliefs about their capability which prevented these students from exercising, in appropriate educational settings, the skills they possessed.

A range of other singing skills were demonstrated by students who identified as having low self-efficacy. These included accurate pitch matching of single notes; control over pitch direction; perceptual awareness of faulty and accurate pitching; clear vocal tone; and stable key sense when accompanied. Although many of these students were clearly in need of singing remediation, their lack of progress was consistent with lack of rehearsal of a developmental skill.

The experiences of Tom, Becky and Helen (not their real names) point to underlying beliefs about the singing process and raise a number of important questions for teachers, teacher educators and those working in the music education field. Is the ability to sing in tune a fixed or developmental skill? If it is a developmental skill, do classroom teachers have the necessary knowledge and understanding to work effectively with children to develop their singing skill? Are there strategies and techniques to assist teachers and their students in singing instruction? If there is a prevailing view that singing skill emanates from a fixed ability, are there differing views and experiences which may

challenge this belief? How do efficacy beliefs in relation to singing develop and how can they be modified? What impact does implicit or explicit criticism of their singing ability have on children's singing self-efficacy?

There has been little attempt to evaluate the success of the nation's school singing programmes, the exception being Buckton's (1983) analysis of six-year-old children's singing skills in relation to a range of instructional settings and teacher characteristics. However, the recent Music Assessment Results of the National Education Monitoring Project (NEMP: Crooks & Flockton, 1997) revealed low levels of pitch accuracy at age eight, and very small gains in pitch accuracy up until the age of 12. Both findings suggest that singing instruction in New Zealand primary schools is ineffective.

Given the nature and quality of classroom singing programmes in many New Zealand schools, the NEMP results are not surprising. Much school singing occurs in large group situations in which the opportunities for individual feedback are very limited. There is a trend towards singing along with tapes, a practice which directs children's attention away from their own voices. Many of the tapes in popular use are unsuitable for beginning singers because of inappropriate pitch range, melodic shape, tempo, accompaniment or vocal models. The focus of class-based singing lessons tends to be on participation and the learning of new repertoire, rather than on the development of singing skills.

In many New Zealand primary and intermediate schools, membership of choirs is by audition, suggesting that for choirs, flawless performance outcomes are valued more highly than skill development. Ironically, at the same time as music education research has directed attention towards the normative development of musical skills in human beings, popular opinion, in the western world, has emphasised the gulf between those who possess and those who lack musical ability. Nowhere has this been more pronounced than in attitudes towards singing where the term *tone deaf* has been applied unthinkingly and inappropriately. Unfortunately, such a tag lightly given is difficult to dispel.

At a policy level, music education in New Zealand is in a state of change. The New Zealand Music Syllabus (1989) is soon to be replaced by the New Zealand Arts Curriculum which will require schools to provide instruction

in music, visual arts, drama, and dance up until Year 10 of compulsory schooling. Although this requirement will mean a greater commitment from schools to arts education, it coincides with reduced hours nationally for teacher education in the arts, and reduced levels of support for practicing teachers.

This study of preservice student teachers' beliefs about a central component of arts education in New Zealand schools, singing, is both timely and relevant. The research reflects aspects of past and present practices and outcomes for singing instruction in New Zealand schools, as well as addressing important issues for the future. The overview presented in the next section traces the progress of the study from these initial concerns and questions to its conclusion.

1.3 OVERVIEW

Chapter Two, the literature review, presents the theoretical framework for the study and draws together the primary themes of self-efficacy, vocal development and teacher education. It concludes with the identification of the specific research questions addressed by the study. The methodology of the study is outlined in Chapter Three, and includes information about data collection and analysis.

Because the study employs both quantitative and qualitative methodologies, the findings are presented in two chapters. Chapter Four reports and discusses the questionnaire findings, while Chapter Five presents results and discussion of the open-ended questions and interviews.

The final chapter, Chapter Six, addresses the issues raised by the study's findings, and the implications for music education programmes in schools and teacher education institutions. It includes a set of specific recommendations relating to policy and practice. Suggestions for further research are also made.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter explores the concept of singing self-efficacy through a review of relevant theory and research. Throughout the chapter there is a focus on the relationship between musical learning and more general learning theories, in particular the threads which link vocal development and self-efficacy.

The theoretical constructs which underpin the research are outlined in the first section of the chapter, with particular emphasis on self-efficacy theory and causal attributions, classroom goal structure and conceptions of ability. The second section traces important developments in the field of music education research and leads into a comprehensive review of the literature concerning vocal development and singing.

Studies of teacher education theory and practice are then considered, with a focus on those relating to teacher efficacy and music education. An important subsection is the examination of music education policy and practice, both internationally and in Aotearoa New Zealand, its relevance to teacher education, and its possible impact on the development of singing skills in children. This section concludes with a discussion of contemporary research issues in music education.

The final section of the literature review draws together the strands of educational research, vocal development, music education and teacher education research and leads into the formulation of the research questions which determine the scope of this study.

Although the skills, knowledge, understandings and body of works which form the content of the discipline of music can be identified as specific to music, it would be wrong to conclude on that basis that musical learning occurs in a rarefied atmosphere untainted by the non-musical outside world. Music educators and researchers in the field are increasingly cognisant of the multiplicity of factors which impact on musical learning. As a result, an

important theme of music education research in the latter part of the twentieth century has been the investigation of musical learning in the light of general educational theories (Dowling & Harwood, 1986; Hargreaves, 1986).

Arguably, the single most important development in educational research in the latter part of the twentieth century has been the so-called cognitive revolution with its focus on the vital role of the learner within the learning process. There has been a shift in focus away from studying subjects engaging with abstract materials in artificial settings to studies of learners in their natural learning environment (Mayer, 1992).

With this change in focus, however, there is also the danger that an overemphasis on the process of learning may relegate discrete subject disciplines such as music to a secondary role in the business of learning (Hargreaves, 1986). The cognitive approach to instruction has resulted in significant studies of mathematics, reading and writing and science, but there has been less emphasis in cognitive psychology on subjects such as music, and on the arts in general.

Current thinking about learning recognises its multi-faceted character and in particular the importance of the learner. Instruction based on cognitive theory seeks to develop learners' awareness of how they learn, to encourage the use of strategies and to develop a raft of metacognitive capacities. Aspects of the self such as self-esteem, self-concept and self-confidence have been studied from a range of perspectives.

Bandura's social learning theory offers a comprehensive explanation of how, why and what individuals learn, and embeds learning within the context of an individual's past and present social setting (Bandura, 1977). Human behaviour is shaped by the flexible three-way relationship which operates between individuals, their behaviour and the environment, a concept encapsulated in Bandura's model of triadic reciprocity (Bandura, 1986). As such, it provides a useful framework through which to explore vocal development and the development of beliefs about singing capability.

Of particular relevance to this study are self-efficacy theory (Bandura, 1977, 1986, 1997; Bong & Clark, 1999; Zimmerman, 2000), attribution theory (Weiner, 1979; Schunk, 1995), classroom goal structure and conceptions of

ability (Ames, 1992; Dweck, 1986, 1999; Dweck & Leggett, 1988; Nicholls, 1978). These constructs will now be defined and described, and their application and relevance in the context of music education, particularly singing, will be considered in subsequent sections.

2.2 SELF-EFFICACY

Self-efficacy refers to the beliefs individuals hold about their capability to perform successfully or act effectively in specific areas of human functioning (Bandura, 1977, 1986, 1997). As one of a range of theories that fit within the broader construct of self-system research, much of the potency of self-efficacy lies in its focus on specific rather than global judgments and situations (Stipek, 1993). Unlike more general measures of self such as self-esteem or self-confidence, efficacy beliefs are inextricably linked to specific skills (Bandura, 1977; Pajares, 1996; Pajares and Miller, 1994). Although self-concept and self-efficacy share similar internal characteristics, self-efficacy research has consistently demonstrated greater predictive and explanatory power (Bong & Clark, 1999). Self-efficacy theory provides a potentially fruitful avenue for the study of both successful and problematic singing development, and for an examination of approaches to singing remediation.

A large body of research about self-efficacy has demonstrated the following points:

1. Self-efficacy plays a vital mediating role between skill and action.

It is important to note the distinction between learning and performance (Schunk, 1991). Individuals may acquire new skills but fail to use them because they lack belief in their capability, or because they fear the consequences of inadequate performance (Bandura, 1986).

2. Self-efficacy influences skill acquisition both directly and indirectly. Beliefs about capability affect the choices people make in relation to particular activities (Pajares, 1996). Where self-efficacy is high, individuals actively seek opportunities for growth and development. Conversely, individuals who experience low self-efficacy for particular activities manage their lives in order to avoid experiences which exceed

their perceived capability (Bandura, 1997) or which expose their lack of capability.

3. Self-efficacy is a better predictor of positive attitudes than actual ability. Bandura (1997) suggested that individuals develop a mindset about their capabilities. In the event of a mismatch between performance and perceived capability, people have a tendency to act on the basis of established beliefs rather than reappraise their capability.

4. Individuals with high self-efficacy in a particular area show resilience in the face of failure, and are more likely to persevere in difficult or challenging situations than those with low self-efficacy (Bandura, 1977, 1997; Pajares, 1996; Zimmerman, 2000).

5. Self-efficacy beliefs motivate learners to engage in self-regulatory behaviours such as self-monitoring, self-evaluation and use of learning strategies, leading to higher academic achievement (Zimmerman, 2000).

Bandura (1977) identified four interrelated factors as being critical to both the formation and alteration of efficacy beliefs.

1. **Performance accomplishments**, regarded as the most potent sources of efficacy information, relate to individuals' ongoing and direct personal experiences of the skill being learned, their successes and failures, their achievements and setbacks.

2. **Verbal persuasion** encompasses the range of feedback and encouragement that individuals receive while learning and developing new skills, and while performing those particular actions or tasks.

3. **Vicarious experience** refers to both the identification and the degree of identification learners have with other learners or achievers in the particular learning area.

4. **Emotional arousal** pertains to the feelings associated with carrying out the particular action or activity.

Alongside these four sources of efficacy information, consideration must also be given to age-related characteristics of the learner. Language acquisition, developing social awareness, understanding of self, and relative importance of family, peer or school influences, all play a part in how

individuals perceive and evaluate experiences with regard to their beliefs about capability (Miller, 1993).

Bandura (1997) emphasised the interactive role of efficacy beliefs in relation to experience. Individuals interpret experiences in the light of their beliefs about capability and at the same time modify their efficacy beliefs in the light of their experience.

2.3 CAUSAL ATTRIBUTIONS

Although it has been argued that the role of causal attributions is to provide the learner with information that is relevant to the shaping of efficacy beliefs (Bandura, 1997), attribution theory also provides a mechanism for exploring individuals' beliefs about the reasons for success and failure in a range of contexts (Weiner, 1979; Asmus, 1986). It seeks to explain why particular achievement events occur, especially those in which the outcome is significant, unexpected or disappointing.

The attributions individuals make for success or failure can significantly affect motivation to continue to achieve in a particular performance area. For example, ability attributions for success may enhance motivation, but are detrimental when applied to failure (Vispoel & Austin, 1995).

In general, four attributions, ability, effort, task difficulty and luck, are deemed to have sufficient explanatory power, although some researchers have undertaken studies in which additional attributions are considered (Asmus, 1986; Vispoel & Austin, 1995). Such researchers contend that by offering choices beyond the traditional four attributions, research participants are able to select factors which reflect the true nature of their attributional beliefs rather than make do with the closest fit available. Vispoel and Austin have identified that in artistic domains, individuals frequently attribute success or failure to their level of interest, their use of strategies, and the role of significant others.

Specific attributions possess underlying conceptual features which in turn produce a range of effects. These effects may vary according to task outcome. Some attributions imply an internal rather than external locus of control, with ability and effort seen to be dependent on characteristics within the individual, and luck and task difficulty deemed to be external to the

individual. Success which is perceived as resulting from an internally-located attribution (for example, ability) yields greater pride than success attributed to an external factor (for example, luck or task difficulty). Failure attributed to internal rather than external factors results in increased embarrassment, shame and humiliation (Schunk, 1991; Vispoel & Austin, 1995). These feelings are perceived to inhibit motivation to persist with the task or activity concerned (Covington, 1984).

Attributions may also be classified as stable or unstable over time with task difficulty perceived as stable, and effort and luck unstable. Individuals who regard ability as a fixed entity will also adjudge it to be a stable attributional feature. Success attributed to stable causes such as low task difficulty will tend to result in heightened expectations of future success. Conversely, when low ability and high task difficulty are ascribed as attributions for failure, individuals are unlikely to feel optimistic about their capability to successfully master difficult tasks in the future.

A third dimension, the degree to which attributions are perceived as controllable or uncontrollable by the individual, although potentially problematic, has nonetheless been of value in guiding research and intervention programmes (Schunk, 1991). Feelings of control are believed to impact favourably on task choice as well as on persistence and effort. When students feel they lack control, their motivation to succeed is lowered and they lack optimism for success.

2.4 CLASSROOM GOAL STRUCTURE & CONCEPTION OF ABILITY

Central to social learning theory is the notion of a dynamic interaction between learners and the learning context (Zimmerman, 1995). Investigations of both classroom goal structures, and the conceptions of ability espoused by teachers and learners, have consistently demonstrated the powerful impact of each factor on learning outcomes (Dweck, 1999).

Researchers have identified two distinct conceptions of ability, and established that adherence to one or the other results in clearly differentiated learner attributes. Fixed entity theorists view ability as stable and uncontrollable, an internal, concrete characteristic (Dweck, 1999). In contrast,

incremental theorists have an expectation that with effort and experience, ability will be raised over time (Dweck, 1999; Dweck & Leggett, 1988; Schunk, 1995).

Although young children initially equate ability and effort, around the age of nine they begin to differentiate the two concepts (Nicholls, 1979; Schunk, 1995). The result is a strengthening belief that effort is mediated by ability, rather than ability being developed through effort, and a subsequent decline in the importance of effort as a causal factor in success.

The notion of ability as stable and uncontrollable has been the subject of considerable research attention, with the suggestion that attributing success to stable factors such as high ability raises expectations of future success. However, a considerable body of research has demonstrated that individuals who attribute success to ability and subscribe to fixed entity conceptions of ability also seek less challenging tasks in order to protect their sense of capability (Dweck, 1999; Dweck & Leggett, 1988). Nonetheless, when individuals hold to incremental views of ability, ability attributions need not be detrimental to learning, but are likely to promote optimism about future success (Dweck, 1999; Dweck & Leggett, 1988; Schunk, 1995).

Conceptions of ability are reflected in the goals which teachers and learners espouse. Fixed entity theorists focus on performance goals, those which measure ability, particularly in relation to less able others (Ames, 1992). Depending on whether learners are successful or fail, belief in ability and feelings of self-worth are strengthened or lessened (Dweck, 1986). Where performance goals prevail, learners who experience difficulties frequently exhibit helpless responses and doubt their abilities (Dweck, 1986, 1999). Learners who adopt performance goals are less motivated to expend effort, because of the threat to self-worth of failure after effort. In addition, there is evidence that learners motivated by performance goals utilize superficial strategies in preference to more demanding self-regulatory strategies (Greene & Miller, 1996).

Conversely, incremental theorists focus on learning (Dweck, 1999) or mastery (Ames, 1992) goals, in which learning, understanding and improving take precedence over success, and learners are motivated to engage in tasks

which extend their capabilities. Learners sustained by learning goals do not question their ability when confronted with difficulties or failure, but are motivated to explore new strategies and solutions (Dweck, 1999; Greene & Miller, 1996). The contribution of effort to successful outcomes is well-recognised by such learners (Ames, 1992), and the combination of learning goals and incremental conceptions of ability allows learners to achieve success which may have seemed beyond their capabilities.

Because of the context specific nature of self-efficacy theory, attribution theory, conceptions of ability and classroom goal structures, their practical application to educational settings requires a focus on particular tasks, skills or behaviours. The explanatory power of these theories to vocal development and teacher education will be explored in the following sections of the literature review. However it is important to develop a context for such discussion by providing a brief overview of significant aspects of music education research.

2.5 MUSIC EDUCATION RESEARCH

This section describes relevant historical and contemporary developments in the field of music education research with a major focus on the emerging discipline of the social psychology of music.

Overview of Music Education Research

The field of modern music education research has its roots in the work of acousticians and psychologists and in its early decades was dominated by those with a strongly behaviourist perspective (Colwell, 1992). With an early and sustained emphasis on tests and measurement, and on quantitative methodologies (Mark, 1992), the progress of music education research has closely followed that of more broadly-based educational research.

Research in the area of musical development is one of the major legacies of the 1960s and 1970s. Increased interest in the musical activity of infants and young children coincided with the decline of behaviourism and with the subsequent recognition of young children as more than empty cognitive and behavioural vessels awaiting filling (Tighe, 1993).

Many of the dominant perspectives of music education researchers such as prevailing beliefs about musical ability reflected the audience/performer distinction in western music. It is only in recent years that writers in the field have articulated the importance of active music-making to human existence (Dowling & Harwood, 1986) and the potential of all human beings to engage in meaningful musical activity.

Although experimental, psychostatistical and survey methodologies continue to predominate in the field of music education research, the last two decades have seen many researchers move towards a qualitative paradigm which takes account of the differing cultural, social and educational contexts in which music learning and teaching occur (Bresler & Stake, 1992; Hargreaves, 1996; Hargreaves & North, 1997; Scott-Kassner 1992). One result of this shift has been a reduction in isolated and decontextualised tests of singing skill and perception in favour of measures which assess children's vocal competence in naturalistic contexts and with real musical tasks (Welch, 1998). Nonetheless, music educators and researchers into vocal development need to remain aware of the dangers of overemphasising the technical aspects of singing at the expense of children's positive attitudes towards musical experience and their developing sense of musicality.

The relationship between general musical self-concept and self-efficacy in specific music tasks has not been investigated in any depth and the causal relationship which may exist between general musical self-concept and low self-efficacy in one or more important areas of musical functioning is as yet uncharted territory. A study by Pajares and Miller (1994) provides a good example of how wider research into self-systems may inform the related work of music education researchers. In their study which involved 350 undergraduate education majors, Pajares and Miller investigated the predictive power of self-efficacy compared with general mathematics self concept for successful problem solving. Their findings clearly demonstrated the vital mediational role of efficacy beliefs and their primacy over other factors such as self-concept. On the basis of research such as the Pajares and Miller study cited above, it appears that in order to raise low musical self-concept it may be

important to first address issues of low self-efficacy in specific musical tasks such as singing or instrumental playing.

Musical self-concept has been the focus of a moderate amount of research interest (Reynolds, 1992). Although the results of studies into the relationship between musical self-concept and achievement are equivocal, there appears to be a link between musical self-concept and participation in musical activities. In addition, the reciprocal relationship between positive musical self-concept and successful musical task performance has been clearly established (Asmus, 1986).

While acknowledging a shift towards more holistic understandings of the nature of musical learning, Tait and Haack (1984) identified a tendency for music educators to limit their attention to musical problems when underlying non-musical factors may be the source of the musical problem. They insisted that unless the human problem is first recognised and dealt with in such situations, there is little chance of the musical problem being resolved.

Despite concerns that the domain is characterised by a proliferation of one-off research efforts (Reimer, 1992), burgeoning international interest in music education research has resulted in the development of stronger theoretical frameworks and robust and active sub-disciplines (Hargreaves, 1996). Of particular relevance to this study is the relatively new field of social psychology of music with its close relationship to socio-cognitive theories of learning.

It is plain that music education research owes and will continue to owe a great deal to those who come from outside the field (Humphreys, 1998). Humphreys suggested that music educators must evaluate which contributions to reject or accept, and in doing so will lay a firm foundation for the next wave of music education research. Although the potential contribution of cognitive psychology to music education research needs to be recognised, it is important that new developments should be characterised by an approach which takes account of the unique features associated with musical behaviours and musical learning (Reimer, 1992; Thomas, 1992). Of particular relevance to this research is the relationship between self-efficacy and causal attribution theory

and musical development, a relationship that will now be explored within the context of singing and vocal development.

2.6 SINGING AND VOCAL DEVELOPMENT

This section of the chapter deals in depth with the activity of singing, vocal development, poor pitch singing and related instructional issues. The section concludes with a discussion of how self-efficacy theory and causal attributions have been applied within music education research, and of possible future applications.

Singing

At the heart of this study is the musical activity of singing and the conditions under which beliefs about singing capability and competence flourish or fade. Definitions of singing vary across time and societies, between generations, and between different social and cultural groups within communities. Members of a community often possess a shared understanding of what singing is, an understanding which is implied and operational rather than explicitly stated. Along with this are beliefs about what constitutes good singing (Addo, 1998; Walker, 1994). Cultural groups assign value to different aspects of the singing process (Addo, 1998). However, as the context changes, so may the value and the emphasis (Welch, 1994).

With reference to the western musical model, in-tune singing is the factor most often associated with good singing, or conversely, lack of tunefulness is linked to lack of ability in singing (Welch, 1998). The importance of tunefulness stems from the significance of melodic and harmonic structures in Western music (Welch, 1994) and from the emphasis on musical performances which involve the accurate reproduction of musical works (Sloboda, 1985). Such a perspective is in direct contrast to societies in which music is regarded as a social rather than a performance experience (Radocy & Boyle, 1979). Although contemporary music education thinking highlights the structural and sonic diversity of world musics (Anderson & Campbell, 1989), the issue of singing capability (in the western sense) continues to hold

significance for human beings in western and non-western societies alike (Murao, 1994; Phillips, 1996).

For the purposes of this study, singing is defined as a vocal activity which utilises combinations and variations of pitch, rhythm, timbre and dynamics. It differs from speech in that it involves patterns of sustained and pitched vocal sounds which are articulated within formal and informal structural frameworks. In addition, songs embody and convey meaning which cannot be adequately communicated through speech forms.

Language and music share structural and behavioural features (Sloboda, 1985) and have therefore been the focus of combined research attention. Research into the acquisition of language and the vocalisations of infants indicates that the potential to speak and to sing is present in normally functioning human beings from all societies and cultures (Keane, 1997). Singing is a reflection of vocal development and of particular enculturation (Addo, 1998). Some researchers have speculated that children learn to speak through singing (Bentley 1966; Trehub, 1993). M. Papousek (1996) proposed that infants' earliest vocalisations which are considered the precursors of language and thought deserve equal recognition as the foundation of singing and musical creativity. However, the potential for speech and song, which appears to be predetermined by human genetic makeup, may be maximised in the development of speech and language at the expense of the development of singing and musicality (Keane, 1997).

Researchers writing about the development of singing have tended to mark the beginning of vocal (singing) development as the point at which children first reproduce recognisable fragments of known songs. However, increased research interest in the vocalisations of infants (H. Papousek, 1996; M. Papousek, 1996; Trehub, Unyk & Henderson, 1994) has resulted in an expanded understanding of the seamlessness of vocal development from infancy to adulthood. This viewpoint is consistent with the philosophies of renowned music educators such as Zoltan Kodaly (Choksy, 1981), Carl Orff (Orff & Keetman, 1958), and Shinichi Suzuki (Suzuki, 1969), who emphasise the importance of early musical learning proceeding along the naturalistic lines of early language learning.

Just as infant-directed speech relates to the development of syntactic awareness in language, the distinctive features of infant-directed song may foster the acquisition of structural knowledge in music (Trehub, Unyk & Henderson, 1994). Studies of infant-directed speech and singing patterns reveal conventions that are universal as well as culture-specific in the way caregivers interact vocally with infants (M. Papousek, 1996; Trehub et al, 1994). Among these conventions are the manipulation of such diverse musical elements as melody, rhythm, timbre, duration, tempo and intensity and a sophisticated array of devices on the part of adults to stimulate infant vocalisation (Welch, 1998) or to attract and maintain infant attention (Unyk, Trehub, Trainor & Schellenberg, 1992).

Vocal Development Models

The notion of developmental phases in the acquisition of singing skills is widely accepted in music education research literature (Bentley, 1966; Dowling, 1982; Dowling, 1988; Shuter-Dyson & Gabriel, 1981; Welch, 1994). Moog's (1968) study of the musical experiences of young children is the cornerstone for much subsequent research into vocal development.

In general terms, young children tend to gain mastery over words, then rhythm, and finally pitch. Within the pitch dimension, melodic contour, individual phrase accuracy and lastly key stability is achieved. Dowling (1982) demonstrated that the melodic hierarchy identifiable in the vocal development of children, that of pitch, contour, tonality and interval size, is also apparent in the vocal perception of adults. Addo (1998) suggested that the playground learning hierarchy (in which all components are learnt simultaneously) is different to that of the classroom in which words, rhythm, then melody are learnt progressively. Nonetheless, it appeared that the Ghanaian children in her study tended to gain mastery over words and rhythm before pitch.

Although the measurement of musical perception in young children is confounded by their ability to represent what they hear, it is likely that aural perception of melodic features such as melodic rhythm, melodic contour, melodic intervals and tonal centre increases with age, and that individual

children's attentional focus may differ significantly (Ramsey, 1983). For some children, rhythmic factors in new musical material are attended to at the expense of the pitch dimension and for others the opposite is true. There are also indications that preschool and early primary age children focus more effectively on single rather than multi-dimensional concepts in singing performance (Sims, 1995).

In relation to tonal stability, Bentley (1966) proposed that children do not take account of the chordal background to melody until their sixth or seventh year. Bartlett (1993) distinguished between scalar and modal melodic structures, and maintains that although musically untrained adults and children as young as three demonstrated sensitivity to the former, knowledge of modal structure develops more slowly and as a result of formal training. Hargreaves (1996) suggested a gradual improvement in children's sensitivity to western tonality and harmony from 5-11 years.

A longitudinal study of early childhood musical development (Welch, 1998) reinforced the primacy of words over melody in beginning singers. However, Welch suggested that because of the complex blend of textual and melodic elements in songs, children's attention to words at the expense of melody may indicate a lesser level of vocal development than is actually the case. This suggestion is consistent with research findings which show that children more accurately match melodies sung on a neutral syllable than those sung with words (Goetze, 1986, cited in Cooper, 1995). Welch also maintained that children's increasingly accurate reproduction of melodic contour reflects a growing awareness of their capacity to control vocal pitch.

Two other important findings emerged from Welch's (1998) study. Firstly, the children in the study demonstrated a consistent improvement in vocal pitch matching skill over their first three years at elementary school. Secondly, there were clear differences between children's ability to successfully match pitch in different singing tasks. Three tasks, matching simple pitches, simple glides and song fragments, all resulted in more accurate replication than the task of singing a simple song. This finding highlights the need for care in the selection of tasks for studies of children's pitch-matching

abilities, and for reports of such studies to include clear descriptions of the musical material under consideration.

An understanding of structural features such as repetition, variation and development is a prerequisite for an overall accurate performance. Davidson (1994) stressed the importance of the interplay between surface and underlying musical features when correctly reproducing a song. Given that accurate singing of individual pitches occurs within the context of underlying tonality, and accurate rhythmic reproduction involves a feel for the underlying pulse, Sloboda's (1985) observation that children below the age of five "do not reliably beat time to music, nor do they seem to notice gross dissonance" (p.209) provides a plausible explanation for developing vocal accuracy.

In his work with Project Zero at Harvard, Gardner warned about developmental theories which emphasise cognitive and behavioural aspects of musical development at the expense of the affective components which are unique to learning in the arts (Gardner, 1973). Music behaviours are highly specialised and draw on a unique form of intelligence (Gardner, 1983). Music behaviours are also 'affect-laden' (p.113). Within the context of his theory of multiple intelligences, Gardner identified musical intelligence as having the distinctive characteristics of a separate intelligence. His classification of an intelligence is dependent on that intelligence being either absent or able to be isolated in special populations, highly developed in certain individuals or cultural groups, and consisting of clearly identifiable core abilities (Gardner, 1983).

In a model that offers an alternative framework for the study of vocal development Wolf and Gardner (1980) identified three levels of artistic development. An important advantage of this model is that while being consistent with other widely-accepted vocal development models it can also be usefully applied to a variety of musical activities and to musical development in a range of cultural settings.

During Wolf and Gardner's (1980) first level of development which extends from birth to approximately 24 months, children gain practical musical knowledge through their interactions with people, in particular responsive caregivers, and the environment. Other researchers concur with the view that

the first two years of life are a time of intense vocal activity, experimentation with pitch, timbre and dynamics, and a time in which young children attend in a focused way to structured song material (Davidson, 1985; Moog, 1968; H. Papousek, 1996; M. Papousek, 1996).

Wolf and Gardner's (1980) second level is that of 'symbol user', a stage which may last until five to seven years. Children at this stage of artistic development manipulate musical materials with increasing confidence and competence, and demonstrate expanding mastery of their vocal apparatus and of the song conventions of their own musical culture.

Wolf and Gardner (1980) maintained that at around five to seven years, children begin to demonstrate an awareness of societal norms and expectations in relation to music activity and take on the role of 'craftsperson'. This third level extends through until 11 to 13 years, the transition from childhood to young adulthood.

The above models of vocal development are not evidence of a closed system with a clearly defined beginning and end. Such a view would fail to take account of increasing indications of pre-birth musical learning (Lecanuet, 1996) or of the sophisticated range of vocalisations demonstrated by infants which precede easily-recognisable songs (Moog, 1968; H. Papousek, 1996). Welch (1986) suggested that reaching the culturally desired goal of in-tune singing is the beginning of a whole new phase of vocal development geared towards more complex and sophisticated singing behaviours. Sloboda and Davidson (1996) warned that strict adherence to preconceived stages in musical development may result in instructional conservatism. Cooksey and Welch (1998) also cautioned against the expectation of all voices following the same smooth developmental course. Vocal development is not always "consistent, stable and predictable across various age groups" (p.102).

Musical Ability

One significant aspect of music education research, which has impacted on beliefs about singing and vocal development, has been a preoccupation with defining and measuring the presence of musical ability in children. The writings of Arnold Bentley, a key figure in the development of the field of

music education, illustrate how perspectives on musical aptitude and accomplishment have changed over time. Few music educators would dispute the presence of high innate musical ability in some human beings, but much of Bentley's writing reflects his conviction that musical ability is something which resides in a few fortunate individuals (Bentley, 1966). In modern western society, there is a strong adherence to the notion of musical giftedness and a view that mere training is insufficient to develop a musician of worth (Walker, 1987). Although contemporary music education research rejects such a stance, Bentley's views mirror the prevalent western cultural perspective in which the population is divided into performers and listeners, and from which grows the perception of being musical or not.

It is no kindness to a child to encourage him to try to achieve special skills for which he does not possess the inherent abilities and when his only reward is likely to be lack of achievement and its consequent frustration, disappointment, and loss of self-esteem (p.103).

Cross-cultural studies of musical development and competence highlight the intellectually precarious nature of such a stance. Buckton (1983) maintained that cultural difference in terms of exposure to role models who sing, as well as differences in the social functions of singing account for the disparity in tunefulness, a view shared by Addo (1998) who related success in singing to motivation to participate. Many non-western societies, for example Pygmy society, have a high expectation of skilled musical activity by all members of their community (Gregory, 1997), an expectation which is presumably reinforced by generations of competent musicians. Contrast the beliefs underlying Addo's statement, "if singing is as natural as walking then, once we learn to sing properly and practise singing, we sing better" (p.146), with those of Bentley (1966) who wrote that "however favourable the environment, the child with little innate capacity is unlikely to make much progress in musical activities" (p.15). The two statements encapsulate the incremental versus fixed entity theories of ability explored by Dweck (1999).

Within any given cultural setting, subtle and overt messages are conveyed about which sets of skills, attributes and accomplishments result

from strategic effort and which vary according to the individual's inherited, genetic makeup. Within Pakeha New Zealand, that section of society in which western values and beliefs predominate, musicianship, often exemplified by singing, is commonly thought to be in the latter category. Consequently, perceived high rates of singing competency among Maori and Pacific Island populations have been interpreted as a genetic predisposition towards singing, a feature of the biological makeup of Polynesian peoples.

Cultural difference manifests itself not just through contrasting beliefs about the nature of musicality but also through levels of achievement. Popular opinion in Aotearoa New Zealand suggests that Maori and Polynesian children develop singing skills more readily and are more accurate singers than their Pakeha counterparts, a view consistent with findings from Buckton's extensive study of 6-year-old children in Auckland, New Zealand. Buckton (1983) reported that children from Polynesian cultural backgrounds demonstrated significantly higher pitch accuracy than their European/Pakeha peers. Results from the National Education Monitoring Project music assessment study also showed Maori students scoring higher than non-Maori students on a singing accuracy task. (Crooks & Flockton, 1997).

In spite of a lack of empirical evidence to support the notion of gender difference in innate musical capacity (O'Neill, 1997), gender is an important factor to consider in any review of vocal development. In a study of developing reflective musical judgment, Dowling (1988) found that regardless of formal instruction in music, girls consistently scored higher than their male peers. There is also research evidence supporting the higher incidence of poor pitch singing among boys (Phillips, 1996). Physiological differences, particularly at puberty, and strong social pressure for young males not to sing, both impact on the development of singing skills and could reasonably be expected to have a bearing on singing capability.

Although the literature suggests that gender differences exist in singing accuracy (Phillips, 1996), and in developing reflective musical judgment (Dowling, 1988), a study by Cooper (1995) of 169 first to fifth grade children from a single elementary school found no significant gender difference in pitch accuracy. Cooper's findings are consistent with the New Zealand music

assessment study (Crooks & Flockton, 1997). While acknowledging the limited sample size of her own study, Cooper points to the possible effects of motivation and peer pressure on research findings which do indicate gender difference. Certainly the New Zealand study revealed significant gender difference in attitudes towards music activities, with girls having a greater interest in singing and moving to music than boys, and a greater involvement in music activities outside the school setting (Crooks & Flockton, 1997).

Research into pitch accuracy and the acquisition of song has considered the topic from a range of different perspectives including the impact of individual versus group singing experiences (Cooper, 1995; Rutkowski, 1996), the effect of neutral syllables rather than words on pitch accuracy (Goetze, 1986, cited in Cooper, 1995), relationship between pitch accuracy and positive attitudes towards singing (Mizener, 1993), the effect of different vocal role models (Green, 1989; Price, Yarbrough, Jones & Moore, 1994), the effects of different learning modalities (Persellin, 1994), the effect of harmonic context (Sterling, 1985), learning and transfer effects of pitch interval practice (Harvey, Garwood & Palencia, 1987), and the importance and nature of feedback (Welch, Howard and Rush, 1989).

The notion of vocal development models may lead to the conclusion that learning to sing is straightforward and for most children as natural as learning to speak. This may be true in some cultural settings, but for children in societies which are influenced primarily by a Western model of musical development, the process of learning to sing can leave them with an overwhelming sense of failure and inadequacy.

Cooksey & Welch (1998) highlighted the importance of a curriculum that addresses developmental, psychomotor and socio-cultural aspects of the singing process rather than one which emphasises that singing develops along a single dimension. They contend that the revised British National Curriculum for Music (1995) falls short because it fails to take account of the human dimension involved in learning to sing.

Although recent writings acknowledge that singing and the notion of competent singing is firmly embedded within a particular cultural context (Walker, 1994), such a view is of little comfort to those who perceive

themselves as singing failures within the Western model. Because singing in tune is a valued musical skill in many communities and cultures, it is important to explore both theoretical and practical issues surrounding the concept of tunefulness, and to focus on factors which may inhibit or enhance children's and adults' ability to sing tunefully.

Poor Pitch Singing

The phenomena of poor pitch singing has been studied from a range of perspectives. Children and adults who experience difficulty reproducing a melody accurately have been referred to variously as monotones, grunters, tone deaf, non-singers, uncertain singers and poor pitch singers (Gordon, 1971; Welch, 1986). The changes in terminology closely reflect educational and societal attitudes towards those seen to lack competence as singers.

Kazez (1985) states that there is little chance of any person being truly 'tone deaf', no matter which definition of the term is used. He cites an entry in Butterworths Medical Dictionary (1978) which defines "tone deafness" or "asonia" as "a form of amusia in which there is inability to understand or hear the difference between one tone in music and another, so that it is impossible to sing or to play a stringed instrument in tune" (p.167). He points out that even those called tone deaf would be able to distinguish between 'you're going to the store?' and 'you're going to the store', a distinction which is dependent on identifying the upwards inflection at the end of the question.

Labeling individuals as tone deaf suggests any of a number of possible explanations for pitching difficulties. It may imply inability to detect pitch difference, inability to talk about pitch relationships such as higher or lower, or difficulty with general auditory perception (Kazez, 1985).

In a study of 31 musically untrained university students, Cuddy (1993) found that six students who identified themselves as 'tone deaf' demonstrated sensitivity to the tonal structure of melody. Flowers (1985) observed that children who cannot sing well in tune can often identify when they are out of tune. This view is consistent with other findings which indicate that for many children out of tune singing may be a coordination rather than a pitch discrimination problem (Phillips, 1996; Welch, 1986).

'Non-singers', a term used by Gordon (1971) to denote those who attempt to sing in their speaking pitch range, fails to take account of the singing intention of the individuals concerned. The term 'uncertain singer', although kinder, is somewhat euphemistic and non-specific in its definition of the problem. Recent literature supports the use of 'poor pitch singer', a phrase favoured by Welch (1979) in his extensive study of the phenomena, although Phillips (1996) advocated 'inaccurate singer' and Minami (1994) proposed that the concept of the 'developing singer' is both more accurate and more helpful when referring to children.

Early research into poor pitch singing frequently utilised faulty research methodologies which failed to take account of the complex external factors which impact on successful skill development. The data in Bentley's (1966) study was gathered by surveying teachers about children they considered to be 'monotones'. Radocy and Boyle (1979) suggested that such an approach was inherently problematic because of its reliance on the subjective judgments of observers who mistakenly believe their judgments are accurate and consistent. Further support for this position comes from recent pitch perception research. This research highlighted the extremely flexible receptivity of the ear with the result that it does not always provide the brain with reliable information about pitch accuracy (Fiske, 1994; Walker, 1994).

Likewise, a study by Davies and Roberts (1975) required classroom teachers to evaluate children's performances along a single dimension of normal or not normal. This methodology did not allow for differences along alternative dimensions such as the child who sings well with vocal support from an adult, or the child who sings well alone and unaccompanied (Buckton, 1983).

Welch (1998) suggested that in some children poor pitch singing may result from a failure to differentiate between singing and speech. This lack of distinction between speech and singing tones is common in young children's singing and is an important instructional focus for early childhood and junior school teachers. Unfortunately when older children fail to discriminate between the two vocal modes, rather than being given instructional help, they

are more often labeled as tone deaf with the result that their singing confidence diminishes (Welch, 1998).

The remediation of poor pitch singers has been approached from different perspectives. In remedial programmes with individuals, attention to producing a singing rather than speaking tone is often the first step, with the focus then being given to finding the singer's 'personal note', the particular pitch which occurs most comfortably or naturally for that child. This note becomes the centre for the development of a wider pitch range, and for the songs and exercises which form the musical content of the remedial programme (Buckton, 1983). A significant amount of anecdotal evidence from the researcher's professional colleagues and from her own work with poor pitch singers indicates that using simple melodic material, directing attention to listening, carefully-structured practice in vocal coordination, and the provision of an accepting and low-stress environment all assist in developing more tuneful singing.

Some researchers have taken an experimental approach to the remediation of poor pitch singing. In a study which focused on training subjects in pitch matching, Bergan (1965, cited in Farnsworth, 1969) found that immediate auditory feedback was more helpful than delayed auditory or immediate visual feedback. Kazez (1985) successfully trained seven elementary students with poor pitch discrimination to discriminate between pitches a semitone apart.

Skill development involves individuals conceptualising the skill to be learned and using that model as a guide. Only rarely does this result in immediate successful task performance. Instead learners test their performance against the conceptual model and with successive performances and subsequent adjustments, improvement occurs (Bandura, 1997). Given that singing is a complex task involving the coordination of physiological, cognitive and affective factors, an expectation that learning to sing is a skill that develops over time and with practice seems inherently logical. It is important that teachers bear this in mind as they develop appropriate instructional and remedial practices in singing. A number of writers, writing from both teaching and research perspectives, have been concerned with the practical implications

of applying vocal development research to classroom practice. The following sub-section deals with such instructional issues.

Instructional Issues

There is frequently a crowding of demands for learners when they are learning complex new skills (Sloboda, 1985). In singing, these demands include memorising words, rhythm and melody, co-ordinating breathing, achieving the correct tension of vocal folds for accurate intonation, and the control of dynamic levels and other expressive elements. In a carefully-structured singing environment the level of difficulty of the song material will be controlled and beginning singers' attention will be directed to selected aspects of the task.

Atterbury (1984) discussed two views of vocal development which provide teachers with a convenient explanation for children's progress or lack of progress in singing and which allow teachers to shed responsibility for less successful singing. The first is that singing is an innate ability, as shown by many competent young singers coming from so-called musical families. The second notion is that poor pitch singing is the result of a neurological disorder. Both beliefs are widely held and openly expressed by classroom teachers, by music specialists and by the general population, and squarely place responsibility for lack of progress in singing on deficits in the individuals concerned.

As well as having a negative impact on vocal development for the individuals concerned, these beliefs run counter to the considered views of many prominent music educators (Choksy, 1981; Welch, 1994), and to Atterbury's own teaching experiences (Atterbury, 1984). Atterbury stressed the need for actively teaching children how to sing. Cooksey and Welch (1998) agreed, pointing out that "appropriate musical 'control' of... voices is not a natural result of singing activity *per se*, nor of chance" (p.102). Among other things, such active instructional programmes focus attention on and enable children to develop control of the vocal mechanism, and to develop tonal and melodic memory, important prerequisites for being able to sing in tune. Moog (1968) maintained that efficient functioning of the vocal apparatus, frequent

practice, and repetition of known song material will all contribute to improved singing accuracy.

Davies (1986) advocated the provision of a rich and varied musical environment in order to facilitate the development of a musical vocabulary for children. She suggested that creating their own invented songs provides children with the opportunity to develop their vocal potential and extend their pitch range as well as to gain an understanding of the medium of song (Davies, 1992). In addition, Davies (1986) discussed the importance of singing as a means of human expression and the value of spontaneous songmaking in helping children express feelings which might not surface in other ways.

Buckton (1983), Addo (1998) and Chen-Hafteck (1999) emphasised the close relationship between children's cultural learning and their singing learning, and stressed the importance of incorporating appropriate musical material into the singing programme. Culturally derived songs and chants are of particular value, and can be the basis of vocal exercises and pitch development material.

The two facets of musical learning, enculturation and training, are an important consideration in the literature of music psychology. In western culture, the former is seen as the dominant process up until about 10 years although there is obviously considerable individual difference. Whereas musical learning through enculturation results in the interweaving of a broad range of musical and cognitive skills, training relates to depth of knowledge and accomplishment within a particular skill (Sloboda, 1985). With regard to singing, the instructional practices in early childhood centres and primary schools could be described as emphasising caught rather than taught skills. However, a case can be made for the value of targeted singing instruction for three-, four-, and five-year-olds. Such programmes have resulted in improved singing performance, and although these gains may be an example of accelerated development phenomena, there are psychological and attitudinal benefits to children of 'finding' their singing voices at an early age. Conversely, children who do not achieve vocal control at an early stage are likely to be adversely affected (Shuter-Dyson & Gabriel, 1981).

Other writers have stressed the importance of supporting and encouraging children's early singing efforts and of positive instructional strategies for developing tunefulness (Bayless & Ramsey, 1991; Haines & Gerber, 1992; Phillips, 1996; Vajda, 1974), and warn of the long term effects of negative feedback in singing, particularly in relation to singing in tune. They cited instances of adults whose singing development was arrested at an early age because of insensitive feedback from teachers and family members, a point particularly well-illustrated by McLendon, (1982). Sloboda's (1989) study which involved adults recalling early music performance experiences found that many so-called unmusical adults related powerful memories of negative feedback, often from schoolteachers. Cooksey and Welch (1998) pointed out that a curriculum which fails to provide adequate guidance for teachers will be untenable and the result will be pupils who experience a sense of failure and carry into adulthood feelings of musical inadequacy. They stated that "singing habits (and perceptions about singing as a personal activity) acquired during adolescence can be long-lived, so it is important that such habits are healthy and successful in matching musical with developing physiological and psychological needs" (p.116).

Referring to adolescents, Cooksey and Welch (1998) emphasised the need for teachers to provide practical tips and information about vocal abilities and vocal maturation. Such knowledge and guidance would also be of considerable value to primary age children as they develop beliefs about capability, make attributions for success or failure in singing, and develop the vocal control necessary for in-tune singing.

Successful learning of complex skills most often occurs when learners have access to successful models, experience a supportive practice environment and receive constructive and encouraging feedback (Schunk, 1991). Sloboda's (1985) discussion about the learning of new and complex skills is applicable to beginning singers. He stressed the importance of motivation, repetition and feedback in skill acquisition, features which are not often in evidence in regular classroom music programmes. In addition, he distinguished between external and internal feedback and pointed out that although internal feedback is usually available to learners, teachers may need to direct children's attention to it.

Farnsworth (1969) maintained that attention to sensory cues such as visual imaging, kinaesthetic awareness or appropriate body movements assists the development of pitch understanding and accuracy in young children.

Self-efficacy and Singing

Bandura's (1977, 1986, 1997) work on self-efficacy and the efforts of attribution researchers are a reminder that a parallel process is underway alongside the process of learning to sing. In a review of empirical research on music and motivation, Thomas (1992) directs attention towards how student self-efficacy in singing mediates between teaching and student learning.

Despite the fact that self-efficacy research has been conducted in a diverse range of disciplines and areas of human functioning (Pajares, 1996), there is little evidence of its application to music in general or singing in particular. Links in the literature are implicit rather than explicit (Shuter-Dyson & Gabriel, 1981; McLendon, 1982) and issues of personal efficacy are alluded to rather than addressed directly. Research which takes account of the origins of efficacy beliefs in other academic disciplines provides a productive path for music education researchers wishing to pursue the causes of low self-efficacy in singing. Conversely, research into singing self-efficacy and individuals' beliefs about other aspects of musical capability will strengthen understanding of the broad concept and applications of self-efficacy theory.

When applying general theories about self-efficacy to singing it is important to remember that singing has unique characteristics which may preclude generalization. For example, when individuals make assessments of their capability in drawing, they feel competent to judge whether their drawing of a horse actually looks like a horse because they have had many years of identifying and developing a schema for the way horses look. However in singing, limited experience of songs and singing may mean that individuals lack well-developed schemas of how particular songs sound, and therefore they are not well-equipped to measure their performance. Unlike activities such as mathematics computation which involve written and visual symbols, the temporal nature of singing means it is impossible for individuals to hold onto their performance after the event unless the singing has been recorded (not

something which those with low singing self-efficacy usually desire). In addition, the process of singing demands sustained cognitive attention from beginning singers or those who lack confidence, making it difficult for them to attain the kind of critical distance which enables an objective consideration of the singing. Those who have low self-efficacy in singing may also doubt their capability to assess their performance. They may rely instead on the opinions of people who are seen to be competent or knowledgeable in the field, and this may result in unduly harsh judgments. Finally, singing is an activity that occurs within shared listening space and is therefore open to being judged by others. Despite the fact that listeners may not publicly state their opinion of someone else's singing, it is often assumed that the singing is being judged, resulting in anxiety which in turn impacts on song performance.

Although such links have not been clearly established in the literature, it is likely that the perception of poor pitch singing is one possible factor in the development of low self-efficacy in singing. As well as exploring instructional approaches conducive to high self-efficacy, an important parallel task for music researchers is to identify other factors which may contribute to low self-efficacy in singing.

Bandura (1997) wrote about the significance of vicarious experience and modeling to support the development of high self-efficacy. Although in singing adults' identification with family members is commonplace as in 'nobody in our family can sing', it is difficult for individuals to get a sense of who is 'like me' with regard to singing because of the internal rather than visible nature of the vocal mechanism.

In exploring the development of efficacy beliefs, Bandura (1997) suggested that cognitive self-reflective capabilities allow individuals to make self-efficacy judgments which are increasingly based on internal rather than external information. Once again, in practice this seems less true for singing than for many other skills. Children who successfully master singing in tune, and those who fail to do so, are frequently given both explicit and implicit feedback that their level of accomplishment relates to inherent ability rather than to aspects of personal agency.

Bandura's (1986) theory of triadic reciprocity is important and raises the question of whether or not there is a uniform level of potential for individuals to impact on their surroundings or context. The person who has low self-efficacy in singing is likely to have bought into a model of singing as a fixed ability trait, or in Bandura's terminology may have accepted an environment as *imposed* rather than *selected* (Bandura, 1997). Even if subsequent education and positive experiences encourage the individual to revise their understanding of singing, it may be difficult to maintain this in the light of contrary and strongly-held views of peers, colleagues and family members. Bandura (1997) suggested that external persuasion is often required before individuals can be persuaded to reappraise their low self-efficacy and accept a different and *created* environment.

Bandura's (1997) distinction between self-efficacy expectations and outcome expectations is relevant here. Whereas self efficacy is an individual's perception of capability, an outcome expectancy is the expectation that particular behaviours will result in particular outcomes. Although an individual may know that particular behaviours will result in a particular outcome, for example, that practising singing will improve the quality of the singing, their own low self-efficacy in singing may prevent them from acting in accordance with the outcome expectancy.

Music and Attribution Research

Unlike self-efficacy research, attribution research has been the focus of sustained attention from a handful of music education researchers (Asmus, 1986; Austin & Vispoel, 1998; Vispoel & Austin, 1993; Vispoel & Austin, 1995), and their work has made a significant contribution to understanding of the complex relationships at work in musical learning. One aspect of this multifaceted structure is the interaction between a range of factors including beliefs, task choice, persistence and performance accomplishment.

An important focus of research relating to music and attribution theory is the attributions children of various ages make about success or failure in music. A number of studies have established that in the primary school years children attribute success in music to effort and practice, whereas high school

students' attributions tend towards ability (Austin & Vispoel, 1998; Thomas, 1992).

Asmus (1986) reported similar findings in a study which explored the nature of student beliefs about success and failure in music, including how these beliefs changed over time. One important finding of this study was a significant shift in attributions from internal-unstable to internal-stable, as students progressed through the grades. The trend towards internal-stable attributions is a concerning one and raises the question of whether such a shift occurs because of current music education practices or is a reflection of learning within a broader life context. Asmus pointed out the likely influence of the prevailing western view which promotes an internal stable attribution (ability) for musical achievement.

Asmus (1986) also reported a higher incidence of external-unstable attributions for people not doing well in music compared with those who are doing well, with the number of external attributions increasing with grade level. Asmus suggested that this may indicate ego protection factors at work and the need to preserve an illusion of capability. Maintaining an appropriate public image is very important to students of high school age. Students who attribute failure to low ability may go to considerable lengths to minimise the effect of this or to make their failure appear attributable to factors other than ability (Vispoel & Austin, 1993).

The location of the shift in attributions between sixth and seventh grades found by Asmus (1986) may also correspond with the development of a personal judging faculty (Phillips, 1996) coupled with an awareness of the opinions of others. An additional factor may be the change in classroom goal structure from the co-operative groupings of primary school to ability grouping and the competitive and public grading practices which often characterise secondary schools (Austin & Vispoel, 1998).

There is a strong link between competitive goal structures such as choir auditions which lead to comparisons, and ability attributions. In contrast, mastery-oriented classroom settings in which assessment against past performance prevails over norm-referenced measures positively effect student motivation (Dweck, 1999; Vispoel & Austin 1993).

A major implication of Asmus' (1986) findings is that children who reach their teenage years without learning to sing in tune are likely to attribute this failure to lack of ability. This will in turn impact on their motivation to expend further effort in acquiring singing skills. Clifford (1984) stressed the importance of students learning to view failure positively and of acquiring skills relating to persistence in the face of challenge. Such an approach leads to effective goal-setting, self-initiated performance, detailed assessment and evaluation, and facilitative attributional response.

Attributing failure to effort leading to an increase in effort and subsequent failure, in reality reinforces low ability attributions. Clifford (1984) maintained that strategy training (implies failure attributed to ineffective strategies) leads to more productive engagement with challenging tasks and encourages a problem-solving approach to failure. Vispoel and Austin (1993) found some evidence of greater performance gains when strategy rather than effort attributions were made. Studies of attributional retraining in the field of learning disabilities point to the value of such retraining in conjunction with specific strategy training to assist underachieving students (Carr & Borkowski, 1989). This body of research highlights the kind of support which is not available to children who take a long time to develop in-tune singing skills.

Using a critical incident approach Vispoel and Austin (1995) surveyed a group of high school students about the attributed causes of success and failure in four subject areas including general or core music. Within each subject area specific tasks or activities were suggested with students being given the opportunity to add activities which were not included in the pre-established categories. The general music tasks identified were singing, playing an instrument, reading music and music tests. In addition to ability, task difficulty, effort and luck attributions, family influence, teacher influence, strategy and interest were included.

The results of the study indicated that attributional response varied according to outcome (success or failure), subject area and activity. More specifically, students' attributions in music could not be generalised from attributions in core subjects such as mathematics or English. In addition, findings in the Vispoel and Austin (1995) study showed that the attributional

responses to singing varied most markedly from the other music activities. For singing, ability was perceived as the strongest determinant of both success and failure, and teacher influence and lack of interest were significant attributions for failure.

Although Vispoel and Austin (1993) advocated parents and teachers de-emphasising ability in singing activities and suggested introducing tasks of appropriate difficulty, there remains a strong need for attribution retraining in this area. The suggestion that students be encouraged to generalise more facilitative responses from other activities in music to singing is an excellent one. However when singing is the main classroom music activity this is not a realistic option. Furthermore, as ability in singing is often regarded as the gateway to other musical activity, the potentially paralysing effect of low ability attributions for singing failure becomes clear. Vispoel and Austin (1995) warned about the use of feedback which indirectly communicates low ability, and advocated an alternative, view of ability in singing as 'a collection of skills that may be continuously improved over time' (p.405), a suggestion consistent with Dweck's (1999) incremental conception of ability.

Vispoel and Austin (1993) considered the affective responses associated with ability attributions for failure in music and how they differ from those in other contexts, and point to the impact of negative past experiences. They maintained that the impact of emotions on subsequent behaviour in music is complex and poorly understood. It may be at this point that the construct of self-efficacy has good explanatory power.

If musical achievement by all students is a goal of music education then it would be desirable for music teachers to encourage internal-controllable attributions such as strategic effort for success and failure. However the finding that students favour different attributions according to success or failure indicates that teachers also need to take account of a student's performance before providing feedback.

Austin and Vispoel's (1998) study of 12-13-year old students in a middle to upper-middle class, largely Caucasian school, sought to establish the extent to which students' attributional beliefs in classroom music vary as a function of task outcome and attribution category. They were also interested in

the relationship between attributional beliefs, music self-concept and music achievement.

Most to least endorsed success attributions were teacher influence, peer influence, family influence, luck, ability, metacognition, persistence, effort, strategy use, interest and task difficulty. All registered above the 3.5 midpoint indicating that on average each attribution was seen as a viable reason for success in music. In contrast, only three of the failure attributions, family influence (3.92), ability (3.65) and luck (3.52) registered above the midpoint. These were followed (in most to least order) by persistence, strategy use, task difficulty, peer influence, metacognition, interest, teacher influence and effort. These results reinforce the need to measure success and failure attributions separately.

Austin and Vispoel's (1998) study showed strong links between attributional beliefs, and music self-concept and music achievement test scores. The combination of attributions to lack of ability and negative family influence (low level of musical talent and participation), and the link with low self-concept and low achievement is of particular concern. Perceptions of ability as stable and uncontrollable and of music ability as an inherited trait may result in learned helplessness. Correlational results revealed attributional profiles for high and low achievers and reinforced the more constructive response to failure associated with effort and strategy attributions.

Austin and Vispoel (1998) suggested that classroom music teachers discuss possible reasons for success and failure with students. In this way teachers have the potential to alter or modify the attributional beliefs students hold and encourage a shift to less stable and more controllable attributions. Classroom teachers must also concern themselves with knowing and challenging students' perceptions about music ability. In particular, students who possess a concept of ability, particularly singing ability, as a multifaceted and changeable state, are likely to be less discouraged and more resilient when faced with ability attributions for failure.

A central theme in this review of literature relating to singing and vocal development has been the impact of educational practice on student learning and perceptions of capability. Enlightened instructional singing practices in

schools require teachers who possess the necessary teacher efficacy and self-efficacy to deliver such programmes. Effective preservice and inservice teacher education programmes are an essential component in the preparation of such teachers. Issues relating to teacher education will be considered in the following section.

2.7 TEACHER EDUCATION

A study of teacher education students' perceptions of singing capability needs to be located within the context of teacher education research. Studies of teacher values and beliefs, teacher efficacy, student teachers' prior learning and experience, the relationship between teacher skill and teaching ability, and teacher education programmes in music are all relevant to this study.

The impact of teachers' values, attitudes and beliefs on their own learning is supported by persuasive empirical and anecdotal evidence (Nespor, 1987; Pajares, 1992). Student teachers' own experiences provide a powerful filter for new and contradictory information and this may result in a high degree of resistance to different beliefs and attitudes about teaching (Richards & Killen, 1994). Teacher efficacy mediates between what teachers know and what they can do (Gibbs, 1997), with teachers' actions and behaviour better predicted by their self-efficacy than by their actual capabilities.

Lortie (1975) wrote "the mind of the education student is not a blank awaiting inscription" (p.66). Because the majority of teacher education students are likely to have spent more than a decade as educational consumers, Lortie contended that they come into teacher education courses with preconceived ideas about the learning and teaching process and about the general role of the teacher. He maintained that these views, generated from a distorted and incomplete perspective on teaching, encourage an imitative approach to teaching and lead to a conservative rather than change-oriented perspective on education. Other teacher education findings (Gibson, 1976; Tabachnick & Zeichner, 1984) demonstrate that student teachers frequently adopt the practices of the classrooms and schools in which they find themselves.

In a participant-observation study of four student music teachers, Schmidt (1998) found that the influence of their music education courses was strongly mediated by the students' existing beliefs, with the result that students learned quite different and sometimes conflicting things from the same teaching episodes. Schmidt also noted that depending on the students' interpretation, all teaching has the potential to be educative, in other words, conducive to learning and growth, or miseducative, interfering with ongoing learning (see Dewey, 1938).

There is a need for teacher educators to confront the issue of generations of inadequate music teaching in schools. Russell-Bowie (1988) wrote of the importance of breaking the cycle of poor teaching and subsequent low achievement and low self-efficacy in music and made helpful suggestions for ways in which this may be achieved. Primary teachers whose self-efficacy in music is low need targeted interventions in order to ensure that the practices which contributed to their lack of confidence in music are not perpetuated by subsequent generations of teachers.

In addition, teacher education institutions need to guard against focusing attention on skill-development at the expense of intention-driven issues (Gibbs, 1997). There is clear evidence that domain-specific self-concept enhancement combined with domain-specific skill development results in more robust learning than does a focus on either in isolation (Calsyn & Kenny, 1977) a view shared by Jeanneret (1997). Jeanneret stressed the need for teacher educators to design music education curricula which aim to impact positively on student attitudes rather than focusing exclusively on musical instruction. She noted that such an approach is particularly important for students who cite negative prior experiences at school and within their families as reasons for their lack of confidence.

Gifford (1993) discussed the lack of confidence among teachers in the arts, and attributed this partly to a perception of not being artistic and partly to a lack of experience in the arts. He maintained that this lack of confidence to teach in arts areas is definitely noticeable in music. In a study of preservice primary students Gifford found that although student teachers demonstrated a positive and professional attitude towards music when they entered curriculum

music programmes, the preservice courses in which they were involved did not enhance confidence in the subject or result in greater enjoyment of music at the personal level. An analysis of the course material indicated that a heavy emphasis on instructional rather than experiential activities may have influenced this outcome.

Gifford (1993) suggested that music teacher educators should consider adopting Swanwick and Tillman's (1986) model of musical development because of its emphasis on the balance between musical experience and musical instruction. A preservice teacher education programme that balances encounter with instruction can help student teachers gain a sense of being musical.

Gifford (1993) maintained that as well as developing prospective primary school teachers' musicianship, music curriculum courses should aim to develop a reflective and critical approach to their own and children's music-making. Gifford cautioned about the limitations placed on teaching and learning by an overemphasis on behavioural objectives although he conceded that they can be helpful in shifting the focus of teachers towards student learning.

In a response to Gifford, Barrett (1994) reported on an action research project which sought to develop student teachers' skills in and understanding of music through active involvement in a variety of musical tasks. This approach to learning about teaching music seems particularly valid given that numbers of students lack confidence in their musicality and have low self-efficacy in areas like singing.

Although preservice teachers regard their level of musical skill as being the most important factor in their ability to teach music (Gifford, 1993), time constraints in teacher education programmes make it difficult to achieve the skill level necessary to impact in any significant way on music teaching efficacy. Gifford commented that bemoaning a lack of time in preservice courses will be unlikely to bring more time. Rather it is important to make optimum use of the time available.

Drummond (1998) argued that time is a critical factor which must not be overlooked and maintained that in order to equip music teachers for the

breadth of their work, more not less hours must be spent in training them. He detailed the steady decline in preservice hours devoted to music and in the inservice support available to teachers in Aotearoa/New Zealand, and contrasted this with the increase in demand for quality music learning experiences in and outside of schools, a situation which appears to disregard the current market-driven model of education. Although convinced that generalist primary school teachers will not receive sufficient basic training to enable them to deliver high-quality classroom music programmes, Drummond is equally concerned that a move towards employing specialist primary music teachers will result in significant variations in quality.

Although a great deal of teacher efficacy research is concerned with general measures of teacher efficacy, there is value in applying findings to the study of specific curriculum subjects. Gibbs (1997) noted that those factors which influence the development of high self-efficacy may be different to those which influence the development of low self-efficacy, and this is certainly worthy of investigation in relation to singing.

Ashton (1984) stressed the important relationship between teacher efficacy and student achievement, a cause of concern to music educators faced with teacher education students who identify as having low self-efficacy both in music and in teaching music. Teacher efficacy research is thus a reminder to music educators in preservice teacher education programmes of the need to take account of the attitudes and beliefs about music which their students bring to music courses. To ignore the impact of previous learning contexts in music is to render much valuable music teaching and learning impotent.

In a study which included teacher education students and teachers of different age levels, Herbert, Lee and Williamson (1998) explored links between teacher efficacy and factors such as student learning outcomes and achievement, teacher satisfaction, and teacher responsibility for student success or failure. Some research participants taught, or were training to teach, multiple subjects, and others, single subjects including music. The study's findings reinforced Bandura's (1997) contention that personal experience is the single most critical factor in the development of teacher efficacy, and underlined the role of teacher efficacy in positive educational outcomes.

Findings from Herbert, Lee and Williamson's (1998) study also supported the notion that teachers' and student teachers' efficacy beliefs are qualitatively different. In relation to factors influencing the development of teacher efficacy there is evidence (although equivocal) that teachers' sense of efficacy is highest during preservice years and decreases with teaching experience. Where teacher education programmes are successful in raising the teaching efficacy of student teachers in a discipline such as music, there is a need to develop strategies for maintaining and supporting the level of teacher efficacy.

Teacher's judgments about self-efficacy vary between and within curriculum areas (Good & Tom, 1985). When appraising self-efficacy in any given area, factors such as task difficulty and confidence are relevant, as are variables such as task specificity, grade and gender of students. In relation to singing, student teachers often express that in spite of their low self-efficacy, they are prepared to sing with children when they can be certain that no other adult is within earshot. However, short of questioning children about whether singing happened in their class and whether the student teacher sang, there is no way of knowing if this assertion is true in practice. Students also expressed a preference to sing with younger children who they perceive to be less judgmental about singing ability than older children.

Another important consideration is teachers' own attributional beliefs about singing and how these impact on the attributional beliefs of children. Specialist music and general classroom teachers who believe that singing is a fixed ability trait rather than a developmental skill will have difficulty following Vispoel and Austin's (1998) suggestions for overcoming the debilitating effects of ability attributions for failure. The lack of attributional retraining, and of strategies to enhance musical performance in classroom music settings, may suggest that teachers also favour ability attributions for success and failure in classroom music.

It is well recognised that an interactive relationship exists between music education policies and practices, and the micro and macro social settings in which they reside, and that musical learning occurs through processes of enculturation and training. An investigation of beliefs about singing capability

needs to take account of the recent history of classroom music in Aotearoa New Zealand, to consider the implications of current policies and practices, and to comment on the likely impact of new directions.

2.8 MUSIC EDUCATION IN AOTEAROA/NEW ZEALAND

For the past 150 years, singing has been an important part of the primary school music curriculum in Aotearoa New Zealand (Buckton, 1983), with individual class teachers carrying the responsibility for their own classroom music programme. Under the New Zealand Curriculum Framework (1993) with its seven essential learning areas including the arts, and the pending Arts Curriculum document which will replace the existing New Zealand Music Syllabus (1989), the responsibility for provision of classroom music programmes will still reside with individual classroom teachers. In reality, teachers who feel confident to teach singing, and comfortable about singing in front of others have tended to provide singing experiences for the children in their care, while those who lack confidence either arrange for singing to be taught by another teacher or in conjunction with another class, or avoid classroom singing altogether.

With the nationwide introduction of a three year degree for primary teachers, there is concern about reduced numbers of graduates with depth of understanding of music education theory and practice. In addition to the existing number of teacher education requirements, the degree programme must also prepare students for possible postgraduate study in education. The result is an overcrowded curriculum, in which there are fewer opportunities for students to develop subject specialties. The reorganization of teacher education qualifications into discrete paper-based degrees rather than cohesive discipline-grouped studies is also likely to impact on the robustness of the learning that occurs in subjects such as music.

One of the greatest perceived threats to music teaching and learning in schools stems from a worldwide trend to integrate arts subjects at both policy and practice levels. Teacher education courses now require that arts educators in the various disciplines compete for student learning time, with the total time available further reduced by other demands on the curriculum. The propensity

for non-arts educators and educational administrators to combine the various artistic domains into a poorly-blended arts mixture is strenuously opposed by music educators. Research findings which demonstrate that global artistic self-concept is enhanced through enhancing self-concept in specific arts areas rather than the reverse (Yeung, McInerney & Russell-Bowie, 1999) add weight to their arguments. In addition, self-concept in a particular arts area cannot be enhanced merely by talking about the subject. It requires active engagement with the artistic materials of the discipline, and this requires time (Drummond, 1998).

2.9 RESEARCH QUESTIONS

The literature reviewed here has highlighted areas which are overdue for further investigation as well as issues which remain unexplored. Effective music research relates to what is currently under consideration in the international research community and seeks to approach old problems in new ways. It seems important that this study extend leads offered by existing studies or research rather than contribute yet another stand-alone project.

Classroom music teachers often complain that research complicates music learning and teaching, is incomprehensible to practitioners, and is of little practical relevance. Although Kemp (1992) urged that teachers view insight into research as an important component of professional development, such a view does not absolve researchers from making their research more explicitly relevant and from presenting it in an accessible form for classroom teachers. Good research questions are relevant to the processes of contemporary education. In addition, good research suggests ways of working that are realistic and practicable for those engaged in classroom teaching.

Bresler and Stake (1992) stated that "the most important criterion for any research is that it is about something important, important to readers as well as to researchers" (p.85). Writers such as McLendon (1982) have articulated the impact of childhood singing experiences on adults' perceptions of singing capability. Studies of student teachers' attitudes to music curriculum courses (Barrett, 1994; Gifford, 1993) also highlighted the important role of prior experience in perceptions of capability. However, in spite of these and

other related references, there is no evidence of any systematic study of individuals' perceptions of singing capability and the factors which contributed to these beliefs.

Although uncovering a wealth of significant theory and research relating to vocal development, the literature review identified a need for more self-efficacy research to be conducted within artistic domains. Artistic pursuits have been largely neglected in wider self-efficacy research and this is a serious omission. For the explanatory power of self-efficacy theory to be recognised, its application to a range of contrasting domains must continue to broaden. Because within western societies involvement in arts activities is often restricted to those who demonstrate particular aptitude, efficacy beliefs of individuals differ markedly.

The foundation of this study is the drawing together of a range of educational research relating to self-systems, attributions and motivation, music education and teacher education. With the pending publication of a new curriculum document, music education in Aotearoa New Zealand is entering a period of change. It is vital that such change occurs in an environment in which music educators understand and evaluate past music education practices and develop clear ideas about how the musical needs of future generations of school children can best be served.

Planning for the effective delivery of music education in the future requires systematic evaluation of what has occurred in the past. One important means of assessing the impact of music teaching in schools is to consult with those who are products of the system. One way of breaking the cycle of inadequate teaching is to encourage student teachers to reflect on the nature and quality of their own classroom music experiences in the light of contemporary understanding about musical learning.

This study aims to provide a context in which the music education providers of tomorrow may learn from the consumers of yesterday. It involves the survey of a year group of teacher education students about their singing self-efficacy, and explores in depth with three students the reasons for their efficacy beliefs. The primary consideration is to establish the nature of student

teachers' singing self-efficacy and to identify both the sources of these beliefs and the practices which contributed to their development.

The study therefore seeks to address the following research questions:

1. What are the singing self-efficacy beliefs of student teachers?
2. Are there differences in the singing self-efficacy beliefs of student teachers with regard to gender, age or ethnicity?
3. What factors have influenced the development of student teachers' singing self-efficacy?
4. What school and other practices may have contributed directly or indirectly to the singing self-efficacy of student teachers?

CHAPTER THREE

METHODOLOGY

This chapter describes the methodology used in the study. In the opening section consideration is given to philosophical and methodological issues associated with the study's design and implementation. This is followed by a description of the study's progress from the application for Human Ethics Committee approval to the data analysis. Links between the research questions and methodology are clearly established throughout.

3.1 METHODOLOGY

Research Design

Two factors were significant in the initial decision to survey teacher education students' singing self-efficacy. Firstly, student teachers' informal accounts of their early singing experiences and the subsequent development of their singing self-efficacy provided the stimulus for this research. Because of the lack of data about the incidence of low self-efficacy in singing, a decision was made to construct a questionnaire which would generate descriptive data (Drew, Hardman & Hart, 1996) about singing self-efficacy. Secondly, while the research did not directly address the question of how student teachers with low self-efficacy in singing deliver an effective classroom music programme once they are employed as classroom teachers, using student teachers as research subjects provided an opportunity for the issue of singing self-efficacy to be raised among preservice teachers.

Pajares (1996) advocated the use of a combination of quantitative and qualitative approaches as a means of establishing how efficacy beliefs develop and their impact on subsequent achievement. It was decided therefore that both a likert-scale questionnaire and open-ended questions would enable participants to provide explanations and interpretations of their beliefs, and of the contexts and experiences which gave rise to them (Herbert, Lee & Williamson, 1998).

In addition, it was felt that the individual, personal stories of a small number of participants would provide deeper insight into the development of

singing self-efficacy. Far from complicating quantitative data, students' life stories add meaning and validity to it. Herbert, Lee and Williamson (1998) criticised much teacher efficacy research on the grounds that it relies too heavily on quantitative data at the expense of a teacher 'voice'. Stake, Bresler and Mabry (1992), stressed the importance of understanding the people behind stories when they stated

We consider personalities to be determining factors, thus a central part of the stories. For all the effort to cast education into a technical and standardized operation, it remains greatly a product of spontaneity and intuition on both sides of the desk. The particulars of arts education cannot be understood, we believe without the personalistic dimensions (p.12).

Elliot Eisner (1996) observed that individuals' stories "make vivid what numbers often obscure and... generate an empathetic form of experience that helps a reader know viscerally what the situation is like for those who are there" (p.11). Eisner advocated an expansion of the methods of educational discovery in order to reduce the bias effect of purely quantitative methods. At the same time he emphasises the need for qualitative researchers to place their insights within a meaningful referential framework. A research methodology which employs quantitative and qualitative research methods is one way of ensuring that this happens.

Reliability and Validity

Decisions about the design of research inevitably lead into considerations of reliability and validity. Unlike research which uses quantitative methodologies, qualitative research is more concerned with issues of understanding and meaning than with issues of replication and generalization (Maxwell, 1992), and therefore does not lend itself to the application of conventional standards of reliability (Burns, 1997). Anderson (1998) suggested that unless questionnaire items incorporate scales which are sensitive to such fluid states as mood, there is likely to be consistency of response. In key informant interviews of the type used in this research,

reliability is often a question of intuition. Congruence between verbal responses and non-verbal signs is a strong indicator that a participant's account is reliable.

An important way to monitor research findings for bias, and to increase confidence in the soundness of data, is recourse to the notion of triangulation (McFee, 1992). Denzin (1978) favoured the use of between-method rather than within-method triangulation in order to maximise the strengths and minimise the weaknesses of different methods, although McFee cautioned that both methods must indeed address the same issue. In this study, contrasting methods of data collection were used in an effort to produce robust and credible research findings.

Maxwell (1992) stressed that in qualitative research, questions of validity are focused not on methods or data but on the interpretation of data. He distinguished between five types of validity and suggests that attention to these protects qualitative researchers from validity threats. In this study, taping and preparing transcripts of interviews, and retention of questionnaires allow access to original data sources and thereby strengthen *descriptive validity*. *Interpretive validity* relies primarily on the meanings participants ascribe to their accounts. In this instance, anecdotal evidence consistent with the interviewees' stories supported the meanings they ascribed to their experiences, but at the same time allowed for the possibility of alternative meanings and interpretations. Unlike the previous two categories, *theoretical validity* is a step removed from the data itself. This research incorporated theories of musical development in conjunction with self-system theories in order to develop an explanation of the phenomena under investigation. Maxwell's final two categories, *generalisability* and *evaluative validity*, are less relevant to this research.

The Researcher

An important consideration in any research is the impact of the researcher on the results of the study. The impetus for this study was the researcher's work with teacher education students and the impression that for

many of these students different music educational interventions could have resulted in more positive and constructive singing self-efficacy. This belief was influenced in part by discussions with professional colleagues involved in remedial singing instruction as well as through reference to relevant music education literature. In addition, the researcher's observations of and involvement with the contrasting vocal development journeys of her own five children played a pivotal part in the shaping of her beliefs about singing self-efficacy.

Such intense personal involvement with the conceptual content of the research, coupled with an empathetic engagement with the research subjects, brings with it a danger that the researcher may overlook alternative explanations for the research outcomes. Undoubtedly the researcher's perspective will to some extent affect the interpretation of the data collected (Arsenault & Anderson, 1998). In order to lessen the chance of extreme bias, it is vital that sufficient data are provided in the research report so that readers may verify the interpretations of the researcher and even form additional conclusions of their own (Bresler & Stake, 1992).

Anderson (1998) also raised the possibility of interviewers using leading questions and of the researcher's agenda obscuring the meanings or intentions of the interviewee. Close reading of the interview transcripts for this research shows that although on occasions the researcher attempted to lead the discussion in particular directions, the participants did not cooperate unless they had something to say on the issue. On a number of occasions, participants steered the conversation back to issues and perspectives which were significant to them, repeating and emphasising important points.

3.2 PARTICIPANTS

Questionnaire Participants

In order to accurately establish the nature of singing self-efficacy in student teachers, there was a need to obtain data from a sizeable sample so that results could be generalised to the larger student teacher population. A number of factors including the number of students in particular groups, ease of access

for questionnaire administration, and prior completion of music curriculum courses, influenced the choice of participants for the study.

When considering the suitability of year groups in the primary preservice programme, first and third year groups were excluded because significant numbers had completed some or all components of the compulsory music curriculum course. This course with its emphasis on the development of basic music skills and confidence was expected to influence students' beliefs about capability. A decision was made to survey students who were in their second year of the primary preservice degree programme. With the exception of a small number of repeat students and those who had chosen music as a subject for specialist study, the majority of second year students would not complete their curriculum music course until the following year.

Interview Participants

One hundred and sixty-five students completed the questionnaire. At the conclusion of the questionnaire, participants were given the opportunity to indicate their willingness to take part in a follow-up interview. The questionnaires of students who agreed to be interviewed and whose total score indicated low self-efficacy in singing (either a total score of 23 or less, or a rating of 1 or 2 for item 9) were identified. From these, a random selection of participants was made. Students selected received a letter inviting them to take part in the interview phase, but after three separate random selections, only one student had contacted the researcher agreeing to be interviewed. As there was no other means of contacting students who had indicated a willingness to be interviewed, early the following year the researcher then sought volunteers from among the cohort which had taken part in the questionnaire phase the previous year. Two students approached the lecturer and were subsequently interviewed. Both these students were enrolled concurrently in music option papers. One was also completing the music curriculum paper, and both were known to the researcher. Although taking part in the interview phase neither advantaged or disadvantaged the students in terms of their music studies, it is likely that the participants' knowledge of and interest in music education, and

the existing level of trust between researcher and interviewee resulted in high quality data.

3.3 INSTRUMENTS

Questionnaire

A questionnaire (Appendix 1) was developed to examine the nature of student teacher's beliefs about their singing capability, and any factors and events which students identified as important in the formation of those beliefs. Bandura (1986) suggested that measurements of self-efficacy must be task specific and relate directly to criterial performance tasks. Student teachers' unsolicited comments about singing self-efficacy indicated that singing itself is sufficiently task specific. Although students frequently state that they would be comfortable singing in front of young children but not in front of other adults or their peers, their comments do not suggest that beliefs about capability are different in different contexts but rather that certain contexts are more or less stressful than others.

Four singing subskills: in-tune singing, singing with pleasant tone, rhythmic accuracy and singing with expression, were identified. These subskills related directly to the definition of singing as a vocal activity which utilises combinations and variations of pitch, rhythm, timbre and dynamics. For each of these subskills, participants were asked to rate themselves, using a five-point Likert scale, on both task difficulty and strength of belief. For the task difficulty questions, participants rated themselves on a forced-response scale with five responses from extremely easy to extremely difficult. For the strength of belief questions, participants rated themselves on a five item scale from extremely sure to extremely unsure. Participants were also asked to rate themselves on a general singing self-efficacy item with ratings ranging from definitely capable to definitely not capable.

Although the questionnaire was constructed to provide a logical and coherent sequence (Anderson, 1998), no consideration was given either to the ordering of the subskills or to the possible impact of the order on item response. A retrospective analysis of the subskill item order has shown that it

corresponds with the researcher's beliefs about most to least important skills for perceptions of capability. The general self-efficacy item was placed after the sub-skill items in order to provide a context for participants in their rating for this item.

Using an open-ended question format, students were asked to comment on the development of their singing self-efficacy and on any particular experiences or events they could recall that contributed to these beliefs. These questions were included in order to assist in the analysis of the quantitative data and to enrich the meanings ascribed to it. Data on gender, age and ethnicity were also obtained. Participants completed the questionnaire voluntarily and anonymously. In order to preserve anonymity during selection, students who agreed to participate in the follow-up case study interviews were asked to include the number of their personal university mail locker rather than identify themselves by name.

Interviews

In order to gain a deeper understanding of the complex factors which impact on the formation of singing self-efficacy, audio-taped interviews were conducted with three participants. Inclusion of this phase of the research recognised that short responses to the open-ended items on the questionnaire could mask significant events in individual students' lives. The interviews provided the researcher with the opportunity to seek further clarification of the participants' thoughts, feelings and experiences with regard to their singing self-efficacy and musical self-concept.

The format of the interviews was semi-structured. Participants were interviewed individually, and all responded to questions about their childhood musical experiences, family musical history, important events in the development of their personal beliefs and attitudes about singing, and feelings about providing an effective music programme in their own primary school classrooms.

3.4 PROCEDURE

Ethics

Approval for the research was gained from the Massey University Human Ethics Committee. Ethical issues such as consent, privacy and anonymity were taken into account. Information sheets were provided for questionnaire and interview participants (Appendices 2 and 3), and interview participants signed individual consent forms (Appendix 4).

Pilot Study

In order to establish that the questions and format were clear, the questionnaire was initially completed by 12 student teachers enrolled in their third year of the degree programme, and who currently completing a music option paper. All questionnaires were completed according to the instructions given. In addition, the open-ended questions about the formation of singing self-efficacy elicited responses which were detailed and pertinent to the research questions under consideration. No modifications were made to the questionnaire as a result of the pilot study.

Questionnaire Administration

Information sheets and questionnaires were distributed during the same one-week period to all students in a second year Professional Practice and Inquiry (PIP) lecture. Questionnaires were completed voluntarily and anonymously at the start of the lecture. Individual PIP lecturers took responsibility for collecting questionnaires and returning them to the researcher.

The total number of questionnaires completed was 165. This represented 67% of the second year primary preservice teacher education cohort, which at that stage numbered 240 students.

Interviews

Participants in this phase were interviewed individually. Before the interview, they were given an information sheet and a consent form and were encouraged to read the forms carefully and ask questions before giving consent. The interviews were audiotaped and transcribed for ease of analysis.

Analysis of Data

Each completed questionnaire was numbered for ease of reference and identification. The first nine items were then given a numerical score which corresponded to the circled Likert-scale rating. Bearing in mind Crowl's (1996) caution that individual items added together should be conceptually linked, the nine individual scores were added to give a total score for each participant.

For each item, and for the total score for each participant, the total sample mean and standard deviation were obtained. In addition, a factor analysis was undertaken in order to examine the underlying factor structure of the scale. Analyses of data in terms of gender, age, and ethnicity, were also performed.

The answers to the open-ended questions were read in order to identify student statements about factors that influenced the development of their singing self-efficacy. Transcripts of the taped interviews were read and re-read in order to extract participants' individual stories.

Clear themes and patterns were apparent. For each theme, such as school or family, comments by students with high and low self-efficacy were noted separately and the questionnaire number recorded for future reference. Questionnaire comments and interview responses were discussed in the light of the four factors Bandura (1977, 1986, 1997) identified as important in the development of efficacy beliefs: performance accomplishment, verbal persuasion, vicarious experience and emotional arousal. Attention was paid to questionnaire participants' attitudes and beliefs with regard to teaching music in the primary classroom and to the impact of their own experiences as learners on their personal teaching philosophy.

Findings from each phase of the study are reported in the following two chapters. Chapter Four considers the results and discussion relating to the questionnaire data. The results and discussion relating to the open-ended questions in the questionnaire and to the interviews are reported in Chapter Five.

CHAPTER FOUR

RESULTS AND DISCUSSION: PART I

The first section of this chapter reports results of the data analysis for the questionnaire, and includes analysis of the data in relation to gender, age and ethnicity. This is followed by a discussion of both the implications and the limitations of the statistical findings.

4.1 DATA ANALYSIS

The first section of the questionnaire contained nine items. Items 1 to 8 consisted of four pairs of variables, each pair measuring the level of efficacy and the strength of the efficacy belief for four aspects of singing behaviour, namely, in-tune singing, rhythmic accuracy, pleasant tone and appropriate expression. Item 9 was a measure of overall singing self-efficacy. A numerical rating of 1 to 5, which equated with the selected response for each item, was assigned to the first nine questionnaire items, with 1 indicating low self-efficacy and 5 indicating high self-efficacy. A total score was calculated for each participant, with total scores ranging from a minimum of 9 to a maximum of 45. Individual item scores and total scores for each participant were then analysed using a variety of measures.

Item intercorrelations ranged from .40 (between items 4 and 7) to .84 (items 5 and 6). In general, the item intercorrelations indicate that items on the scale are tapping a common domain of singing self-efficacy. The internal reliability estimate (alpha) for the 9-item scale was .94, suggesting a high level of internal consistency.

Means and standard deviations for the nine items on the questionnaire were calculated and are presented in Table 1. Although the mean score for item 9 (overall singing capability) indicates a trend towards positive singing self-efficacy for student teachers, the figure masks the reality that among the sample of 165 students, 44 (over 25%) rated themselves as not capable or definitely not capable at singing. Only 78 of the 165 participants, less than 50%, rated themselves as capable or definitely capable at singing. Of the 165

students surveyed, 57 (35%) responded that it was either difficult or extremely difficult for them to sing in tune.

Table 1.
Means^a and Standard Deviations for Questionnaire Items

| Items | <i>M</i> | <i>SD</i> |
|-------|----------|-----------|
| 1 | 2.99 | 1.12 |
| 2 | 2.82 | 1.19 |
| 3 | 2.96 | .95 |
| 4 | 2.74 | 1.06 |
| 5 | 3.47 | .97 |
| 6 | 3.33 | 1.02 |
| 7 | 3.27 | 1.01 |
| 8 | 3.20 | 1.03 |
| 9 | 3.17 | 1.11 |
| Total | | |

^aN=165

A factor analysis was carried out in order to examine the underlying structure of the scale. Although the principal components solution resulted in only one factor with an eigenvalue greater than one, a second factor with an eigenvalue of .9 was also investigated. These two factors, which accounted for 76.65% of the variance, were entered into a Varimax rotation. Two clear subscales were identified. The first (Tune/Tone) contained items one to four and item nine. These items related to in-tune singing, pleasant tone and overall singing capability. The second subscale (Rhythm/Expression) contained items five to eight, which relate to accurate rhythm and expression. Factor loadings are shown in Table 2.

Table 2.

FACTOR ANALYSIS OF QUESTIONNAIRE ITEMS

| Items | Factor 1 (Tune/Tone) | Factor 2 (Rhythm/Expression) |
|-------|-------------------------|---------------------------------|
| 1 | .853 | .343 |
| 2 | .830 | .349 |
| 3 | .773 | .392 |
| 4 | .868 | .286 |
| 5 | .355 | .794 |
| 6 | .426 | .740 |
| 7 | .224 | .781 |
| 8 | .374 | .783 |
| 9 | .784 | .379 |

Means and standard deviations for the two subscales and the full scale were calculated and are presented in Table 3. Differences in sub- and full scale scores as a function of gender, age, and ethnicity were analysed by means of *t* tests, and an analysis of variance. In terms of gender there were no significant differences between males and females for Tune/Tone, $t(153) = 0.27$, $p = .79$; Rhythm/Expression, $t(153) = 0.08$, $p = .94$; or Full scale, $t(153) = 0.20$, $p = .84$.

Regarding ethnic background, statistically significant differences between Maori and European/Pakeha students were found for both subscales and the full scale, as follows: Tune/Tone, $t(135) = 2.73$, $p < .01$; Rhythm/Expression, $t(135) = 2.90$, $p < .01$; Full scale, $t(135) = 3.02$, $p < .01$. In all cases, Maori students reported more positive self-efficacy beliefs than their European/Pakeha peers. There was no analysis carried out for the participants who identified as Pacific Islander ($n = 5$) and Other ($n = 4$) because of the small samples.

A one-way analysis of variance (ANOVA) was performed in order to test for significant differences between the three age-based groups. No significant differences were observed: Tune/tone, $F(2,158) = 0.40$, $p = .67$; Rhythm/expression, $F(2,158) = 1.42$, $p = .25$; Full scale, $F(2,158) = 0.04$, $p = .97$.

Table 3.

Means and Standard Deviations for Subscales and the Full Scale

| | N | Tune/tone | | Rhythm/Expression | | Full Scale | |
|---------------------|-----|-----------|------|-------------------|------|------------|------|
| | | M | SD | M | SD | M | SD |
| Males | 32 | 14.90 | 4.87 | 13.28 | 3.55 | 28.19 | 7.52 |
| Females | 123 | 14.64 | 5.04 | 13.23 | 3.43 | 27.87 | 8.03 |
| Maori | 26 | 17.12 | 4.58 | 15.27 | 3.01 | 32.38 | 6.77 |
| European/ Pakeha | 111 | 14.25 | 4.88 | 13.19 | 3.36 | 27.44 | 7.68 |
| <21 | 73 | 14.57 | 4.83 | 13.37 | 3.15 | 27.95 | 7.44 |
| 21- 30 | 59 | 14.52 | 4.67 | 13.75 | 3.14 | 28.27 | 7.22 |
| >30 | 29 | 15.44 | 5.60 | 12.45 | 4.40 | 27.90 | 9.60 |

4.2 DISCUSSION

In this section, results of the quantitative data analysis are discussed in the light of the first two research questions. These questions seek to provide an overall singing self-efficacy profile for student teachers, and to identify any differences in singing self-efficacy on the basis of gender, age and ethnicity.

The findings of the study suggest a slight trend toward positive self-efficacy among the cohort of student teachers who completed the questionnaire,

with a concentration of scores in the middle of the distribution. Although the scope of this study precludes generalisation to unrelated groups within the wider New Zealand population, the notion of relatability (Bell, 1987) is realistic. It is likely that these findings may be applicable to other groups of teacher education students in the institution in which the study was carried out, and possibly throughout Aotearoa/New Zealand.

The perceived link between tunefulness and general singing capability (Welch, 1999) is borne out in this study. Although Anderson (1998) suggested that asking individuals different questions on the same questionnaire is likely to result in correlation between items, participants' responses to the first nine questions indicate a stronger relationship between in-tune singing and pleasant tone, and the general self-efficacy item, than between accurate rhythm and expression, and the general item. This suggests that the first two singing subskills are more strongly related to overall singing self-efficacy than are the second two.

The identification through factor analysis of two distinct subscales adds support to the notion that, within a western cultural context, in-tune singing is the factor most often associated with singing capability (Welch, 1999), and to the anecdotal evidence that vocal tone is often problematic for singers with low self-efficacy. This finding is consistent with analysis of the means for items 1 to 8 in the questionnaire which showed that participants rated accurate rhythm followed by appropriate expression as the singing factors about which they felt most efficacious. Conversely, the means for in-tune singing were slightly above the midpoint of 3 for capability but under for strength of efficacy, while the means for pleasant tone were below the midpoint for both capability and strength of efficacy. These findings highlight the importance to the development of singing self-efficacy of a positive instructional focus on pitch accuracy and tunefulness in classroom singing programmes, an approach advocated by music educators such as Choksy (1981), Atterbury (1984) and Welch (1985). Attention to issues of vocal production with a view to improving vocal tone may also impact positively on singing self-efficacy.

Although there is a general perception that females are more capable singers than males, this was not borne out in the self-efficacy beliefs of the

questionnaire participants. One explanation may be that the high proportion of Maori males ($n = 14$ from a total of 32 males) served to raise the overall mean for males in the study.

It is important to recognise that these results do not provide a complete perspective on the research questions under consideration. The following chapter, which presents results and discussion from the open-ended questions and interviews, completes the picture.

CHAPTER FIVE

RESULTS AND DISCUSSION: PART II

This chapter reports the findings from the open-ended question items of the questionnaire, and from the individual interviews. In order to place the discussion in context, the chapter begins with an overview of questionnaire responses and a summary of the individual interviews. The discussion which follows draws on both the open ended questionnaire responses and the interviews, and centres on the major theoretical constructs of the study: self-efficacy and causal attributions; classroom goal structures and conceptions of ability; vocal development; and teacher efficacy.

5.1 QUESTIONNAIRE RESPONSES

The open-ended questions in the questionnaire sought to identify both general factors and specific events which influenced the formation of student teachers' efficacy beliefs in singing. Although two different questions were used to elicit this information, there was considerable overlap between the responses. For this reason, the data obtained were collated according to the nature of the response rather than in relation to the specific question being asked. Three themes: other people, the self and musical experiences, emerged as significant in the development of students' singing self-efficacy. These themes are consistent with Hargreaves' (1996) contention that studies of musical development must take account of the social and educational context of the learning.

Participants who identified as having low self-efficacy in singing cited school/teacher, family, peer and other people influences, and self-evaluation as important factors in the development of their efficacy beliefs. Participants with high self-efficacy also cited these same factors but in addition commented on the importance of singing and general musical experiences.

The comments of some students with low self-efficacy reveal little about the source of their beliefs but express a firm conviction about their lack of capability. One writes "I just know I can't sing" while another comments

“Personal experience. I just don't have a nice voice”. Although it is not possible to evaluate the accuracy of these judgments, the comments are consistent with Flowers (1985) observation that poor pitch singers can often identify when they are out of tune, and with the belief that out of tune singing may be a coordination rather than a pitch discrimination problem (Welch, 1986; Phillips, 1996).

With regard to specific events which impacted on singing self-efficacy, success or failure in choir auditions figured prominently, reflecting the significance attached to performance goals (Dweck & Leggett, 1988; Dweck, 1999) in singing. Students with high self-efficacy wrote of the importance of achievements such as being selected to sing a solo or winning an auditioned part in a musical show. Many participants with low self-efficacy also traced their beliefs to a specific occasion. One student described how at the age of 11 “I held a note too long and was told off by the teacher in front of everyone”. This comment highlights how seemingly inconsequential incidents may make a lasting impression on those whose efficacy beliefs are vulnerable to criticism.

A number of participants with high self-efficacy emphasised the contribution of long-term involvement in musical activities, attributing their beliefs about capability to a process which occurred over time rather than to a single incident. These students' comments attest to the value of a mastery orientation towards learning (Dweck & Leggett, 1988; Dweck, 1999), a theme that will recur throughout this chapter.

Bandura's (1997) judgment of the impact of sibling interactions on the development of efficacy beliefs is evident in a number of questionnaire responses. Interestingly, comparisons with siblings and sensitivity to siblings' comments were mentioned only by students with low self-efficacy in singing. Responses ranged from very decided “negative experiences mainly from siblings” and “through my family - especially brother and sister” to comparative comments such as “my mother said my sister could sing better than me. Put me down a bit”.

5.2 INTERVIEW SUMMARIES

Three students, Kirsty, Louise and Joe, (not their real names), were interviewed in the final phase of the research. In addition to questions about their childhood music experiences, they were asked about their singing self-efficacy and the particular factors and circumstances they believe contributed to the development of these beliefs. They were encouraged to speculate about practices and experiences which may have assisted them develop more favourable beliefs about their singing capability, and in conclusion, discussed their personal philosophies about teaching singing in the classroom.

Kirsty

Kirsty is a mature student with a great love of music and a developing sense of efficacy as a singer and musician. She described how as a child she had always loved to sing and how she was encouraged to do so within her family. When she began at intermediate school as an 11 year old, it was very natural for Kirsty to audition for the school choir. She gave a detailed and poignant description of the audition.

I remember at the time we were standing in rows with quite a space in between us, singing this song, and this person walked past with his ear like this saying 'you can go' and 'you can go' and being absolutely terrified that I'd be one of those people so I was singing really quietly. And he said 'you can go'... and just feeling absolutely humiliated. And I wasn't shocked because it was almost like I'd expected him to say I could go, but feeling totally humiliated and walking out while everybody else was singing and never trying that again, never ever putting myself in that kind of position...

I've often thought about it. It's not even been something that has gone to the back of my mind. Somebody talks about singing and that comes instantly to my mind, 'you can go'. Just those words and just that hand ... And I still hear it now. I found it devastating, it was a devastating event.

I don't think I've ever talked or told anybody about that event because I think until recent years it would have made me cry. It was still a fairly raw and painful event... It was something that affected other parts of my life too... As soon as I heard you were looking for someone to talk to I thought, I'm going to talk about that. I'm going to use this as a chance to tell my story.

Following the audition, Kirsty stopped singing altogether, a decision which she described as leaving her “full of songs to sing” but with no means of releasing them.

Over twenty years later, Kirsty was accepted into a teacher education programme and required to choose two subjects for specialist study. After a great deal of soul-searching she opted to study music. In spite of her low self-efficacy as a singer and a belief that she was completely unmusical, Kirsty had retained a great love for the subject. She made a conscious decision to confront her fear of failure in what she hoped would be a supportive and encouraging environment.

Louise

Louise entered the College of Education at the end of her secondary schooling. From a young age she had enjoyed music making and for her 10th birthday she requested piano lessons as a birthday present from her parents. Louise studied music at secondary school with the emphasis on instrumental music. Although she felt confident as an instrumentalist, Louise was not confident about her singing ability. She described how she and her younger sister used to sing to their grandparents. Her grandparents responded politely but unenthusiastically and Louise took this to mean that she lacked singing ability. When her high school music teacher suggested that it would be good for Louise to join the choir, Louise also interpreted that comment as an indication of low singing ability. “I thought maybe she thought I should go into the choir to actually improve my singing”. Louise linked her low self-efficacy in singing to a lack of confidence in speaking.

I didn't like speaking in front of people and singing to me was a step up from speaking. I just thought if I can't speak in front of people then how am I going to sing in front of people?

Like Kirsty, Louise also opted to study music as a specialist subject within the teacher education programme. She described how a compulsory music leadership component in the second year course impacted significantly on her singing self-efficacy.

I used to think I was really bad but I think doing that music leadership course really helped it. Before that I didn't want to sing in front of anyone. I could sing in front of the kids but I just couldn't sing in front of my friends or adults. Everyone had to (sing alone in the Music Leadership module) so it wasn't so bad. I came from thinking I was really bad to I was not so bad.

Joe

Joe is also a mature student. Musical experiences within his family of origin involved live music-making, especially singing along with the piano accordion. He doesn't recall any particular encouragement or messages about capability or lack of capability. The music that occurred in his family was "just sort of something they did". Joe's pivotal musical memory relates to auditioning for a part in HMS Pinafore at intermediate school.

The roles were all singing ones, and when I auditioned by singing the teacher said to me 'we might find you somewhere in the chorus or perhaps Mr B would like a hand with the stage work'. That straightaway sent a message to me that she doesn't think I can sing - that was my first recollection of it.

Later in the interview Joe spoke again about the audition. "I'm 40 just about and it's like I still remember that day so clearly." He went on to relate how subsequent experiences reinforced his singing self-efficacy. "I heard myself singing one night and somebody had tape recorded it at a party and I

heard that and hated that.” Referring to that incident, Joe recalled a friend saying about his singing, “this is what I have to put up with”.

5.3 SELF-EFFICACY AND CAUSAL ATTRIBUTIONS

Self-efficacy theory and attribution theory provide useful frameworks for examining both open-ended questionnaire responses and statements from interview participants. Bandura (1977) cited four factors as being important in the formation of efficacy beliefs, and analysis in terms of these factors sheds light on the processes at work as efficacy beliefs develop. Causal attributions are the explanations individuals give for their successes and failures and are closely linked with beliefs about capability.

Performance Accomplishments

As well as referring to the level of skill achieved, performance accomplishments or enactive mastery experiences describe individuals’ ongoing and direct experiences of the skill being learned, and are regarded as the most powerful influence on developing efficacy (Bandura, 1997). Successes contribute significantly to high self-efficacy whereas failures, particularly before positive self-efficacy is established, diminish an individual’s beliefs about capability.

In singing, performance accomplishments may take a variety of forms including both public and private achievements in formal and informal settings. A number of students reported that public recognition of their singing skill was a major factor in their high self-efficacy. Achievements such as being asked to sing for a particular purpose, or being selected for a special singing role or as a member of a special singing group, were mentioned by many participants. Successful choir auditions or selection for solos were also a source of high self-efficacy. Each of these events produced a strong sense of accomplishment in the individuals concerned. One student wrote:

Being given lead singing roles in musicals gave me confidence to go further. Have always sung - been in choirs, enjoy a large variety of music and sing all the time to family etc.

An important aspect of broadly-based musical experience is the opportunities it provides for practice and rehearsal of a range of related musical skills (Hargreaves, 1996). Participants who identified as having high self-efficacy cited group experiences such as choirs or kapahaka (Maori singing groups) as important in the formation of their singing self-efficacy. One student wrote that “after being involved with kapahaka and various choir groups I believe I have developed a good awareness of my singing capabilities”. For students with high self-efficacy whose experiences were not confined to singing, involvement in other musical activities such as playing instruments contributed significantly to a general understanding and familiarity with musical structures and concepts. One stated, “I have played piano from a young age and I believe that my singing ability has developed from this”, while another wrote, “lots of music at home. Have played musical instruments from an early age - lots of practice listening for intonation, tune etc”.

It is well documented (Bandura, 1997) that once high self-efficacy is established, individuals are resilient in the face of setbacks and are motivated to persist with the activity concerned. Comments from participants with high self-efficacy bear this out. One wrote:

I've always been able to sing. I had a nice treble voice when I was a boy. Since then my tone isn't as nice. I would like to have singing lessons to help with this.

Another commented:

I've had different types of music lessons since I was 6. I think I'm an OK singer but I don't think I'm great. I can only span two octaves and my voice isn't wonderful.

Interestingly, although this participant clearly had some misgivings about her voice quality, she still rated herself as capable at singing.

Participants who identified as having low self-efficacy did not cite lack of singing experience as an important factor. A number told of failing to be accepted in the school choir and interpreted this as indicative of low ability in singing.

At intermediate we all had to sing one at a time to the music teacher so she could pick a choir. I never made the choir so I believed that I couldn't sing very well.

Another student teacher noted that she “loved singing as a child but discovered I wasn't that good when I didn't get into the Chapel choir at intermediate school” These comments bear out Bandura's (1997) view that an individual's self-efficacy is shaped by the inferences drawn from success or failure more than from the performance event itself. For both Kirsty and Joe, audition failure was interpreted as a clear message that they were not capable singers and their response was to stop singing.

Bandura (1997) suggests that in order to shift low self-efficacy there needs to be significant external pressure. Kirsty's decision to join an optional singing development group took extraordinary courage and only happened after she had developed a relationship of trust with the lecturer concerned and with other group members. In Louise's case this pressure came through a compulsory music leadership module, a requirement she was unaware of when she enrolled in the paper. The result was a performance accomplishment which exerted a powerful influence on her self-efficacy.

If someone had said to me, ok next year you're going to have to get up in front of the class and sing and teach them and sing all the parts, I wouldn't have believed that I could do it and I probably would have taken another paper. I suppose because the class was so supportive... and when I actually did it, I was taping myself and practising and playing it back. I thought well it doesn't sound as bad as I thought, but it took a lot to actually get up there. But once it was over it kind of changed everything.

Verbal Persuasion

Verbal persuasion, the range of feedback that people learning and developing new skills receive, is closely tied to performance accomplishment. Individual's beliefs about their singing capability appear to be particularly susceptible to the negative comments of teachers, family members and peers.

One explanation for this may be that unlike the playing of instruments in which the sound is produced by the instrument, in singing the individual concerned is the instrument. Kirsty commented:

I really wanted to be in the choir, I just loved singing and until that point I always thought that I was okay. Nobody ever said that I was okay ... I just always thought inside of myself that I sounded alright and it was like he was saying me, the person wasn't okay, it was like he was rejecting me...

Another explanation for the level and importance attached to external feedback is that in contrast to activities like silent reading or embroidery which do not impinge on others' time or space, singing occurs in a shared sonic environment. As a result, singers tend to be sensitive to the opinions of those who have no choice but to listen. This is reflected in comments such as "I love to sing - I'm sympathetic to others' ears" and "everyone tells me I can't sing. I turn the radio up loud so they can't hear me sing".

Although Bandura (1997) suggested that as cognitive self-reflective capabilities develop, individuals increasingly base their self-efficacy judgments on internal rather than external information, some participants' responses indicate that singing self-reflection and self-assessment may not be well-developed in individuals with low singing self-efficacy. An example of this reliance on external feedback is the student who wrote "I haven't ever had feedback so have no idea how to judge myself".

Bandura (1997) stated that "many children are severely handicapped by disbelief in their efficacy stemming from faulty self-appraisal..... They have much to gain from changing a negatively biased system of self-appraisal that leads them to belittle their capabilities and increases their vulnerability to stress and despondency" (p172). Unlike subjects such as mathematics in which high test scores can be perceived by the individual as a successful performance accomplishment irrespective of feedback from others, individuals who lack belief in their capability as singers may also lack belief in their fitness to judge their own capability and may rely heavily on others' judgments. One participant commented "When friends joke 'don't sing' I ask myself if there is

some truth behind what they say". Unfavourable comments about their singing are not necessarily evaluated objectively by singers. One student wrote:

When my flatmates sing I might join in and the one who thinks she's good would give me a look. She would make comments that I was bad.

Absolute credibility may be given to deliverers of feedback, particularly those regarded as musically able, as with the participant who wrote: "My brother continually tells me I sing out of tune and because he has perfect pitch I believe him". Some students formed positive efficacy beliefs in the absence of negative feedback as in the comment "no one has ever told me I am a horrible singer" indicating a belief that when someone does not sing well other people let them know.

Although such links have not been clearly established in the literature, questionnaire responses indicate that the perception of poor pitch singing gained through feedback from significant others may be a crucial factor in the development of low singing self-efficacy. One student, explaining how her low self-efficacy developed wrote "my sister and parents saying I couldn't sing in tune" and another "Mum told me that I could not sing in tune". Another student wrote "Form 2 teacher telling me I can't sing. Friends tell me to shut up. Far too hard to sing when you're tone deaf". Such comments are consistent with the questionnaire findings which demonstrate a strong relationship between in-tune and pleasant tone items and overall beliefs about singing capability.

Because the male voice register is conspicuous in a group of women and children, male teachers and student teachers need to be prepared for the attention this may attract. It is easy for those with low self-efficacy to interpret this response as further evidence of lack of singing capability. One student wrote:

On teaching practice I was sitting at the back of the class and joined in with the singing. All at once all the kids stopped, turned around and looked at me. I rather hope it was because they hadn't heard a male voice before rather than the sound.

Where high self-efficacy is established, individuals are able to accommodate contradictory comments about their singing capability, further evidence of how high self-efficacy promotes resilience and is difficult to shift (Bandura, 1997). One student whose overall rating was capable but who was less efficacious about pleasant tone wrote “some of my friends have told me I have a good voice - one other one told me I sing through my nose”.

Verbal persuasion featured in all three questionnaire participants' accounts of their singing self-efficacy development. For Kirsty, the words 'you can go' rang through the years as a continual reminder of her lack of capability. For Joe, the teacher's indirect response to his audition effort spoke clearly about lack of singing capability while Louise interpreted her music teacher's statement about joining the choir as a subtle message about her lack of capability.

The impact of negative feedback can also be far-reaching. It is not surprising that students like the one who wrote “I'm always being told not to sing, my girlfriend told me to shut up when I thought I was doing quite well” will begin to question their own judgment of singing capability and eventually do as they're told – stop singing!

The cumulative effect of regular praise events is very powerful in the development of high singing self-efficacy. A student who ranked herself as definitely capable noted “I was praised and encouraged when I was younger by teachers, tutors, parents and friends”.

Vicarious Experience

In those societies in which musical involvement is regarded as a fundamental aspect of human existence, and where there is an expectation that all people will develop musically, vicarious experience is an important component of musical learning. Children observe older family members participating with different levels of achievement in a wide range of musical activities, there is an abundance of role models both male and female and of all ages, and children's early musical efforts are accepted as part of an ongoing process of skill development.

Singing, which is a universal musical activity, has central importance in some societies and communities and it is therefore not surprising that children brought up in such an environment develop positive and robust beliefs in their singing capability (Buckton, 1983; Welch & Murao, 1994). One Maori student cited “family influence, waiata, school choir” as key factors in the development of his high singing self-efficacy. Another Maori student stated simply that her high self-efficacy came about “through my culture and being in kapahaka since I was young”.

Vicarious experiences operate in a complex way in the development of efficacy beliefs (Bandura, 1997). When singing is regarded as an inherited trait, strong identification with family members such as “both parents were musically inclined and I followed them” and “my mum and dad sound terrible so I figure I must too” can contribute to both high and low self-efficacy in singing. Lack of identification with family members and others can also contribute to high and low self-efficacy. One student wrote “when compared to my mother anyone could sing”, while a second compared herself unfavourably with a friend. She commented “my best friend was a brilliant singer and I was never as good as her”. Comparisons with more able children and family members are helpful only when children believe that they also have the means of achieving success.

Louise noted that although her beliefs about capability developed from her own judgments, comparisons with more able singers impacted on how she judged herself.

Some of my friends were really good singers. I was in the choir and they were really good in the choir, so whenever I sang next to them I didn't sound as good... And then you listen to everyone else on the radio and when you try and sing along with them it doesn't work.

In contrast, Joe identified with other singers who didn't sound good.

If I was in the church and I would hear other people singing behind, and they sounded terrible, I assumed that I probably would too, so I wouldn't sing.

An interesting aspect of singing development is the propensity for young singers to identify with well-known singers. One student wrote “I have always loved singing and used to pretend I was a famous singer”. Other students commented on their enjoyment of karaoke which provides them with the opportunity to sing ‘inside someone else’s shoes’. Such identification is a healthy way for students who lack real life role models to practice and rehearse their developing skills and to do so with the confidence and feelings of capability they associate with the person concerned.

For individuals who believe that musical ability is a fixed entity rather than a set of developing skills, and because this ability is internal rather than visible, it is difficult to get a sense of who is ‘like me’ with regard to singing. Asked if there was anything anybody could do to persuade him to readdress the issue of singing capability, Joe replied “probably if I heard somebody sing that sounded terrible, the next time I heard them six months later they sounded really good”. This comment highlights the value of vicarious experience coupled with incremental concepts of singing ability.

Emotional Arousal

Bandura (1977) used the term emotional arousal to describe the affective conditions associated with carrying out a particular action or activity. The relationship between individuals’ emotional state and the other factors Bandura cites as important in the development of efficacy beliefs is one of interdependence. The feelings individuals have in relation to particular activities do not develop in isolation from their performances of the skill or activity, the responses of others to their performances, or their identification with other performers. In the same way, when individuals involve themselves in singing activities, receive feedback about their singing or observe others’ singing behaviours, their complex responses will include an affective component.

Kirsty and Joe both used the word ‘devastating’ to describe their feelings about the audition outcome. They also commented on the public nature of the audition and the associated feelings of humiliation. Joe said “it

was in front of heaps and heaps of people... as you went across the stage you suddenly came off and waited to see if you were in or not”.

Encouragement and appreciation of learners’ efforts engender enjoyment and positive associations. Positive feelings associated with an activity may enhance children’s feelings of capability for the activity (Bandura, 1997). One student described how her enjoyment of singing at school “nurtured my confidence”.

Cultural factors impact in major ways on the quality and quantity of support children experience as they learn to sing. One Maori student noted the importance of her family in the development of her high singing self-efficacy. She wrote “support each other eg. graduation, Maori songs, big groups”. This comment points towards the interaction between performance, in this case, large group performance of familiar repertoire, vicarious experience, as in the inclusion and identification with a supportive family group, and the associated positive emotions.

If children are criticised, labeled as tone deaf, or told to ‘shut up’, it is likely that singing will come to be associated with unpleasant feelings and uncomfortable physiological reactions (McLendon, 1982). Embarrassment, anxiety and fear of unpleasant consequences are not conducive to improved performance. An activity in which children cannot safely make mistakes or in which they must perform perfectly every time is likely to generate considerable stress.

Emotional states in relation to singing are frequently coloured by the attitudes of significant others. One student commented that “some teachers in the past never praised, smiled etc. Self esteem decreases something chronic”. Louise also spoke about teachers’ attitudes:

Even the teachers, you could see them kind of standing up and watching out for people that weren’t singing and everyone that wasn’t singing got in trouble. And it was all a big military operation sort of thing. It wasn’t a happy enjoyable thing to do.

Where enjoyment of singing is high but singing self-efficacy is low, individuals will often choose not to sing. One wrote “I enjoy singing but don’t

feel confident in my voice or tone expression so tend to avoid singing". In contrast, a student who rated herself as capable at singing commented "I am not terribly confident but I love it and do sing often". It is possible that as individuals develop a robust sense of self-worth, they will be more influenced by their own feelings than the opinions of others. One mature student wrote "I sing because I love to sing and don't worry about anyone else".

Although the questionnaire items did not specify the context in which participants were to rate their singing self-efficacy, in their responses students alluded to particular singing contexts which may be more stressful than others. For students with low self-efficacy and some with high self-efficacy, singing alone (in public) was something not to be contemplated, but in contrast, "when you're with a group it's easy". Comments were also made in relation to song material. One student wrote "it is easier to sing to songs and music that you enjoy rather than doing it because you have to".

Music exams and auditions traditionally cause individuals to feel nervous and this in turn creates anxiety that performance will be affected for the worse. However when individuals achieve success in stressful and demanding situations they are likely to experience heightened self-efficacy (Bandura, 1997). One student's feelings of capability as a singer were enhanced as a result of "being chosen after nerve-wracking audition for special choir".

Causal Attributions

Attribution research traditionally focused on four causes: ability, effort, luck and task difficulty. However questionnaire responses which attribute success or failure to the role of others, support findings that attributions made for success and failure in music activities do not always correspond with those in core subjects like mathematics and English (Vispoel & Austin, 1995). Vispoel and Austin found that the attributional responses to singing varied most markedly from the other music activities. Ability was perceived as the strongest determinant of both success and failure, and teacher influence and lack of interest were significant attributions for failure.

Students' comments about the impact of non-selection for school choirs are consistent with attribution theory which suggests that people seek reasons or explanations for failure when the outcome is important, disappointing or unexpected (Weiner, 1979). Students who desire to sing in the choir will be disappointed if they fail to succeed at an audition and will attempt to find explanations for the negative outcome. Private and public explanations may be different. Failure may be passed off on the surface with comments like "I didn't really want to be in it anyway - the songs they sing are boring and all the people in it are boring", which allow the speaker to save face after what may be a quite public humiliation. In reality, the internal and unexpressed explanation may be lack of ability. Subsequent avoidance of musical activities is both a protection from further humiliation through displays of lack of ability, and an acceptance of low musical ability. When students who fail attribute their failure to a lack of musical ability, the result is likely to lower, or confirm already low self-efficacy.

Although there was no mention in the responses to either luck or task difficulty a number of students alluded to circumstances under which singing was more or less difficult. One wrote "love to sing by MYSELF" and another commented "I sing to myself or quietly but I would never be able to sing to someone (unless in a large group)". Another student noted "I like singing. When you're with a group it's easy to sing". A student with high self-efficacy observed that "singing in a group (preferably larger) is much easier. I would never sing alone".

In spite of the absence of direct references to effort attributions, there is an implied link in the number of references participants made to the importance of practice and experience. A number of students, who attributed their self-efficacy in singing to family and other people influences, provided additional evidence of different attributions for success and failure (Vispoel & Austin, 1995). One student wrote "I have had an ear for music since I was a young child and it has grown from there", a definite ability attribution. This contrasts with the student whose comment "I've been brought up with singing" attributes her high self-efficacy to influences in the home and family.

There is no evidence in the research findings that students who did not achieve success in singing tasks were directed towards controllable attributions such as strategic effort. Neither is there any indication that when failure was attributed to lack of ability, participants were encouraged to adopt more constructive views of musical ability. This lack of instructional help in singing may reflect classroom and music teachers' beliefs that singing skills are not responsive to strategic effort, and that singing ability is fixed rather than incremental. These beliefs are contrary to those of many prominent music educators (Moog 1968; Choksy, 1981; Hargreaves & Zimmerman, 1992; Welch, 1994) and will be explored in more detail in the following section.

5.4 CLASSROOM GOAL STRUCTURE & CONCEPTION OF ABILITY

When considering classroom goal structures, it is important to remember that although singing is one of the 'performing arts', this does not equate with a performance goal orientation. To completely remove performance goals from singing is neither helpful nor desirable, but it is important to ascertain when performance and learning goals may be in conflict. Dweck (1999) cautioned that an overemphasis on performance goals may encourage students to reject opportunities for mastery learning in favour of safe and successful performance outcomes. In addition, for students whose self-efficacy is low, helpless responses may result when performance goals predominate.

Almost every feedback comment reported in the questionnaire responses related to how the singing is as opposed to how the singing could be, a further indication of the negative impact of performance orientations (Ames, 1992) for students who take longer to learn new skills. In spite of a number of low self-efficacy students noting that they could hear that their singing was out of tune, there was no indication that any teacher or family member worked with them to improve the tunefulness of their singing. One participant wrote:

A teacher told me that I couldn't hold a note. Other people have told me that I can't. It's a bit off-putting because with a little appropriate coaching I probably could.

Kirsty expressed anger at the lack of support in schools for developing singers.

In other subjects we look at developing children's skills and abilities, providing them with the experiences and the support that those can develop and also helping them setting the goals so they know where they're going... The support and the strategies for getting there are there for the children and you can do that in singing as well.

Joe noted:

I don't think for me I have ever had anyone encourage me in music at all or ever say to me... you can sing if you practise... No one ever encouraged the positive side of it, never said people can sing if they work on it.

Such experiences point to the value of emphasizing learning rather than performance goal structures in classroom and school music programmes (Ames, 1992; Dweck, 1999; Dweck & Leggett, 1988).

Positive self-efficacy is promoted and maintained, particularly for individuals who struggle, when significant others communicate confidence in one's capabilities (Dweck, 1999). However, Dweck stressed that praise directed towards fixed ability is less effective than expressions of confidence that the learner possesses the persistence and the strategies to make progress.

Sloboda (1994) maintained that relevant practice has a greater impact on musical skill than any other factor. Individuals who recognise that their ability to sing has developed through supported experience will value and acknowledge the part of effort in their achievements. One participant with high self-efficacy stated that she was

encouraged to sing for my own enjoyment, this being the most important thing, not necessarily being 100% performance accurate. And just having a go - trying the emphasis, not necessarily success - trying out for choirs and singing groups.

Students with high self-efficacy in singing demonstrated incremental and inclusive conceptions of singing ability with comments like "children need to be told that EVERYONE can sing if taught and encouraged - instead of

emphasis totally on talent” and “everyone can sing, just some better than others”.

If singing ability and skill mastery need supported practice in order to develop, it is necessary that struggling singers continue to sing. When negative experiences which reinforce low self-efficacy stop individuals singing, the chances of altering beliefs through successful performance accomplishment are severely limited. Joe commented:

If we had to do it as a group (class singing) ... I would be somewhere near the back and I would lip-sync the words. I often did the same at church too.

The issue of support in settings where performance goals predominate is an important one. Kirsty recalled:

To have to walk out in front of your peers who are left there singing and knowing or thinking that everybody is watching you walk out and having no idea of who's left at the end and just having to go back to class. And your class teacher has no idea of what's gone on.

With no preparation before the audition, no discussion afterwards and no opportunity for children to explore if and how their singing skills could be developed, it is not surprising that children attribute their failures such as these to a lack of ability, which they see as fixed.

The notion of singing as a learned skill rather than a gift possessed by the lucky few was highly motivating for Kirsty in her efforts to raise her self-efficacy. She became a member of a vocal development group tutored by a colleague of the researcher, and was able to experience and observe positive instructional strategies in singing. However if students' primary attribution for success or failure in singing is the presence or absence of ability, and if ability is considered to be a fixed entity, no amount of effort will compensate for a perceived personal deficit.

Although notions of vocal development are threaded throughout the discussion, participants raised issues which have specific application to the vocal development literature. These are considered in the following section.

5.5 VOCAL DEVELOPMENT

Davidson (1994) suggested that musical learning is better served by adherence to developmental models than by notions of giftedness, a view closely linked to incremental versus fixed entity views of ability (Dweck, 1999). In addition, models of vocal development, (Moog, 1968; Dowling, 1982; Davidson, 1994; Welch, 1986) presuppose that children will engage with singing tasks over extended periods of time.

It has already been reported that a number of participants with low self-efficacy traced back to painful personal experiences, responded by completely withdrawing from singing activities. Such experiences were not confined to children of intermediate school age. One student identified “not being picked for the school singing group at primary school” as significant in the formation of her low self-efficacy while another noted that her beliefs about low singing capability developed from “not being chosen for the school choir when 6/7 years old”. One student related that “from early childhood was told I couldn’t sing so stopped and only mimed”. If we place these students’ experiences alongside Moog’s (1968) observation that the overall mastery of text, rhythmic, pitch and tonal elements is still developing in most children beginning school, it is not surprising that an early setback such as this would impact on both the child’s vocal development and developing efficacy beliefs.

Shuter-Dyson and Gabriel (1981) cited psychological reasons why it may be helpful for children to learn to sing in tune earlier rather than later. There are also good physiological reasons. The years 0 - 8 coincide with the years of greatest language learning, indicating that there is an optimum perceptual and physiological time for children to engage in the process of vocal development, be it singing or speech.

Nonetheless, questionnaire responses bear out extensive anecdotal evidence that under favourable conditions, adult non-singers can make gains in both perceptions of capability and actual singing skills. One student who rated herself as a three on overall capability wrote:

I have gotten a bit more confidence with a few singing lessons. I have found that I can sing in tune but with not heaps of confidence.

This student is beginning to make strategic effort attributions for success in singing and with continued support is poised to increase her self-efficacy.

Initially Jeff indicated that nothing would induce him to work on his singing, even if he had to forgo the thing he most wanted to do in life. He reflected on the strength of this statement and modified his stance a little. "The thing I want to do most in life, then perhaps I would."

Joe discussed at some length the possibility of revising his efficacy beliefs.

I am pretty sure I can't sing. And I don't think I ever would be able to. I don't really believe you could train me up. I don't think I can put myself in a position where I would practice with a coach because that would be too scary.

Questioned further about the fears Joe responded:

I think there is probably a number of things. One would be the coach saying, 'you're right, there is no hope'. Another fear would be that this coach would be stringing me along saying 'he's paying me to do this'... Mostly it's because standing up in front of anybody and singing is too horrendous.

He elaborated on the risks associated with pursuing singing remediation.

I wanted to join the police force when I left school but I was too short. There's nothing you can do about that, so that's that hope completely gone. And that's the same thing with singing. I don't want that final little bit of thing that's inside me that says 'you just never know' yet the other side says I should find out. A bit risky.

A number of responses provided tantalising hints of personal stories that called for more extensive probing. One student, who rated herself as capable as a singer, wrote "I've had some negative criticism as a very small child that I'm gradually overcoming" implying a journey made in difficult circumstances. Another student with a 'neither capable nor incapable' rating

noted “Love singing - am now only beginning to believe I can sing”. A student who rated herself as ‘definitely capable’ commented “Friend a fantastic singer sang to me - I quit for 4 years. Family criticism put me off. Difficult circumstances took away the enjoyment”. Although the statement implies that the student has started singing again, there is no indication of what enabled this to happen. Knowing more of the experiences of such individuals would be of great value to music educators who are frequently faced with a need to modify students’ efficacy beliefs as well as develop their musical skills.

Louise emphasised the value of positive and encouraging experiences and recounted her flatmates’ comments that they would not be able to do what she had done (the music leadership task). She added:

But I think they haven't had any exposure to music... they haven't really done it before. Whereas they did this music curriculum (the compulsory music curriculum paper) and I think it's really helped them. Now they sing a lot more even around the house... They said they couldn't do music because they can't sing. That was the first thing they said – that they can't sing. I think now they've actually done it that makes them see that we're not brilliant singers but we can actually sing.

For young males, voice changes at adolescence can impact significantly on singing self-efficacy. One male participant commented that his “voice breaking” influenced his beliefs about his singing capability and another recalled the embarrassing situation of his “voice breaking in the middle of a chorus recital at church group”. The notion of boys’ voices ‘breaking’ with the implication that they then require ‘fixing’ has not been helpful to young males. A more productive contemporary perspective is that boys voices ‘change’ suggesting a need for reorientation rather than repair.

5.6 TEACHER EDUCATION

Teachers’ skills, knowledge and belief systems impact in direct and indirect ways on the skills, knowledge and beliefs systems of the children they teach (Pajares, 1992; Bandura, 1997). In addition to the significance of their

personal singing self-efficacy, the beliefs that participants in the study hold about vocal development and singing ability are liable to be transmitted to children in their care, and in turn, to have a major part in shaping children's singing self-efficacy. Highly efficacious teachers are likely to believe their efforts and innovative teaching approaches will make a difference for students who are struggling to learn (Bandura, 1986, 1997), whereas teachers who do not perceive themselves as capable in a domain or sub-domain may doubt their ability to influence student learning outcomes positively.

The significant role of teachers in the formation of individuals' singing self-efficacy is clearly evident in many of the comments already reported in this chapter. The interview phase gave participants' the opportunity to reflect on their school experiences and to suggest alternative approaches to dealing with potentially debilitating situations. Referring to the dismissive approach of the teacher in his audition Joe commented:

She could have done it differently by going " we will get back to you and let you know where you end up". And had I ended up in the choir I would have thought 'okay'.

Because participants had all completed music curriculum or music option papers by the time the interviews were conducted, they were able to reflect on the significance of these papers to their beliefs. Kirsty spoke about how her personal teaching philosophy has been shaped in part by her own painful experiences twenty-eight years before and in part by her teacher education programme. "There's an undue emphasis (in schools) on performance... I will use everyone who shows some enthusiasm and interest."

Student teachers who lack confidence in their own singing capability are likely to be anxious about teaching singing. Although Jeff is adamant that singing will happen in his classroom, he has clear ideas about how he will retain control over the process.

It won't be the start of the school when parents might be there and it won't be last thing in the day because the parents will be there to pick the kids up... I remember how much I enjoyed singing and I assume all kids love it so that I've got to make sure that they have singing of some sort... I'll be

letting them think I'm enjoying it anyway, and listening to them sing and encouraging them to sing... I think it is just making them feel good about themselves and encouraging all of them that they can all sing.

In response to a question about helping children who are struggling with singing, Louise articulated a mastery orientation (Bandura, 1997; Dweck, 1999) towards singing instruction. She commented that she would focus on developing their confidence by “going back to learn simple stuff, really simple tunes like ones with only one note... Breaking it down”. She reflected on her own experiences of singing at school.

All I remember about singing is that you got a song on an OHP and we had to read through the words and we'd all have to sing it to a tape... We just had to sit there and sing it until it was loud enough... But it was never a positive thing, it was always something you had to do...

It seems likely that the mastery goals experienced by Louise in the music leadership course have had a significant impact on her views about singing instruction in schools.

I think you need lots of opportunities to sing. I don't think there are many opportunities to sing and hear yourself singing because when you do it's with a school or with a group and you can't hear what you sound like individually... I am going to do a lot more building up to singing rather than just here's a song and sing it. That's all we ever really did at school.

She spoke about how skill development can foster confidence in other areas. After referring in a general way to the children she will teach, she spoke more personally.

It's just one of those things that I never thought I'd be able to do. Once I've done it it's like 'wow'! Especially in music class I feel so much more confident speaking out and saying stuff in class. I can sing in front of them so why can't I do anything else!

5.7 SUMMARY

Both the open-ended questions and interviews yielded substantial data about student teachers' singing self-efficacy. Questionnaire comments highlighted how factors influencing the development of low and high singing self-efficacy may be the same and different. The contribution of a range of people and a range of experiences in the development of singing self-efficacy is also reinforced in the questionnaire responses.

The interviews are a reminder that short comments on the questionnaire can mask significant events in individual students' lives. Two of the three participants recalled a single incident in which they failed an audition - one for an intermediate school choir and one for a role in a school musical. Both these students regarded the failed audition as pivotal to their beliefs about their singing capability as well as critical to ongoing decisions about musical involvement. The third student developed a mindset about her singing capability based on her lack of speaking confidence. Her self-efficacy then became a filter for subsequent comments, responses and experiences.

The findings from all levels and phases of this research have important implications for those with an interest in music education policy and practice in Aotearoa/New Zealand. These implications will be explored in detail in the final chapter.

CHAPTER SIX

CONCLUSION

This study set out to explore the nature of student teachers' singing self-efficacy, and to identify both the sources of these efficacy beliefs and the practices which contributed to their development. The chapter begins with a summary of the study's findings and of the major conclusions drawn from the findings. Related issues and implications are then considered, with a particular focus on recommendations about instructional practices and orientations which may promote positive singing self-efficacy. Suggestions for further research are also made.

6.1 SUMMARY OF FINDINGS

The findings revealed a wide range of singing self-efficacy beliefs among the participants. These ranged from students who rated themselves as definitely capable on all scale items to those who identified as definitely not capable on all scale items. There were no significant differences in singing self-efficacy on the basis of gender or age. However, Maori students were significantly more positive about their singing self-efficacy than European/Pakeha students. Inter-item analysis revealed a two-factor structure, with items relating to tunefulness and vocal tone clustering with the overall singing capability item, and a second factor linking rhythm and expression items.

Participants' singing self-efficacy appeared to have been influenced by a number of factors. Performance accomplishments, such as audition success or failure, and verbal persuasion, such as praise or direct criticism, were frequently cited. Participants' comments seemed to suggest that external appraisals of capability (teachers, peers, family) were more influential in the development of singing self-efficacy than were self-appraisals of capability.

A number of participants indicated that broadly-based musical experiences, encouragement to try different musical activities with the expectation that skills would develop, and positive affirmation for their

achievements had all contributed to their high singing self-efficacy. The study also revealed that for many, the process of learning to sing had been curtailed by experiences which undermined self-efficacy at a time when it was vulnerable to negative outside influence.

6.2 CONCLUSIONS

In order to further understanding of singing self-efficacy, this study has adopted a past, present, and future focus. The present focus has been on identifying the singing self-efficacy beliefs student teachers hold when they begin music curriculum courses. The past focus has involved participants reflecting on the experiences which have contributed to the development of their singing self-efficacy. Looking to the future has required considering how important musical skills, as well as singing and teaching efficacy, can be developed in preservice teacher education students, so that they are able to provide effective singing instruction in their classrooms. An effective classroom singing programme may be described as one in which children develop the singing skills to participate in the song conventions appropriate to their particular social and cultural setting, and in which they develop positive beliefs about their singing capability.

The study highlights the need for teacher educators to pay explicit attention to the prior experiences, and the belief systems about vocal development, which student teachers' bring to curriculum music courses. Teacher educators can then promote incremental rather than fixed entity conceptions of musical ability, including singing, and structure their programmes in ways which emphasise learning rather than performance goals.

6.3 ISSUES AND IMPLICATIONS

The overall findings raised a number of important issues relating to singing self-efficacy, singing instruction, beliefs about vocal development, and teacher education.

There is no doubt that in the development of efficacy beliefs, children must take account of and weigh the relative value of numerous sources of information, internal and external, and often conflicting in content (Bandura,

1997). The findings from this study highlighted the importance of feedback in the development of singing self-efficacy. It is vital for those in a position to influence the development of childrens' singing self-efficacy to have a good understanding of the processes of singing development, as well as to communicate the belief that singing skill development responds to guided instruction and strategic effort. Understanding the stages of vocal development, and having an expectation of the process that may occur for beginning singers, enables teachers and parents to deliver positive and specific feedback as in 'you're listening well to your voice when you sing' or 'you're moving your voice up and down in all the right places'.

The New Zealand Curriculum Framework (1993) specifies that schools provide a music programme until Year 10 of compulsory schooling (age 14), a requirement that would seem to work in favour of children's increased participation in music activities. This comes at a time when teacher educators in the arts are being encouraged to employ integrated teaching approaches as a convenient solution to difficulties associated with the crowded curriculum. While schools are being expected to deliver higher quality music programmes, there are less hours available for music curriculum teaching during preservice teacher education, and music support services have been significantly downgraded (Drummond, 1998).

The current situation in Aotearoa New Zealand requires that crucial decisions are made about the content and structure of music curriculum courses fro preservice teachers. Sloboda (1985) cited a number of sources which suggest that intelligent teachers benefit more from learning about the psychological processes underlying particular skills than from learning recipes or prescriptions for the teaching of the skills. An understanding of how singing competency develops and of the factors which enhance and inhibit the acquisition of song must be retained as an essential component of music curriculum courses for teachers.

Although Austin and Vispoel (1998) recommended that teachers work with students to identify and, when appropriate, to challenge their perceptions about musical ability, this study points to the need for teachers to identify their own beliefs about music, in this instance, singing, ability, and to understand

how those beliefs are communicated to the children in their care. In order for this to happen, such issues must be addressed explicitly in both preservice and inservice music teacher education programmes. An emphasis on learning rather than performance goal structures in teacher education courses is also desirable.

If specialist music teachers have experienced a smooth musical learning path themselves, they may endorse fixed ability notions of musical learning and therefore lack the requisite beliefs to set in place programmes that favour learning rather than performance goals in musical learning. Because these teachers are likely to be credited with expert status, and because they provide leadership in a subject in which many teachers lack efficacy, their adherence to an ability rather than a developmental model of musical learning may be accepted without question. If this is the case, then it is vital that knowledge about more enlightened music education practices reaches those with particular responsibility for developing programmes in schools.

The belief that singing ability is a fixed entity is communicated in subtle and overt ways to children in the home and in the school, through both enculturation and training modes of musical learning, so that those who fail to have immediate success in music, particularly singing, tend to all too readily apply the label 'non-musical'. In reality, for many of these children, their music experiences are limited to singing along with tapes that are unsuitable for instructional singing, and a weekly 'shout' at school assembly time. It is no wonder that singing skills fail to thrive in such an impoverished musical environment.

Bandura (1997) cited other school practices which transform learning settings into training in inefficacy. What he described as "socially competitive grading practices" (p175) reinforce success for small numbers of children at a high cost to many others. Schools which establish auditioned singing groups at the primary level need to be aware of the powerful impact audition failure may have on the formation of children's efficacy beliefs. Bearing in mind that vocal coordination is often problematic during periods of rapid change such as adolescence (Cooksey & Welch, 1998) the notion of auditioned choirs and

subsequent failure at the intermediate school level may be of particular concern.

Austin and Vispoel (1998) suggested that in order to encourage constructive attributional dispositions, classroom music teachers should discuss possible reasons for success and failure with students, a process that did not occur for questionnaire or case study participants. Where primary and intermediate schools are determined to have elite musical groups, they also have a responsibility to work in ways that encourage the development of musical skills in those children who fail to reach the required standard for involvement at the elite level. This includes explicit feedback about the musical skills which need development, assistance in setting goals to develop these skills, and instructional programmes which allow children to rehearse developing skills in safe and structured environments. Bandura (1997) emphasised the importance of providing a classroom environment in which there is emphasis on individual goal setting and evaluation of progress, and which encourages children to be less dependent on the opinions of others.

Access to successful models provides learners with strategies to enhance their skills (Bandura, 1997), but was not reflected in the comments of some participants who attributed their low self-efficacy to unfavourable comparisons with peers or siblings. It does not follow, however, that social comparisons, which become an increasingly important source of efficacy information as children mature, are always to be discouraged. Instead, the possible negative effects of such comparisons can be minimised by teachers providing opportunities for group learning and peer tutoring, and by emphasising the potential for learning from other more expert peers. Cooperative structures such as these have been shown to impact positively on children's achievement and levels of attainment (Bandura, 1997).

Just as one of the case study participants indicated that in order for his singing self-efficacy to be raised he would need to observe someone like him being taught to sing adequately, practising teachers may also need to be shown how strategic skill development, combined with supportive, encouraging teaching, impacts positively on children's singing skills. Student teachers from the institution in the study are currently given this information in the vocal

development section of their music curriculum course, and many of them make noticeable gains in their singing skill and self-efficacy in the short time available to them. However for others, deep attitude change resulting in radically different instructional and organisational approaches will probably only occur with concrete evidence of the efficacy of such teaching.

Instructional strategies for student teachers with low self-efficacy in singing require a complex array of factors in order to modify efficacy beliefs and therefore enable students to participate in singing activities, in particular, those related to the classroom music programme. The ultimate persuasion of capability is successful performance accomplishment. However skill development and feedback about success alone are not sufficient to engender marked behaviour and attitude change for learners who doubt their capabilities. Such learners also need direct encouragement to review their existing efficacy beliefs and modify them in accordance with their developing ability to achieve success through the exercise of new skills (Bandura, 1997).

Perhaps the best place to start is in the area of emotional arousal, talking with students about their fears, reassuring them of a supportive and encouraging environment, and structuring sessions in small steps. Singing a well-known children's song with a tutor is likely to arouse less anxiety than solo singing of a complex, lesser-known song. Vicarious experience can be gained by sharing success stories of similar others who experienced low self-efficacy in singing. Secondly, drawing attention to other aspects of students' lives, where efficacy beliefs have been altered through strategic effort and supported practice, may contribute to a belief that capability in singing can be improved. Setting short-term achievable goals can allow for modest performance accomplishment which in turn assists with raising self-efficacy.

Students with low singing self-efficacy and who do appear to be poor pitch singers tend to attribute their lack of progress in singing to lack of ability. Remediation for these students is more complex and time-consuming. As well as establishing trust in an area in which many of them feel very vulnerable, there is a need for re-education about the process of vocal development, assessment of where the students are on the developmental pathway, provision of carefully structured singing tasks which allow students to identify and

monitor progress, re-training towards more facilitative attributions, and attention to alteration of efficacy beliefs. Self-regulation needs to be built into programmes where achievement beliefs may be counterproductive for continued engagement in the domain (Schunk, 1995).

More enlightened school singing practices and a general public better educated about the development of singing could result in greater achievement and therefore greater persistence and involvement in singing activities for large numbers of children and adolescents. Although there is no guarantee that even with such changes, all would learn to sing, there is a great deal of anecdotal evidence which suggests that carefully structured instructional practice results in significant gains in singing skill.

A number of participants in the study reported opting out of singing because of discouraging or humiliating experiences. Although children frequently cite lack of interest in or enjoyment of singing as reasons for non-participation, teachers need to be alert to the possibility of unexpressed reasons which may relate to low self-efficacy. Explicitly promoting incremental conceptions of musical ability over fixed entity conceptions is likely to be helpful for such children. In addition, it is useful to focus on making singing instruction a natural activity within the school context. The notion of situated cognition (Brown, Collins & Duguid, 1989) is relevant to how the singing curriculum is delivered in school, and provides encouragement to involve children in authentic out-of-school singing contexts. Teachers need to be conscious of potential applications of the singing skills being learned, and communicate these to the students (Good & Brophy, 1995).

The widespread occurrence of detrimental teaching practices reported in the study reinforces the pressing need for school-based music education to be informed by research, and for music education researchers to find the means of disseminating such information to their teaching colleagues (Mark, 1992). Hargreaves (1996) placed much of the responsibility for this on researchers, and stressed that music education research must be more explicitly informed by current educational practice. Reimer (1992) questioned whether universities collecting data about schools from schools is actually the most effective means for achieving educational change, and advocated a shift in control towards

more teacher-directed research in order to bridge the gap between research and its use in schools. Because teachers possess 'working theories' of pupils' musical development which are likely to be implicitly rather than explicitly formulated, there is a need for collaborative work between enquiring, research-minded practitioners and researchers who are willing to incorporate the insights of practitioners into their thinking (Davidson 1994).

As in any field of human endeavour, there will always be individuals who possess special musical gifts combined with extraordinary motivation to achieve great things musically. However it is important to recognise that there is not a finite pool of musical ability. Exceptional talent in some individuals does not diminish the opportunity for others to develop musically. In reality, the reverse is probably more accurate. Where involvement in musical activities occurs as part of everyday life, there is an increased opportunity for individuals to excel. Elite groups such as the New Zealand National Youth Choir which has achieved international success and recognition over its twenty-year history do not develop in a musical vacuum. Instead, it is likely that the standards of such groups increase in direct proportion to the depth and amount of grass roots participation in the activity concerned.

Many westerners observing African drumming groups, or Polynesian dancing and singing ensembles, or Welsh male choirs, presume that their achievements represent an inherent predisposition in people of these cultures for high levels of musical performance. These beliefs reflect a fixed entity conception of musical ability. What they fail to recognise are the years of exposure to musical models and to the musical structures of the particular culture, the hours of informal and supervised practice of the component skills, the encouragement and support for learners and the communicated belief that musicality is part of being human, all of which combine to produce a so-called 'musical' race or society. Such practices, which are consistent with incremental conceptions of musical ability, also indicate a greater emphasis on learning rather than performance goals for learners.

Sloboda (1985) detailed the western preoccupation with precision as opposed to spontaneous musical experimentation, a preoccupation which appears to be communicated to children by the age of five, along with the

notion of musical ability being a fixed trait. It may be that children from non-western cultures such as Maori, Pacific Island, and African learn to sing in tune not just because there is an expectation that singing is a universal human attribute, but because there is less emphasis, in the early years at least, on 'getting it right'.

In communities and cultures in which western understandings of musical learning predominate, music educators may be accorded expert status in matters of music education. This position brings with it a responsibility to be fully informed about issues which are significant in the musical learning of individuals and groups within that society. Access to contemporary local and international research is vital for a profession which seeks to meet the needs of the learning population. Research findings which can be reported through groups like the New Zealand Society for Music Education have the potential to reach music educators working in a range of learning settings. This includes specialist and generalist teachers at early childhood, primary, secondary and tertiary levels, private music teachers and those involved in community music initiatives.

There is also a need to educate the general public on matters concerning musical development. The researcher hopes that over time and through the provision of appropriate discussion documents, the research audience may be widened beyond those with a training role in music education to include other members of the community who have a part to play in children's musical enculturation.

6.4 RECOMMENDATIONS

The following recommendations are made in the light of the issues and implications identified above.

1. Music curriculum courses taught as part of preservice teacher education programmes need to address explicitly the beliefs students bring to these courses. This includes individuals' personal beliefs about capability with regard to singing, as well as beliefs about the nature of musical ability. A classroom goal structure which emphasizes learning rather than performance

goals should be modeled, with students encouraged to adopt such an orientation in any peer teaching or school-based exercises they undertake.

2. The presence of a non-auditioned, all-comers choir in teacher education institutions sends a clear message to students that participation in singing activities is available and appropriate for all, regardless of prior experience or perceived capability. Where practicable, individual or small group singing tutorials, unconnected to the teaching of specific papers, should be offered to students with low singing self-efficacy.

3. Teacher education course content which relates to vocal development and other developmental musical skills, should include practical exercises interwoven with relevant theoretical information.

4. Opportunities to contextualise music education should be created wherever possible. For example, if students enrolled in a particular paper are taught a welcome song early in their course, it should not be difficult to 'arrange' a visitor so that the song can be used in an authentic context.

5. In-service programmes for practising teachers could cover such topics as the development of singing self-efficacy; establishing learning goals in the classroom music programme; effective instructional singing programmes for children of different ages; appropriate repertoire for developing singers; and constructive support and feedback for children as they work towards personal singing goals.

6. Teacher educators and those involved in music education research need to actively seek opportunities for collaborative research ventures which will reduce the gap between researchers and practitioners.

6.5 FURTHER RESEARCH

The findings of this study suggest a number of worthwhile avenues for further research relating to self-efficacy, vocal development and teacher education. The emphasis on self-efficacy research reflects the lack of studies investigating self-efficacy within the discipline of music. The suggestions made here are by no means conclusive, but represent a range of possible research directions.

1. In the light of claims that teacher efficacy has important implications for children's learning (Pajares, 1992; Bandura, 1997), there would be value in examining the relationship between teachers' personal self-efficacy in a subject discipline such as music, or sub-discipline such as singing, and their teacher efficacy in that discipline or sub-discipline. Such research could explore how carefully structured study during preservice teacher education can promote the development of high teacher efficacy in a discipline in which the teachers concerned previously lacked personal efficacy.
2. Bandura (1997) highlighted the need for teacher efficacy research scales which tap various knowledge domains, in order to detect the influence on student attainment of teachers' sense of efficacy in specific subject areas. There is potential, both in New Zealand and internationally, for devising scales which measure teacher efficacy in music and its relationship to student achievement.
3. There would be value in replicating this study with contrasting or enlarged research populations such as secondary school students or ethnically diverse groups, in order to strengthen the findings of the study. If singing self-efficacy was found to be significantly higher in specific populations such as Maori or Pacific Islanders, further research could be conducted into the music enculturation and training practices of these populations.
4. Cross-sectional studies of the singing self-efficacy beliefs of children, adolescents and adults, and an examination of the factors which influenced the development of these beliefs, would assist understanding of how positive self-efficacy in singing can be promoted, as well as identify possible critical periods in the development of singing self-efficacy.
5. There is a need for substantially more research on singing remediation for children and adults. A range of methodologies could be employed in order to explore singing remediation and attributional retraining strategies which improve singing skills and raise singing self-efficacy.
6. The use of action research methodologies could assist in bridging the gap between research and practice. For example, researchers could conduct action research projects based in specific schools, focusing on such issues as raising teacher efficacy in singing instruction, establishing mastery-oriented

classroom goal structures, and setting in place effective, school-wide, singing instruction programmes.

6.6 POSTSCRIPT

Repeated stories of destructive music education practices are potentially demoralizing for music educators concerned with the provision of high quality music programmes. Those involved in teacher education carry a particular responsibility, and need to support and encourage each in order to develop efficacious attitudes about their potential to influence the teachers of the future. There is much that can be achieved if there is the heart and the will to change.

The statement which concludes this thesis is from a curriculum music student who, although not a participant in the study, has given permission for her story to be reproduced. It tells of wasted years as a result of ill-informed classroom practice, but at the same time is an inspiring testament to a student forced to confront a fear. It provides encouragement for informed music educators in all sectors to make a difference when and where they can.

Prior to beginning this course I avoided anything musical as much as I could. This was because of a great lack of confidence. From a very young age, a particular teacher had told me that I had no musical ability at all and would not let me participate in any musical activities. As a result of this I have never sung at all or participated in anything that could remotely resemble a musical activity. Consequently I was dreading this particular course, as I knew that I would be way out of my comfort zone.

It was with great trepidation that I turned up for my first class. This, I have to admit did nothing to alleviate my fears when I discovered that I not only had to sing but also play the guitar. Despite this I kept turning up hoping each day I would be struck by lightning on the way to College which would save me from this dreaded class called music. However now having reached the end of the semester and not been struck by lightning along the way, I have to say

that it has been one of the best things that I have done. While I don't believe that I will ever be a great teacher of music, I certainly feel that I will with further practice, be able to competently teach the children in my classroom. The best thing that came from this course for me was that I learnt how enjoyable music could be. I learnt how to make music enjoyable and non-threatening yet still to teach effectively. I also have a great understanding of how threatening music can be for children.

I never acknowledged how much of an impact that particular teacher had when she told me that I couldn't sing. Not only has it impacted on my life but on that of my children. About half way through the semester my husband came home from work to find me and our three children enjoying a very noisy, probably not very tuneful, rendition of 'Doctor Knickerbocker'. He said that in the ten years we have been married he had never heard me sing. This really hit home to me how one teacher can have such an impact on someone's life. Not only had this teacher taken something away from me but she had in turn taken it away from my own children. I now feel that I can give this back to myself and to my children.

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APPENDIX 1**EDUCATION RESEARCH PROJECT***Questionnaire about Singing Capability*

This questionnaire seeks your response on a number of items related to your beliefs about your singing capability. For questions 1 - 9 please circle the response which is most accurate for you.

In-tune singing

1. How easy is it for you to sing in tune?

| | | | | |
|----------------|------|---------------------------|-----------|---------------------|
| 5 | 4 | 3 | 2 | 1 |
| extremely easy | easy | neither easy or difficult | difficult | extremely difficult |

2. How sure are you that you sing in tune?

| | | | | |
|----------------|------|------------------------|--------|------------------|
| 5 | 4 | 3 | 2 | 1 |
| extremely sure | sure | neither sure or unsure | unsure | extremely unsure |

Singing with pleasant tone

3. How easy is it for you to sing with a pleasant tone?

| | | | | |
|----------------|------|---------------------------|-----------|---------------------|
| 5 | 4 | 3 | 2 | 1 |
| extremely easy | easy | neither easy or difficult | difficult | extremely difficult |

4. How sure are you that you sing with a pleasant tone?

| | | | | |
|----------------|------|------------------------|--------|------------------|
| 5 | 4 | 3 | 2 | 1 |
| extremely sure | sure | neither sure or unsure | unsure | extremely unsure |

Singing with accurate rhythm

5. How easy is it for you to sing with accurate rhythm?

| | | | | |
|----------------|------|---------------------------|-----------|---------------------|
| 5 | 4 | 3 | 2 | 1 |
| extremely easy | easy | neither easy or difficult | difficult | extremely difficult |

6. How sure are you that you sing with accurate rhythm?

| | | | | |
|----------------|------|------------------------|--------|------------------|
| 5 | 4 | 3 | 2 | 1 |
| extremely sure | sure | neither sure or unsure | unsure | extremely unsure |

Singing with appropriate expression

7. How easy is it for you to sing with appropriate expression?

| | | | | |
|----------------|------|---------------------------|-----------|---------------------|
| 5 | 4 | 3 | 2 | 1 |
| extremely easy | easy | neither easy or difficult | difficult | extremely difficult |

8. How sure are you that you sing with appropriate expression?

| | | | | |
|----------------|------|------------------------|--------|------------------|
| 5 | 4 | 3 | 2 | 1 |
| extremely sure | sure | neither sure or unsure | unsure | extremely unsure |

Beliefs about your singing capability

9. Overall, how capable do you believe you are at singing?

| | | | | |
|--------------------|---------|-------------------------------|-------------|------------------------|
| 5 | 4 | 3 | 2 | 1 |
| definitely capable | capable | neither capable nor incapable | not capable | definitely not capable |

10. Can you explain how your beliefs about your singing capability developed?

11. Do you recall any situations in your past that have influenced your beliefs about your singing capability?

12. Any other comments.

13. Personal details

Gender: male/female

Age: 20 and under 21 - 30 31 and over

Ethnicity: European/Pakeha Maori Pacific Islander Other

Thank you for completing the questionnaire.

Jenny Boyack

A further note

Are you willing to be approached to take part in an interview about your musical development?

At no time in the interview will participants be asked or expected to sing.

I am willing/not willing to be approached to take part in the case study phase of this research.

CB _____

APPENDIX 2

Education Research Project

“‘Sing? Not me!’ A study of student teachers’ self-efficacy in singing and of the factors contributing to these efficacy beliefs.”

Kia ora. He mihi tenei mo te tautoko i taku kaupapa, ara, te tioreore, na, ka nui te mihi. Kia ora.

Information Sheet

1. My name is Jenny Boyack and I am a music education lecturer at MUCE. I am currently studying towards a Masterate in Education and this research meets part of the requirements for the degree.
2. I am studying the beliefs student teachers have about their singing ability (singing self-efficacy) and the factors which contribute to these beliefs. I hope the information gained through this research study will benefit all those involved in music education - teachers, student teachers, music educators and most importantly, the children they serve.
3. This Information Sheet relates to the first phase of the study. I am inviting you to participate in this phase.
4. It is assumed that filling in the questionnaire implies consent.
5. You have the right not to answer any questions.
6. The questionnaire is to be completed anonymously. Completed questionnaires will be kept in a secure place for the duration of the research and will then be destroyed.
7. The questionnaire will take approximately 5-10 minutes to complete.
8. If you would like to be approached to take part in the next phase of the study you can indicate this by entering your College Box number in the space on the last page of the questionnaire. The second phase involves gathering detailed information about the musical development of four individual students through audio-taped interviews.

If you have any other questions about this research please contact me at my office A106, telephone 357 9104, ext 8834, or contact either of my supervisors, Dr Colin Gibbs, telephone 357 9104, ext 8822, or Professor James Chapman, telephone 357 9104, ext 8954.

I appreciate the time you have taken to read this Information Sheet.

Jenny Boyack

APPENDIX 3**Education Research Project**

“‘Sing? Not me!’ A study of student teachers’ self-efficacy in singing and of the factors contributing to these efficacy beliefs.”

Information Sheet

1. I am sending you this information sheet because you indicated that you were willing to consider taking part in the second phase of my research. This phase involves an audio-taped interview on your beliefs about your singing capability. This interview is expected to take 30 to 45 minutes to complete.
2. Participants will have the right to withdraw from the study at any time. They may also at any time refuse to answer a question or ask to have the tape recorder turned off.
3. The taped interview will be transcribed by a person who will sign a written form guaranteeing confidentiality. Participants will have the opportunity to read, add to, amend or delete from the tape transcriptions.
4. After completion of the research the tapes and transcriptions will be destroyed.
5. At no time in the study will participants be required to sing.
6. If you want to ask any further questions please feel free to phone me at [REDACTED]
7. If you wish to participate in this phase of the study, please read and complete the attached consent form and return it to me at Reception, Tower Block, by Friday September 25, 1998.

Thank you for taking the time to read the Information Sheet.

Jenny Boyack

APPENDIX 4

Education Research Project

“‘Sing? Not me!’ A study of student teachers’ self-efficacy in singing and of the factors contributing to these efficacy beliefs.”

Interview Consent Form

I have read the information regarding the singing self-efficacy research project and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I understand that I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researcher on the understanding that my name and any other identifying information will not be used. I understand that the information will be used for this research and for written publications in appropriate journals or forums. I understand that the research findings may also be quoted formally and informally in appropriate music education settings and that in any such references my anonymity will be protected.

I agree to participate in an interview which will be audio taped.

I understand that I have the right for the audio tape to be turned off at any time during the interview.

I understand that the tapes will be transcribed by a person who will sign a written form guaranteeing confidentiality. I also understand that the researcher and the transcriber will be the only persons who have access to the tapes and that at the completion of the study the tapes and transcriptions will be destroyed.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed: _____

Name: _____

CB: _____

(If you agree to participate in the case study interview please complete and sign the consent form and return to Jenny Boyack by Friday October 30, 1998.)