Motivation and Practice for the Classroom

Phillip A. Towndrow, Caroline Koh
and Tan Hock Soon (Eds.)

SensePublishers

Motivation and Practice for the Classroom

Motivation and Practice for the Classroom

Edited by

Phillip A. Towndrow
National Institute of Education,
Nanyang Technological University,
Singapore

Caroline Koh
National Institute of Education,
Nanyang Technological University,
Singapore

Tan Hock Soon
Temasek Polytechnic,
Singapore

SENSE PUBLISHERS
ROTTERDAM / TAIPEI

A C.I.P. record for this book is available from the Library of Congress.

ISBN 978-90-8790-601-6 (paperback)
ISBN 978-90-8790-602-3 (hardback)
ISBN 978-90-8790-603-0 (e-book)

Published by: Sense Publishers,
P.O. Box 21858, 3001 AW
Rotterdam, The Netherlands
http://www.sensepublishers.com

Printed on acid-free paper

TABLE OF CONTENTS

DAVID GALLOWAY

FOREWORD

Given the general agreement on the importance of motivation, it is disturbing that research has not had a greater impact on teaching and learning. One reason is that the concept of motivation becomes more elusive the closer one looks. It is in real danger of fragmenting into different schools of thought: expectancy theory, attribution theory, self determination theory, self efficacy theory, achievement goal theory—and others. Another reason is that many scientific papers seem to be spiralling into a black hole in which increasing statistical complexity is related inversely to the meaningful conclusions that teachers can draw from them. The present volume's emphasis on classroom practice is therefore welcome and timely. The title throws down the gauntlet, not just to the editors themselves and the contributors, but to everyone who studies motivation.

Chapters in Part I—Classroom practice to enhance motivation—provide a welcome reminder that innovation in classroom practice can contribute to understanding motivation. Too often, motivation theorists give the impression that their research provides the key to improving classroom practice. At best, though, the relationship is reciprocal and we should never underestimate the ability of practitioners to provide new insights.

The correlations between alternative measures of motivation are usually low, raising important questions not only about the construct that is being measured but also about the validity in ordinary classroom settings of the methods used. Evidence suggests that questionnaire responses seldom provide a valid picture of students' actual behaviour in real life settings. The seven chapters in Part II—Improving students' motivation in diverse fields and contexts—illustrate the range of situations in which an understanding of motivation can enrich classroom practice. The emphasis, though, is on *an* understanding. There is no single way of understanding motivation. Depending on the contexts and the problems, practitioners can be helped by different theoretical ways of understanding motivation.

In the last 25 years the IT revolution has started to transform teaching and learning. Yet the motivational implications of this revolution remain poorly understood, both for teachers and for their students. Too often, it is assumed that interactive technologies will in themselves enhance motivation. It is now recognised that these technologies can create their own motivational problems. The three chapters in Part III—Enhancing students' motivation through the use of ICT—are a significant contribution to this rapidly emerging debate. They illustrate the power of new technologies and show how an understanding of motivational principles can enhance learning as well as identifying problems that impede it.

A major problem in study of motivation is that so much of the research has been carried out in western countries by western researchers. Their conclusions are not

necessarily valid in other cultural contexts. All contributors to this book are based in Asia or Australia, most of them drawing on field work carried out in Confucian heritage cultures. These provide a healthily critical perspective on the western research, while retaining a sharp insight into its potential contribution to academic research and classroom practice in other cultures. Paradoxically this makes the book more rather than less relevant to practitioners in the west. By providing a much needed analysis of the application of motivation research in other cultures it encourages us to think again about ideas we may have come to take for granted.

Throughout the world, governments see education as the key to future competitiveness, and hence prosperity. Sadly, official attempts to raise standards can lead teachers to concentrate on narrow educational goals such as "teaching to the test". The motivational consequences for students *and for teachers* are dire. This book shows how committed practitioners, both researchers and teachers, are using motivation research to bring excitement back into teaching and learning.

David Galloway
School of Education,
Durham University

CAROLINE KOH, PHILLIP A. TOWNDROW, TAN HOCK SOON

INTRODUCTION

> "People often say that motivation doesn"t last. Well, neither does bathing - that"s why we recommend it daily." Zig Ziglar (n. d.).

According to prevailing opinion, survival in the 21st Century global economy hinges on the generation of a labour pool made up of nimble minded, skilled personnel with the willingness to embrace learning and innovation as a life-long endeavour amidst a constantly changing landscape. This in turn has necessitated a string of educational reforms (Fullan, 1993) to prepare current generations of students for their roles in the future labour force. Against this backdrop of changes, teachers have been grappling with the perennial problem, when implementing a new program, of having to ensure that their students "buy the idea" and have enough "fire in the belly" to see it through (Covington, 1992). As such, the issue of motivation in the classroom has never had greater relevance. Although there is an abundance of research literature explaining how motivation in learning and achievement can be sustained and improved, what seems to be lacking are evidence-based claims about pedagogy and practice that are grounded in educational research at the classroom level. This edited volume has been written with the busy, non-specialist reader in mind. It aims to visit aspects of motivation that are of relevance and application to the teaching practitioner, and to address the question of how classroom-based research findings can be used to improve the quality of teaching and motivation of students.

In its simplest form, motivation can be defined as "what moves us to do something" (Sinclair, Ch. 2). The question that educators and classroom practitioners often ask is "what moves students to learn?" Part I of this book makes an attempt to answer this question and gathers the thoughts of authors whose work focuses on practices found to be effective in promoting learners' motivation. The issue of motivated learning is addressed by McInerney and Liem (Ch. 1), who give a comprehensive overview of motivation theory and its application in engaging students' learning. Readers are introduced to the concept of motivated learning, followed by an examination of the main factors influencing the effectiveness of the principles of motivation in engaging learning. McInerney and Liem also present a retrospective account of a wide range of research on the main issues in motivation, which other authors have further explored in their respective chapters. Also included is an overview of key motivational constructs such as the concepts of intrinsic and extrinsic motivations (Sinclair, Ch. 2; Yeung *et al*., Ch. 5; Wang & Liu, Ch. 6 and Healey, Ch. 7), expectancy-value (Vallance, Ch. 4), goal orientation

P.A. Towndrow, C. Koh and T.H. Soon (eds.), Motivation and Practice for the Classroom, 1–7.

(Wang & Liu, Ch. 6 and Fraser, Ch. 10), attributions (Koh, Ch. 9; Towndrow, Ch. 13 and Tan, Ch. 15) and the various theories related to the Self (Wang & Liu, Ch. 6; Arnold & Walker, Ch. 8 and Liu & Chye, Ch. 12).

In as much as "charity begins at home", learning begins with the teacher. As outlined in the previous chapter, the teacher is one of the key factors enhancing motivated learning. However, there is a need for teachers to be highly committed to teach, in order to be effective motivators. In Chapter 2, Catherine Sinclair provides a comprehensive report on Australian student teachers' motivation to teach, giving a detailed account of the motivating factors, before assessing the possible ways in which initial teacher education programs can be improved to sustain and promote the motivation to teach. The study found that the student teachers are attracted to the teaching profession for a variety of reasons, and that their initial decisions to be teachers are prompted more by intrinsic than extrinsic motivations. Reporting on how the initial teacher education course affected their motivation to teach, the student-teachers felt that the practicum had a more significant effect on enhancing their motivation than the initial teacher education coursework, although there was a decline in two of the main motivators as the student teachers experienced the reality of teachers' work in the course of the first semester. This chapter is of particular value to instructors and course administrators of initial teacher education curricula, as it offers insights into how to improve the quality of such programs. The author concludes that the key to attracting good teachers, to enhancing their motivation to teach and to remain in the profession lies in high quality pre-service teacher coursework and practicum.

Chapter 3 presents findings from another study conducted with student teachers, but whereas the previous contribution focuses on how the quality of initial teacher education impacts on novice teachers' motivation to teach, Andrew Timmins expounds on his study of the effectiveness of alternative pedagogical and assessment approaches, the use of "Quality Learning Teams" (QLT) and portfolio assessment, in motivating Chinese student teachers enrolled in a teacher education program in Hong Kong. Drawing information from qualitative and process data collected from a variety of sources, the author concludes that Chinese student teachers were positively motivated by the QLT strategy and portfolio system. In addition, the students were encouraged by feedback from their instructors and experienced enhanced self-confidence and self-worth as their module grades and relationship with course mates improved. The QLT enabled classroom practitioners to get to know students at a more personal level, and in so doing, improved their levels of confidence and motivation. In turn, students gained from interacting with their teammates, thus building up their emotional intelligence and ability to relate well with others.

While some researchers are interested in exploring the use of new strategies for improving learners' motivation, others are concerned with perceived gender differences in motivation and achievement, Roger Vallance (Ch. 4) examines how an understanding of the issues of classroom authority and the differences in motivational profiles between the two genders would help classroom practitioners identify strategies for promoting motivation, specially amongst boys. This author

posits that only when a teacher's authority is accepted by his/her students, can the latter demonstrate positive attitudes towards learning, improved motivation and attainment of success. He also found that there were marked differences between boys and girls in terms of their motivational profiles, with boys tending to be more competitive and performance goal oriented. Teachers are thus cautioned that boys require a motivational approach different from that established for the girls.

The issues of extrinsic and intrinsic motivations are expounded again in a study by Alexander Yeung and his colleagues (Ch. 5) on the variation over time of the motivation of Chinese students. These authors explored the effects of praise on students' achievement goal orientations, in a cultural context where effort (mastery) orientations were encouraged and praise (performance) orientations rarely conceded. The findings indicated that irrespective of their academic ability, students' effort orientations declined over time, whereas praise orientations remained high. However, rewarding students with praise led to maintenance of effort orientations and enhancement of praise orientations, especially for students of high and average ability. This study therefore shows that the use of praise in the classroom has positive effects on students, even in contexts where achievements are seldom publicly acknowledged. Classroom practitioners should however ensure that there are opportunities for the academically weaker students to receive praise, in spite of their lower chances of success.

Part II of the book presents the views of various authors on the theoretical and practical perspectives underpinning the enhancement of learners' motivation in diverse educational contexts, such as those of Australia (Healey, Ch. 7; Arnold & Walker, Ch. 8 and Fraser, Ch. 10), Hong Kong (Wong, Ch. 11) and Singapore (Wang & Liu, Ch. 6; Koh, Ch. 9 and Liu & Chye, Ch. 12).

In their article, John Wang and Woon Chia Liu (Ch. 6) present a review of existing research on achievement motivation in the context of physical education (PE) and sports psychology. They take a social cognitive approach to understanding the theoretical underpinnings of the factors promoting intrinsic motivation and engagement in physical exercise. According to these authors, the constructs of ability beliefs, achievement goals and self-determination are particularly relevant in explaining motivation in PE. They describe how individuals with incremental theories of ability (concerned with an improvement of competence and knowledge acquisition) are more likely to show adaptive motivational patterns. Likewise, those with high achievement goals profile (high scores in mastery/performance, approach/avoidance goals) show high motivation and enjoyment, relatedness and perceived competence in carrying out PE activities. Finally, Wang and Liu surmise that classroom structures that support students" basic psychological needs satisfaction, favour high intrinsic motivation, effort and enjoyment, as well as a positive attitude. The chapter closes with suggestions on how these research findings can be applied in school contexts to improve students' motivation towards PE.

Taking a different stance, Jean Healey (Ch. 7) advances the argument for the use of extrinsic reinforcers in the motivation of students with special needs. She provides a detailed account of the numerous arguments put forward in support of and against the use of extrinsic reinforcers, before concluding that in the absence of

intrinsically reinforced motivation, the use of extrinsic reinforcers is not only legitimate but effective in precipitating motivation and engagement in less favoured tasks. This is particularly relevant to special needs students, whose disabilities may interfere with their capacity to fully appreciate the intrinsically reinforcing aspects of a particular activity. Special needs educators would be interested in the author's suggestions of ways of making use of extrinsic reinforcers in the implementation of structured programs for students with disabilities.

Presenting their work on Self-Regulated Learning (SRL), Lynette Arnold and Richard Walker (Ch. 8) describe research conducted in two Australian schools, one of which was used for the intervention program and the other as the control. In the intervention process, the teachers used the SRL approach in teaching the Studies of Society and Environment curriculum. They actively involved their students in research planning, devising learning goals, carrying out regulatory processes, promoting higher order thinking and choosing assessment criteria and outcomes for the measurement of effectiveness. In addition, support materials such as the Planning Organiser were provided to teachers and students for further guidance on SRL processes. The results of this study are of relevance to classroom teachers, since they show that, as opposed to the control group, students who participated in the intervention improved in their achievement in the assessment measures. This corroborates earlier findings that the emphasis of SRL on goal-oriented processes in learning led to improved self-efficacy and motivation.

While the previous chapter deals with teachers and students co-constructing classroom environments to improve motivation and achievement, Caroline Koh (Ch. 9) draws on the framework of Attribution Theory to explore the effectiveness of a cooperative learning strategy in changing students" maladaptive motivations, namely learned-helplessness and self-worth motivation. In the study, carried out in the context of a junior college in Singapore, the motivational styles of the selected students were first identified. This was followed by the intervention program that allowed the students to form learning teams and to work in groups on tasks assigned by the teacher. The presumption was that cooperative learning would provide a less threatening working environment to the maladaptive students, who would then be less risk-averse and invest more effort in their work. The findings of the study revealed that the intervention had positive effects on the self-worth motivated students but had no improvement of the learned helpless. In addition, the motivation of some of the mastery-oriented students was adversely affected. The implication for classroom practitioners is that intervention procedures are likely to be effective only when applied to specific motivational types and should thus be carefully customized for the targeted individuals rather than for general application.

The following two chapters provide interesting insights into teaching and learning English as a foreign language in the contexts of Japan and Hong Kong. Sue Fraser (Ch. 10) investigated and compared the goal orientations, preferred content delivery styles and attitudes of students from two Japanese high schools which differed in terms of their academic performance. She found that students

from the high performance school tended to be instrumentally oriented (focused on professional or economic gain) in their second language (L2) learning whereas those from the less result-oriented school were more likely to be integrative (focused on integration into L2 native speaking community) in their goal orientation. In addition, the students in the high performance school showed lower motivation and proficiency in L2 than their counterparts in the lower performance school. The author attributed these differences to the divergence in school culture and student aspirations—students in the high performance school supported traditional exam-oriented approaches, while those in the lower performance school generally ascribed future integrative value to the attainment of proficiency in L2.

For her part, Ruth Wong (Ch. 11) writes about the socio-cultural factors influencing motivation in English language acquisition in the context of a group of migrant Chinese students in Hong Kong. Her findings showed that the Chinese native speaking students reported strong determination to learn English but they had low self-confidence in the subject. Peers and parents reportedly played significant roles in motivating the Chinese students in learning English, but teachers were perceived to exert the strongest influence, namely by providing opportunities for social interaction, observational learning, feedback and through instructional processes. Evidence from these two studies suggest that student motivation and learning dispositions are equally, if not more important than academic ability in determining students' attainment of proficiency in foreign language learning. Furthermore, student motivation to master English as a second language in a non-English speaking setting is significantly influenced by socio-cultural factors such as teacher effectiveness, peer involvement and parental support.

The polytechnic institutions in Singapore offer an alternative track in tertiary education for students who prefer a practice-oriented approach to their education. The academic grades of students applying to the polytechnic courses vary greatly, with popular courses getting their choice students with very good results while the unpopular ones end up with students with not so desirable results. Regardless, there were growing concerns amongst some polytechnic staff that their students lacked motivation in their studies. Using a self-determination approach, Liu and Chye (Ch. 12) investigated the polytechnic students' perceived satisfaction of the three basic psychological needs for autonomy, competence and relatedness. The students reported high satisfaction for relatedness but they did not perceive their needs for autonomy and competence to be satisfied. In addition, although they appreciated the value of their courses and were willing to put in more effort, they found little enjoyment in their learning. Nevertheless, all three psychological needs were found to be highly predictive of intrinsic motivation, effort input and course value. The findings of this study suggest a need to review existing teaching strategies and models. The authors proposed a variety of improvements hinging on the provision of autonomy support and the improvement of students' competence. The last three chapters of this book show how emerging technologies could be used to provide opportunities for such endeavours.

In Part III of this book, the authors write on their experiences with the use of new technologies in designing innovative strategies to improve instructional and motivational outcomes. Phillip Towndrow (Ch. 13) conducted a study on the use of an on-line course to teach a group of Chinese students enrolled in a pre-degree English communication skills program in Singapore. Using surveys and interviews, the author conducted a study on the extent to which the on-line program affected the motivation, performance and attitude of his students. The data obtained showed that unlike the Chinese students in Hong Kong (Wong, Ch. 11), those involved in this study were confident about their proficiency in reading in English. However, although the Chinese students in Singapore showed a high degree of mastery-oriented motivation at the start of the program, their post-intervention responses revealed that their actual contribution to the on-line learning program did not reflect their initial enthusiasm and professed commitment to effort. The author inferred that the reluctance of the students to interact with one another on-line may have been hampered by their concern with protecting their own ego and that of others in the face of challenge. The main implication of these findings is for educators to note the importance of understanding how the factors operating in specific learning contexts may influence the outcome of innovative techno-driven initiatives.

The problem of students" reluctance to participate in on-line learning activities was also encountered by Linda Fang (Ch. 14) in the course of her teaching at a polytechnic in Singapore. Her study of "shy" on-line learners revealed that reticence to interact online may result from one or more of a variety of sources. While for some, shyness is part of their personality, for others it is context and/or culturally driven. Educators who espouse on-line learning methodologies may wish to consider some of the strategies proposed by the author to increase students' participation rate in such programs.

If students experience shyness in interacting on-line, their involvement and level of engagement in interactive digital media, such as computer games, are a source of both great concern and wonderment to their parents and teachers. Many a times, teachers have been heard to quip "If only they (the students) could spend as much time on studies as they do on games"! Hock Soon Tan (Ch. 15) explores the use of three-dimensional interactive technologies and virtual environments to provide an engaged learning experience and to improve motivation to learn. His study showed that interactive digital media promoted students' problem solving abilities. In addition, as the students" efforts were rewarded by success, they experienced improved confidence and self-efficacy, and this led to their motivation being sustained.

This book originated from the need, experienced by many educators, to bridge the gap between motivational theory, research and practice. This collection of specially commissioned chapters provides the reader with many useful ideas on the possible ways in which this could be achieved. Finally, the editors wish to thank Professor David Galloway for lending his support by writing the foreword and for the many useful suggestions he made on improving the manuscript.

REFERENCES

Covington, M. V. (1992). *Making the grade: A self-worth perspective on motivation and school reform*. New York: Cambridge University Press.

Fullan, M. (1993). *Change forces: Probing the depths of educational reform*. Philadelphia: Falmer Press.

Ziglar, Z. (n.d.). Zig Ziglar quotes. *BrainyQuote*. Retrieved May 8, 2008, from http://www.brainyquote.com/quotes/authors/z/zig_ziglar.html

Caroline Koh, Phillip A. Towndrow
National Institute of Education,
Nanyang Technological University,
Singapore

Tan Hock Soon
Interactive Digital Centre ASIA,
Temasek Polytechnic,
Singapore

PART I:
CLASSROOM PRACTICES TO ENHANCE MOTIVATION

DENNIS M. MCINERNEY AND ARIEF D. LIEM

1. MOTIVATION THEORY AND ENGAGED LEARNING

INTRODUCTION

> There are three things to remember about education. The first one is motivation. The second one is motivation. The third one is motivation. (Terrell H. Bell, The USA's former Secretary of Education [quoted in Maehr & Meyer, 1997])

Motivation is particularly relevant to learning because engaging in learning is an active process requiring conscious and deliberate activities. Even the most capable and bright students will not engage in learning if they do not pay attention and exert some effort. Thus, for students to derive optimal benefits from their schooling, teachers need to provide a learning context that encourages students to be motivated and enables them to engage enthusiastically in the learning tasks.

There has been considerable evidence drawn from research on motivation in educational settings for the salience of particular teaching and learning practices for enhancing students' motivation to engage in learning. Text books on learning and instruction are replete with principles of teaching and learning that are based on good research yet, very often, these principles are utilised in a "willy-nilly" fashion, totally ignored in classrooms, or miss their mark. This chapter will first define what is meant by motivated learning, that is, learning that is characterised by *choice*, *energy*, *applying achievement standards*, and *engaging in continuing learning*. It will specifically examine a range of findings from research on key motivational issues such as expectancy and value of the success at an academic task, goals of schooling and goals setting, attributions to success and failure, self-efficacy and self-regulation, self-determination and self-concept, as well as findings related to feedback given by the teachers, and the role of assessment and evaluation. In each of these areas of research, principles have been enunciated that should lead to effective teaching and learning practices.

The chapter will also briefly examine three factors that potentially impact on the application of principles drawn from this vast research, namely: the students, the teachers, and the situation. The individual student brings to each learning situation attributes flowing from their individual histories, including their cultural, social and educational backgrounds, their perceptions of the utility value of school, their expectations, and the role played by parents in their education. Teachers also bring to the learning situation their own attributes that can enhance or diminish motivation in their students, including their beliefs about the nature of learning, their expertise, and stereotypes and expectations they hold. And lastly, the environment in which the teaching and learning takes place has an important effect on motivation and

P.A. Towndrow, C. Koh and T.H. Soon (eds.), Motivation and Practice for the Classroom, 11–36.

learning, some elements of which may be high-stakes versus low-stakes learning environments, selective versus mainstreaming, school philosophy, quality of leadership, and level of resourcing. The chapter will explore how a teacher might work with these elements and teaching/learning principles derived from research to enhance student motivation and to engage students in effective learning.

WHAT IS SCHOOL MOTIVATION?

What is school motivation? All teachers are familiar with highly motivated classes and individuals. There is a zing in the air. No work seems too hard or too much or too boring. Teacher and students work harmoniously and energetically. Students are alert, and attention is focused. Highly motivated individuals and classes persist at the task, desire high levels of performance and come back to the task time and time again voluntarily. Perhaps you have experienced such a class as a student or as a teacher. Or perhaps you have been in classes where the absence of such motivation was evident. Within any class there is also great variation between students in the level of motivation for particular tasks.

What Characterises Motivated Learning?

Motivation appears to be characterised by four qualities: **Choice**, we choose to do some things rather than others. Why do we choose to do the things we do academically, socially, and physically? In a very real sense motivation is therefore a personal investment through choice. **Energy**, activities in which we are motivated are usually characterised by high energy, involvement, enthusiasm, and interest. **Standards**, we usually seek high personal standards in activities in which we are motivated, we don't settle for second best or substandard performance. We try to better our own performance, and, at times, try to beat the performance of others. **Continuing motivation**, when we are motivated we return to the activity voluntarily, time and again, because we enjoy it and feel rewarded through it. So in our classrooms we want our students to:

- *Choose* to do the subject or work rather than to be compelled to do it;
- Invest a lot of *energy* in their work, and to be enthusiastic and interested;
- Set *high standards* for their work and to try to improve and go beyond the acquisition of basic skills; and
- *Continue to be motivated* by spending voluntary, discretionary time on their work, rather than the minimum time.

Let's look at some of the basic principles that underline motivated learning, and refer to theory and research that supports these principles. Before doing this, however, we need to consider some key elements in having motivated students. First, there is the individual student; second, there is the teacher and resources; and third, there is the situation or environment in which the learning takes place. Let's consider each of these as they have an impact on the utilisation of some of the approaches that will be dealt with later in the chapter.

The individual student. The individual student brings to the learning situation a series of attributes flowing from their individual histories, including their educational background (e.g., are they generally successful at school, what are they successful or unsuccessful in, why are they doing the course, what are their expectations and goals, how competent do they feel). The point here is that some individual attributes can have a positive effect on motivation, learning, and performance, some negative, and some of these attributes can be manipulated by the teacher, and some cannot. Among those with potentially positive effects are an optimal level of self-efficacy (Pajares, 1996, 2006; Pajares & Urdan, 2006), internal and controllable attributions for success and failure, such as to effort and learning strategies (Weiner, 2004, 2005), and utilising a range of self-regulatory strategies including self-planning, monitoring, and self-evaluation (Zimmerman, 2004). Among those with less adaptive effects are fear of failure and fear of rejection (Elliot, 1999), self-handicapping (Urdan & Midgley, 2001), and avoidance of help-seeking (Ryan & Pintrich, 1997). We deal with a number of these issues in this chapter.

Teachers. Teachers also bring to the learning situation their own attributes which can enhance or diminish motivation in their students. Some teacher qualities that may enhance student motivation are positive personal characteristics such as being enthusiastic, warm, humorous, fair, caring, supportive, and trustworthy as well as having optimal expectations from students (see Brophy, 2004; McInerney, 2005; McInerney & McInerney, 2006; Schunk, Pintrich, & Meece, 2008; Stipek, 2002), having high teaching efficacy (Caprara, Barbaranelli, Borgogni, & Steca, 2003), and pursuing adaptive achievement goals (Butler, 2007). Some qualities that might diminish student motivation are being too bureaucratic, too authoritarian, too controlling, and a lack of teaching confidence (see Good & Brophy, 2003; McInerney & McInerney, 2006; Schunk *et al*., 2008). Indeed, there is an extensive literature on teacher effectiveness (e.g., Hogan, Rabinowitz, & Craven, 2003) which suggests the characteristics of effective teaching to maximise learning and motivation, some of which are listed below:

– have well-managed classrooms where students have the maximum opportunity to learn;
– plan purposefully programs to achieve specific student learning outcomes;
– use a variety of teaching styles and resources;
– use high rates of questioning to motivate students and to check for understanding; and
– provide frequent feedback and appropriate praise to students.

Learning environments. Research has shown students' motivation and engagement in learning are strongly affected by school and classroom practices or their "psychological environment" (e.g., Maehr & Midgley, 1996). Many schools and classrooms do not implement policies and practices that are in the best interests of motivating students, and in some cases school practices actually run counter to effective motivation strategies used within classroom settings. For example, in performance-oriented high-stakes schools, students may suffer higher anxiety, stress, frustration, mental failure, fatigue, physical and psychological illness irrespective

of the motivational climate of the classroom (Togut, 2007). On the contrary, in schools and classrooms which are learning- and mastery-oriented, students report greater sense of well-being (Kaplan & Maehr, 1999), increased positive affect (Anderman, 1999), and positive coping with academic failure (Kaplan & Midgley, 1999), and a lower use of avoidance strategies, such as self-handicapping, avoidance of seeking help, and avoidance of novelty (Turner *et al*., 2002).

Student motivation is not a static quality. It varies from person to person, from situation to situation, and within the individual from time to time. So there is a complex interaction among attributes of the student, the teacher, and the classroom context which impacts on the level of learning, motivation, and engagement. While there are many macro forces that influence the engagement of students with schooling such as socio-political and economic factors, over which the teacher has little control or influence, in many other instances teachers can have an important impact on each of the key elements, student characteristics, teaching processes to enhance motivation, and the learning environment, which will be described below.

EFFECTIVE LEARNING IS MOTIVATED LEARNING

Effective learning is motivated learning so teachers, in preparing their courses of study for students, must consider the impact the teaching processes adopted have on student motivation, including the nature of the curriculum, the teaching methods adopted, and the assessment and evaluation strategies implemented. Let's look at some elementary issues that are often overlooked by teachers which impact on student motivation and engagement.

Expectancy of Success and Relevance of the Task

Students need to have a strong expectation that they will achieve the desired outcome, or be successful in a learning activity. If they believe success is beyond their capacity they will be demoralised and thus less motivated. However, even if students possess a strong expectation of success but don't value an activity/ outcome they will not be motivated (Eccles, 2005; Wigfield, 1994; Wigfield & Eccles, 2000, 2002).

Eccles and Wigfield postulate that expectancies and values are influenced by task-specific beliefs such as ability beliefs (i.e., the individuals' perceptions of their current competence for a given activity), perceived difficulty of the task, and the individual's goals for schooling, sense of self, and affective memories for similar tasks. These social cognitive variables are influenced by an individual's perceptions of their previous experiences and a variety of wider socialisation influences (Eccles, 2005; Wigfield & Eccles, 2000, 2002; Wigfield, Eccles, & Rodriguez, 1998; Wigfield, Tonks, & Eccles, 2004). They also contend that students' expectancy and task values directly predict their achievement outcomes, including performance, persistence, and choices of which activities to do. Empirical support for these proposed linkages has been found in longitudinal studies of children ranging in age from 6 to 18. Even when level of previous performance is controlled, students'

competence beliefs strongly predict their performance in different domains, including math, reading, and sports. Students' subjective task values predict both intentions and actual decisions to keep taking mathematics and English and to engage in sports (Eccles, 2005; Wigfield & Eccles, 2002). It appears, however, that while valuing a task may be important in the initial choice of activity (we don't usually get involved in activities that have little value or interest), expectancy of success is more important to motivation and performance than valuing after that.

Dowson Hancock was among the scholars who specifically dealt with practical applications and implications of expectancy-value theory to enhance classroom motivation (Hancock, 1995). He pointed out that, to enhance students' expectancy for success, teachers should help the students identify the behaviours associated with successful learning, for example, by asking questions, searching for answers from knowledgeable sources, and reflecting on learning progress (i.e., understanding); teach strategies for learning and metacognition which aim to bolster expectation of success as a result of students' own personal actions; and provide support if learners will benefit or even tutor individually if necessary.

To bring the utility value of a task to students' awareness, Hancock (1995) recommended that teachers: help clarify with students the relationship between actions and consequences; provide appropriate rewards and recognition for effort and achievement; provide rewards equitably across the class; counsel students on the long-term consequences of effort and academic achievement; and support students in long-term goals in situations where parental support may be lacking. Meanwhile, to help students see the attainment value of a task, teachers should diagnose the values that students place on academic achievement; relate this knowledge to the effort expended by students; reinforce students' self-awareness of negative consequences for not making efforts in learning; model positive consequences for effort and achievement; and reward with desirable reinforcers. In conclusion, students should be able to see that what they are asked to learn is relevant and has utility value for some desired outcome or goal and that they can be successful at achieving this goal.

Effective Goal Setting

A goal refers to the quantity or quality of performance that individuals are trying to accomplish (Locke & Latham, 1990, 2002).[1] Goal setting involves establishing quantitative and qualitative standards or objectives to serve as the aim of one's actions. Setting appropriately challenging levels of goals, divided according to different phases of attainment, is crucial in motivating students to engage in learning (Bandura, 1997; Locke & Latham, 2002) and make them self-regulated learners (Locke & Latham, 1990; Schunk, 1990). These goals help give structure to student learning, and a set of benchmarks by which students and teachers can evaluate progression. Knowledge that progress is being made towards desired goals is very motivational, enhances students' self-efficacy, and leads students to select new, challenging goals.

According to Schunk (1990), there are three important aspects of goal setting that teachers should be aware of while helping their students set academic goals. First, goal setting is more effective when goals are proximal (short-term) rather than distal (long-term). This is because students are less likely to become discouraged or unmotivated during long-term tasks when they set short-term goals (Locke & Latham, 1990). Although the distal goal is important for students to keep in mind, progress toward a long-term goal is sometimes difficult for students to gauge. Short-term goals can raise self-efficacy simply by making a task appear more manageable, and they can also enhance perceptions of competence by giving continual feedback that conveys a sense of mastery (Schunk, 1990, 1995). Second, goals that incorporate specific performance standards are more likely to enhance motivation and self-regulation than such broad goals as "you must do your best" or "you should try hard". Specific goals raise performance because they specify the amount of effort required for success and boost self-efficacy by providing a clear standard against which to determine progress (Bandura, 1997; Boekaerts, Pintrich, & Zeidner, 2000). Third, goals should be moderately difficult or challenging. Unlike the first two points above, goal difficulty does not follow a linear relationships to performance. Overly easy goals do not motivate, neither are goals perceived to be impossible to achieve motivational (Schunk, 1995).

Teachers should teach students how to set personal long-term, medium-term and short-term goals that relate explicitly to the purpose for them doing the activity or course. Facilitating students to set their own goals will produce high goal commitment (Schunk, 1995). This is particularly crucial because not only are students expected to show a high self-set goal commitment, they will also need this skill to be life-long learners and when their achievement pursuit is not monitored on a day-to-day basis. Schunk (1995) suggested the following strategies especially useful for teachers to help students set goals effectively: determine what sub-proximal goals must be accomplished to attain their long-term goals; view the goals as reasonably attainable and commit themselves to attain them; provide verbal encouragement ("I am sure you can do this") to enhance motivation to accomplish their goals; teach how to self-monitor their own progress; and provide feedback on tasks where it is difficult for students to gauge their progress. In summary, helping students set the goals with appropriate levels of proximity, specificity, and difficulty is critical for their continued motivation and engaged learning.

Achievement Goal Theory

Students may hold a variety of reasons for schooling in general and engaging in academic tasks in particular. With respect to the latter, students ask the question, "Why am I doing this task?", and the possible answers to this question give us an idea of the students' achievement goals which influence their motivation to engage in leaning tasks. This has been described by achievement goal theorists (Covington, 2000; Elliot, 2005; Grant & Dweck, 2003; Kaplan & Maehr, 2007; McInerney, Roche, McInerney, & Marsh, 1997; Pintrich, 2000; Urdan, 2004) who define achievement

goal orientation as students' general purposes for engaging (or not engaging) in achievement tasks, and these goals are presumed to guide their achievement-related behaviour, cognition, and affect as they become involved in academic work. Two broad categories of academic goal orientations that have received considerable attention are *mastery goals* and *performance goal orientations*. Central to a mastery goal orientation is the belief that effort leads to success: the focus of attention is the intrinsic value of learning. With a mastery goal orientation, students are directed towards developing new skills, trying to understand their work, improving their level of competence, and achieving a sense of mastery. These students feel successful if they believe they have personally improved or have come to understand something. Their performance relative to others is irrelevant; of greater importance to them is the task. In contrast, central to a performance goal orientation is a focus on one's ability and sense of self-worth. With a performance goal orientation, students are directed towards demonstrating ability relative to others or by surpassing norms. Thus, standards of achievement are referenced against the performance of others or against external standards such as marks and grades. Consequently, one's self-worth is determined by one's perception of ability to perform relative to others.

Most studies have shown that students who adopt a mastery goal orientation demonstrate a host of adaptive processes and outcomes, such as increased effort, persistence after failure, positive affects about school and academic tasks, greater use of deep cognitive strategies and self-regulated learning, attribution of success and failure to controllable factors, and self-perception of competence or self-efficacy (see Elliot, 2005; Kaplan & Maehr, 2007; Schunk *et al*., 2008; Urdan, 2004 for recent reviews). A performance goal orientation, in contrast, has shown inconsistent effects. Recent research, which bifurcated the performance goal orientation into its approach and avoidance dimensions, has consistently found negative consequences of pursuing a performance-avoidance goal orientation (i.e., a goal to avoid unfavourable social judgments about one's competence), including poorer or lower achievement, intrinsic motivation, and self-efficacy (Elliot & Church, 1997) but higher maladaptive behaviours such as self-handicapping (Midgley & Urdan, 2001) and avoidance of help seeking (Ryan & Pintrich, 1997). However, the effects of a performance-approach goal orientation (i.e., a goal to outperform others, or look more capable than peers) on motivation, engagement, and achievement have been found ambiguous. Some research has found that pursuing this goal is associated with lower persistence after failure (Elliot & Dweck, 1988), greater use of superficial cognitive strategies and less use of deep strategies (Nolen, 1988), greater feelings of self-consciousness (Roeser, Midgley, & Urdan, 1996), negative affect in school (Midgley & Urdan, 2001), and the tendency to attribute failure to lack of ability (Dweck & Legget, 1988). On the other hand, a substantial body of literature also documented the adaptive consequences of a performance-approach goal orientation, including enhanced intrinsic motivation (Elliot & Harackiewicz, 1996), enhanced achievement motivation (Elliot, 1999), enhanced engagement in science class (Meece, Blumenfeld, & Hoyle, 1988), valuing of school (Midgley, Arunkumar, & Urdan, 1996; Wolters *et al*., 1996), use of self-

regulatory strategies (Wolters *et al*., 1996), and improved teacher-assigned grades (Roeser *et al*., 1996). However, Urdan (2004) warns that, in the face of failure or when self-efficacy is low, performance-approach goal oriented students are prone to become performance-avoidance goal oriented.

In general, achievement goal theorists agree that it is important to strengthen students' adoption of a mastery goal orientation in the classroom (Brophy, 2004; Deemer, 2004; McInerney, 2005; Meece, Anderman, & Anderman, 2006; Schunk *et al*., 2008; Stipek, 2002; Urdan, 2004; Urdan & Turner, 2005). To this end, these theorists believe that teachers should create academic tasks that are meaningful, challenging, and personally relevant to students, evaluate students on the basis of personal improvement and effort rather than relative performance among students, and provide students with a sense of autonomy by giving them choices and a voice in classroom decisions whenever possible. Thus, students should be encouraged to learn for its own sake and understand and be able to utilise the new knowledge and skills to achieve their goals rather than to engage in activities simply in order to pass tests or to compete with other students. This means teachers should particularly emphasise the importance of students understanding information in order to extend their personal intellectual growth. This requires careful consideration of the nature of the assessments set and their evaluation. That is, teachers should make student evaluation practices as private as possible to avoid establishing competitive assessments in which there are winners and losers. Competitive and normative evaluation might be motivational for the winners, but is definitely not so for the losers.

Attributional Beliefs

When students have successes or failures they automatically search for reasons. The motivational importance of such perceived causal control over one's successes and failures has been a focus of Bernard Weiner's attribution theory (Weiner, 1992, 2004, 2005). The theory rests on three basic assumptions. First, it assumes that people attempt to determine the causes of their own behaviour and that of others. Second, it assumes that the reasons people give to explain their behaviour govern their behaviour in predictable ways from one situation to the next. And third, it assumes that causes attributed to a particular behaviour will influence subsequent emotional and cognitive behaviour. Thus, the hub of the attribution theory is that individuals seek to explain and interpret, or "attribute", their successes and failures in activities in terms of causes. In other words, individuals ask questions such as, "Why did I fail the exam?" or "Why did I achieve so well?" It is, however, more likely that these types of questions are asked after failure, rather than after success.

Weiner originally postulated four causes that are perceived as most responsible for success and failure in achievement-related contexts: Ability, Effort, Task Difficulty, and Luck. *Ability* refers to a person's perceived performance capacity in a particular activity. For example, some people feel they are good at tennis, while others at mathematics, and so on. *Effort* refers to the energy expended on a task.

Task difficulty refers to the parameters of the tasks. That is, tasks that most people can perform are labelled easy, while tasks that few can master are labelled difficult. Lastly, *luck* refers to the variables that lie outside personal control that may affect the behaviour (other than the first three mentioned). Things such as being unwell could affect performance.

In achievement tasks it is important that individuals attribute the success and failure in previous performance to causes that will positively motivate future performance, and not dysfunctional ones that will discourage further involvement. If students realistically appreciate the role effort plays in their achievement, and believe that they can improve, they will be more motivated in subsequent engagements. Too often students attribute failures to their low ability, task difficulty, or bad luck, features of the situation over which they have no control. Attributions to uncontrollable and personal characteristics such as low ability and to task difficulty potentially demotivate students. For example, a student who fails in a mathematics test may attribute the failure to lack of preparation. In this case, the effect of the student's attribution on his future motivation and engagement in learning mathematics will be considerably different from another student who attributes the failure to lack of ability. Further, if the failure is attributed to bad luck (such as illness), future motivation may not be affected; however, if the failure is attributed to task difficulty, the student may withdraw from involvement in the task in the future. Therefore, through attributional retraining, teachers may guide students towards a belief in themselves as constructive forces influencing their own successes and failures in the classroom; teach students to assume responsibility for both their successes and their failures; and emphasise the role of internal and controllable characteristics of success and failure, particularly the importance of effort exerted by the students (see also Biggs & Telfer, 1987; Schunk *et al*., 2008).

Effective Feedback

To reduce discrepancies between the performance demonstrated by the students and the target or desired performance demanded by the teachers, effective feedback must be given to students. Feedback is defined as information provided by a teacher, peer, book, parent, self, and experience, regarding aspects of students' performance, skills, knowledge, mastery, or understanding (Hattie & Timperley, 2007). Effective feedback needs to provide information not only about correctness/incorrectness of students' work, but also about how and what the students can do to rectify or improve their subsequent performances. Thus, instructional purposes should be included in feedback. Hattie's (1999) meta-analytic study showed that feedback which entails information not only about the quality of performance that has been demonstrated by the student but also about what they should do to do the task more effectively has been found to have the highest impact on students' achievement outcomes. Hattie also demonstrated that the most effective forms of feedback provide cues or reinforcement to learners; are in the form of video-, audio-, or computer-assisted instructional feedback; and/or relate to goals.

Hattie and Timperley (2007) maintain that to provide effective feedback, three major questions are asked by students to which the teacher guides and elucidates the answers. These questions are: *Where am I going?* (What are the goals?), *How am I going?* (What progress is being made toward the goal?), and *Where to next?* (What activities need to be undertaken to make better progress?). The first question, Where am I going?, pertains to the information about the learning goals related to the task or performance that students must attain, or success criteria, which are communicated to students by the teacher. These goals can be wide ranging, such as getting a minimal of C in English or showing an understanding of a certain mathematical concept. To answer the second question, How am I going?, a teacher should provide information relative to a task or performance goal in relation to some success criteria, to prior performance, and/or to success or failure on a specific part of the task (Hattie & Timperley, 2007). Knowing that progress made is motivating for the students and enhances their self-efficacy. With regard to the third question, "Where to next?, the teacher should provide information that leads to greater subsequent possibilities for learning, which may include enhanced challenges, more self-regulation over the learning process, more strategies and processes to work on the tasks, deeper understanding, and more information about what is and what is not understood (Hattie & Timperley, 2007).

According to Hattie and Timperley (2007), there are four major levels on which feedback should be focused, and the level at which feedback is directed influences its effectiveness. First, feedback can be directed at a task, which includes information about correct/incorrectness of the performance (e.g., a teacher may say, "Your explanation about the theory is unclear"). Second, feedback can be directed at the process done to complete a task/product (e.g., "You can improve this draft by incorporating more information from the text book we discussed"). Third, feedback to students can be aimed at the self-regulation level, including greater skill in self-evaluation or confidence in further engagement in a task (e.g., "You have incorporated most of important points in this draft. Check if there are other points that have not been included"). This feedback can have significant influences on students' self-efficacy, self-regulatory proficiencies, and self-beliefs about students as learners, so that they are more motivated and more informed of how to improve and continue working on the task. Fourth, feedback can be unrelated to performance on the task, but focused on the "self" (e.g., "You did well on the task"). Hattie and Timperley argue that feedback directed at the self as a person is the least effective; feedback focused on self-regulation and the processing of the tasks are powerful in terms of deep processing and mastery of tasks; and feedback about the task is effective when the task information is subsequently used for improving strategy processing or enhancing self-regulation.

There are multiple ways teachers can assist in providing effective feedback. These include setting appropriately challenging and specific goals. Specific goals are more effective than general or non-specific ones, primarily because they focus students' attention (Locke & Latham, 1984). Kluger and DeNisi (1996) demonstrated that the impact of feedback is influenced by the difficulty of goals and tasks, where the most impact occurs when goals are specific and challenging but task complexity is

low. Feedback is also more effective when there are perceived low rather than high levels of threat to self-esteem, presumably because low-threat conditions allow attention to be paid to the feedback given. Thus, teachers can assist by clarifying goals, enhancing commitment or increased effort to reaching them through feedback. Teachers can also create a learning environment in which students develop self-regulation and error detection skills so that students are equipped with self-feedback skills (Hattie, Biggs, & Purdie, 1996). In imparting feedback, teachers can ask the following four questions to guide their feedback: "What is the key error?", "What is the probable reason the students made this error?", "How can I guide the student to avoid the error in the future?", and "What did the student do well that should be noted?" In summary, in order to be effective, feedback should be specific, not vague and general. It should point out what has been achieved and what further needs to be achieved. Teachers should develop strategies to ensure all students receive informative and structured feedback so that students understand and acknowledge what they have achieved and what further activities need to be undertaken. In this way students can assume control over the learning process, and having some level of control enhances motivation.

Assessment and Evaluation

In the context of education, assessment, or measurement, refers to marks obtained in tests or other pieces of work set by the teacher, whereas evaluation refers to the quality, value or worth of the information gathered (Gronlund, 1985). Assessment and evaluation types and processes have a strong capacity to motivate students, but they may also intimidate and frighten students. Two common types of assessment and evaluation implemented by teachers are norm-referenced and criterion-referenced. When a teacher compares a student's score with the average score of the class on a given performance, he uses norm-referenced assessment and evaluation. The focus is on relative performance and, as such, the definition of a good performance or a poor performance is determined by the group's average and the distribution of scores. In contrast, when a teacher compares a student's performance against certain achievement goals (e.g., the level of the mastery of essential skills), she uses criterion-referenced assessment and evaluation. Very often the criteria are relative to the student's individual performance standards (i.e., intrapersonal standards).

Since norm-based assessment and evaluation are based on social comparison, these processes may lead some students to hold performance-avoidance goals (i.e., to avoid looking incompetent relative to peers), which in turn may lead them to engage in failure avoiding behaviour such as procrastination, sabotaging their own work, and self-handicapping (Midgley *et al*., 1996), or other less adaptive behaviour such as test anxiety (Elliot & McGregor, 1999), and negative psychological well-being (Kaplan & Maehr, 1999). In addition, it is noted that educators and parents complain that norm-referenced assessment and evaluation provide little information about what a student can (strengths) or cannot do (weaknesses), whereas criterion-referenced assessment and evaluation focuses attention on whether or not the

student has learned what they were intended to learn (Biehler & Snowman, 1990; Biggs & Telfer, 1987; McInerney & McInerney, 2006).

In order for the assessment and evaluation processes to be motivating, teachers should focus on criterion and intrapersonal norm-referenced assessment and evaluation. To do this, as recommended by Paris and Ayres (1994) and Wiggins (1993), teachers should establish for students the purpose of the assessment and evaluation; design a range of assessment tasks that not only promote engaged learning, and also are valid, fair, educative, and relevant to the regular curriculum and instruction provided in the classroom; make explicit the criteria for evaluation (instead of being secretive about grading standards); provide effective feedback; model interest in learning and self-evaluation in real-life contexts; derive assessment tasks from students' everyday learning in school; use methods that allow students the time to produce thoughtful and complete work; collect diverse evidence of students' learning from multiple activities over time; design assessment tasks that are varied, functional, pragmatic and beneficial to stimulate learning, as well as those that reflect local values and standards; design activities that encourage student responsibility for self-assessment, peer assessment, and for selecting learning activities and outcomes; and follow up with opportunities to improve on areas of weakness and ultimately produce products in which the students can take pride and boost their self-efficacy (see McInerney & McInerney, 2006).

THE SELF AND MOTIVATION

We have considered a number of teaching elements above that influence student motivation and effective learning. In the next section of the chapter we consider some features of the **self** that have been shown to have an impact on student motivation and learning. Obviously the self plays an essential role in motivation. There are four self issues that teachers should consider as they encourage students to become engaged in learning activities. These are self-efficacy, self-regulation, self-determination, and self-concept.

Self-Efficacy

Albert Bandura (1997, p. 3) defines self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments". Thus, students' self-efficacy refers to their perceptions or beliefs of capability to learn and perform particular academic tasks at particular levels at a particular point in time. Bandura (1997, 2006) believes that efficacy beliefs influence how people feel, think, motivate themselves, behave, and overall achievement. For example, if students enter an achievement situation with high self-efficacy perceptions they would believe that they can accomplish what the achievement situation requires them to do; as a consequence, they are likely to approach tasks with confidence and engage in them willingly, actively, and persistently. On the contrary, students who are low on self-efficacy beliefs are unsure what they can achieve or even convinced that they cannot do the task; as a result, they doubt their own capabilities for

success, and hence are more likely to try to avoid the situation, or if this is not possible, to give up easily when they encounter frustration and failure.

Research has usually operationally defined and assessed self-efficacy with reference to the capabilities needed to succeed in particular achievement situations. In this regard, the term has a more specific meaning than such terms as academic confidence or academic self-concept (see e.g., Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Bong, 1997; Bong & Skaalvik, 2003, on the generality and specificity of self-efficacy beliefs). In general, this literature has documented the positive role of self-efficacy beliefs on students' effort, persistence, and choices of activities, academic performance, interest, management of academic stressors, and growth of cognitive competencies (see Bandura, 1997, 2006; Pajares, 1996, 2006; Schunk & Pajares, 2004, 2005 for reviews).

According to Bandura (1997; see also Schunk & Pajares, 2004, 2005; Schunk *et al*., 2008), there are four primary sources of students' self-efficacy judgements. The first is *performance attainment*, which refers to past successes and failures experienced and perceived by students in the achievement setting. Typically, students' successes at a particular academic task raise their self-efficacy on that task, whereas failures lower it. Second, *vicarious experience*, which refers to students' experiences in watching the task performed successfully by classmates who are viewed as possessing similar characteristics to themselves in terms, for example, gender, age and ability. The more similar these characteristics are perceived by a student, the stronger the impact of vicarious experiences in enhancing the students' self-efficacy. Third, *verbal persuasion*, which refers to the role played by a trustworthy source (e.g., the teacher, parents, siblings, peers) in convincing a student that he or she can accomplish the task if he or she applies reasonable effort. Verbal persuasion is less likely to be effective unless it is realistic and reinforced by real experience. Fourth, *physiological arousal*, which refers to the physiological reactions felt and experienced by students as they are performing a particular task or preparing for a test. For example, if the anxiety felt by a student had negatively affected her performance in the past, it is very likely that she will lose her confidence in her ability to perform in the next test.

Dale Schunk (2006; see also Schunk *et al*., 2008), who has extensively researched self-efficacy, recommends that teachers should encourage students to believe they can succeed at a high level at particular tasks by stressing the importance of effort. This can be done, for example, by making one of the following encouraging statements, "Work hard", "Keep trying", or "Don't give up". However, does harder work always lead to success? There is nothing more demoralising than working as hard as you can and still failing! Thus, teachers must provide opportunities for students to be successful. Success breeds success! This can be achieved by varying the levels of difficulty of the assignments or quizzes or examinations given to students—so that they experience success, and by helping students set attainable goals for themselves. Similarly, to nurture healthy academic self-efficacy in their students, Frank Pajares (2006) recommends that teachers should emphasize students' skill development rather than self-enhancement, which was typically done by the traditional instructional strategy by building students' self-esteem through praise or

self-persuasion methods. He believes students' skill development should be the focus, which can be done through raising competence through genuine successful experiences with the performance at hand (i.e., authentic mastery experiences). In addition, Pajares also suggests teachers praise what is praiseworthy; praise effort and persistence and not ability; foster optimism and a positive outlook on life; minimise public comparisons of students' achievement; tailor instruction to the students' capabilities; focus on the development of mastery goal orientation; and help students set short-term, manageable and attainable goals rather than long-term and too difficult learning goals.

Self-Regulation

Barry Zimmerman defines self-regulation as a process that involves self-generated thoughts, feelings and actions for attaining academic goals (Zimmerman, 1998, 2004; Zimmerman & Cleary, 2006). Self-regulated learners view learning as a systematic and controllable process and accept responsibility for their achievement outcomes. Self-regulated students approach tasks with confidence, diligence and resourcefulness, and proactively seek out information when needed, attempting to take the necessary steps to master it. They are metacognitively, motivationally and behaviourally active participants in their own learning (Winne, 1995, Zimmerman, 1998, 2004; see also Wolters 2003a, 2003b). Research has demonstrated that self-regulated learners value the importance of effort and intrinsic interest in the task; appear to be high on self-attribution (i.e., they accept responsibility for successes and failures); and also report high self-efficacy (i.e., a belief in themselves as learners) (see Bråten, Samuelstuen, & Strømsø, 2004; Pintrich & De Groot, 1990; Zimmerman & Martinez-Pons, 1990). The self-efficacy findings are particularly important because they revealed that students' self-efficacy beliefs can enhance their motivation, which in turn leads the students to continue learning in a self-directed manner (Zimmerman, 2006).

Zimmerman and Martinez-Pons (1990) identified 10 strategies typically adopted by self-regulated learners: *self-evaluation* ("I check over my work to make sure I did it right"); *organization and transformation* ("I make an outline before I write a paper"); *goal setting and planning* ("I commence revision a number of weeks before the test"); *information seeking* ("I read the subject as widely as possible"); *record keeping and self-monitoring* ("I pick out the unknown words and make cards"); *environmental structuring* ("I make my desk clean and tidy and put all the books I need nearby"); *giving self-consequence* ("I give myself rewards during study breaks, such as watching TV"); *rehearsing and memorising* ("I write out all the important points many times so that I can remember them"); *seeking social assistance from peers, teachers, and other adults* ("I discuss the assignment with my friend on the way home in the train"); and *reviewing notes, books, or tests* ("I go over my notes on the topic"). Self-regulatory behaviours may not be applied equally in all situations. Whether a learner self-regulates can depend on the domain and situation (e.g., curriculum area, specific activity); the social, cultural, and educational environments (e.g., in particular the degree of student initiative

allowed relative to teacher regulation); and the nature of the learning outcomes desired by the learner (Alexander, 1995; Boekaerts, 1995, 1998; Butler, 1998; McInerney, in press; Zimmerman, 1998, 2004). The way in which learners self-regulate is also a function of a number of important cognitive processes regarding their knowledge and beliefs (Butler, 1998). These processes include their interpretation of the tasks and goals they set themselves, which may be influenced by their understanding of typical task demands; their beliefs about factors responsible for successful and unsuccessful performance; and task-specific perceptions of their self-efficacy. Learners' understanding and mastery of learning strategies may also influence the degree and manner in which they self-regulate.

Research has indicated that students who are academic high achievers practice a greater range of self-regulatory strategies, and more often, than low achievers (Ablard & Lipschultz, 1998; Purdie & Hattie, 1996; Zimmerman & Martinez-Pons, 1990). They may also make greater use of the full range of strategies such as self-evaluating, goal-setting, and planning, keeping records, and monitoring and reviewing (Ablard & Lipschultz, 1998). Although research clearly shows that students who are self-regulated achieve more effective learning outcomes, not all students know how to regulate and monitor their learning, and the self-regulatory skills described above do not occur naturally or spontaneously in learners. In light of the importance of self-regulatory process in studying to students' success in school, teachers should teach students how to be self-regulated learners (see e.g., Boekaerts & Corno, 2005; Paris & Paris, 2001). This can be done by teaching students metacognitive strategies, involving strategies of how to set goals, how to monitor their own work, and how to keep progress records and to evaluate their own work. In this regard, the ability of students to set goals is very important to self-management and motivation. Students who successfully set goals and can communicate them to others (e.g., teachers) perform better than those who have vague goals (Hayes *et al*., 1985). With appropriate training, students can monitor their own work and keep progress records, which should also foster their motivation to learn. In short, teaching self-regulatory skills will empower students and make them feel and think that they can take control of, and monitor, their own learning. Students who see the power of their own learning processes, and feel in control of their learning are more motivated and achieve more.

Self-Determination

In self-determination theory (SDT), Edward Deci, Richard Ryan, and their associates posit that a full understanding of goal-directed behaviours, including students' engagement in learning, and of psychological development and well-being, generally requires addressing the needs that give goals their psychological potency and influence people's self-regulated activities (Deci, Vallerand, Pelletier, & Ryan, 1991; Reeve, Deci, & Ryan, 2004; Ryan & Deci, 2000). Three psychological needs, which are postulated to be universal, fundamental, and broad ranging in their influences on goal-oriented pursuits, are needs for *autonomy* (i.e., self-determination in deciding what to do and how to do it), *competence* (i.e., developing and exercising

skills for manipulating and controlling the environment), and *relatedness* (i.e., affiliation with others through prosocial relationships). According to SDT, satisfaction of these three basic needs provides the necessary conditions that give people the freedom to engage in self-determined activities. Thus, the theory postulates that students are likely to be intrinsically motivated to be engaged in learning activities when they are placed in a learning environment that supports satisfaction of their autonomy, competence, and relatedness needs (Deci *et al*., 1991; Reeve *et al*., 2004; Ryan & Deci, 2000).

Deci and Ryan (2000) define intrinsically motivated behaviours as those behaviours performed out of interest and requiring no external prods, promises, or threats. These behaviours are experienced as wholly self-determined, with no external pressure, as representative of and emanating from one's sense of self. On the contrary, extrinsically motivated behaviours are performed instrumentally to attain some other goals (e.g., studying with an aim to get a school certificate in order to get a job). These behaviours would typically not occur spontaneously and therefore must be prompted by incentives or other external pressures. A theoretical significance of SDT is that it explains how extrinsically motivated actions can become self-determined through the developmental processes of internalisation (i.e., the process of the adoption of social norms, values, and beliefs prescribed by one's social and cultural environments) and integration (i.e., the process through which the internalised external norms, values, and beliefs become part of one's personality and identity). That is, by enabling individuals to assimilate external values and reconstitute them into personally endorsed values and self-regulations, the internalisation process allows us to feel self-determined when enacting them. When the process functions optimally, we identify with the importance of social regulations, assimilate them into our integrated sense of self, and thus fully accept them as our own. Deci and Ryan (2000) and Ryan & Deci (2000) specify four types of behavioural regulation that can be ordered along a continuum between amotivation at one end and intrinsic motivation at the other end: external regulation, introjected regulation, identified regulation, and integrated regulation. *External regulation* occurs when students' actions are regulated by external rewards, pressures, or constraints (e.g., a student who does an assignment with an aim to obtain teacher's praise or to avoid parental confrontation). *Introjected regulation* occurs when students act because they think they should or would feel guilty if they did not (e.g., a student adopts this regulation when he studies primarily because he knows that he will get a bad grade and disappoints his parents if he does not). *Identified regulation* occurs when the regulation or value is adopted by the self as personally important and valuable (e.g., a student who willingly does extra work in a particular academic task because he believes it is important for his self-selected future goal of attending college or entering a particular occupation). Lastly, *integrated regulation*, which is the most self-determined form of behavioural regulation and loosely related to intrinsic motivation, occurs as a result from the integration of identified values and regulations into one's coherent self (e.g., a student with two conflicting identifications of being a good student and a successful athlete who harmoniously integrates the two with each other; when this state is achieved, the

student's behaviour is an expression of what is valued by and considered important by the student).

Based on the theorization above, Deci and Ryan argue that students can gradually internalize extrinsic reasons for completing necessary, but uninteresting, tasks and learning activities, and thus infuse agency into daily learning activities. As motives for engaging in tasks become more internalised and integrated in a student's self, the potential for self-determination and autonomy increases. To promote gradual internalisation of extrinsic motivation in the classroom, SDT recommends that teachers refrain from overtly controlling student behaviours. Some research has revealed that teachers' controlling behaviour is related to decreases in students' intrinsic motivation, engagement, and achievement, as well as increased feeling of anger and anxiety (Assor, Kaplan, Kanat-Maymon, & Roth, 2005; Reeve & Jang, 2006; Reeve, Jang, Carell, Jeon, & Barch, 2004). SDT researchers also discourage teachers from giving students incompetence feedback, imposing strict deadlines, using threats and competition to control behaviour, giving frequent directives, interfering with students' natural pace of learning, and restricting students from expressing critical or independent opinions. In contrast, it is essential that teachers provide optimal challenges, informational feedback, interesting and stimulating material and assignments, and opportunities to view effort as a key contributor to performance (Reeve *et al*., 2004; Reeve & Jang, 2006; Reeve *et al*., 2004; Ryan & Deci, 2000). Teachers should show affection and warmth, express interest in students' activities, and spend time and share resources with students (Assor & Kaplan, 2001).

Self-Concept

The notions of self-concept and self-esteem are often used interchangeably. Researchers, however, argue that self-concept refers to descriptive information about oneself such as height, hair, colour, ability in academic, sports, and so on, whereas self-esteem is the evaluative component of self-concept, which refers to how one feels about these objective qualities of self-description (see, e.g., Valentine, DuBois, & Cooper, 2004). Thus, in this regard, self-esteem reflects the components of self-concept judged to be important by a particular individual. We will use the term self-concept in this discussion to cover both the descriptive and evaluative dimensions.[2]

Research has consistently indicated that the more positive the students' academic self-concept, the higher their achievement (see Valentine *et al*., 2004 for a meta-analytic study). Why is it so? This is because individuals who have a positive self-concept are expected to be more motivated to perform particular activities than those who have a poor self-concept, and success in performing certain activities is believed to enhance self-concept. Hence, the relationship between self-concept and behaviours, particularly in terms of success and failure, is presumed to be reciprocal (Marsh & Craven, 1997).

Self-concept is formed through social interaction and social comparison. Feedback from significant others such as parents, siblings, teachers, and peers is

influential in the growth of one's self-concept. *Social frames of reference* indicate to us what our capacities and qualities are under particular circumstances. For example, on an objective criterion, some students may be quite good at mathematics, yet when they use others who are superior at mathematics as a frame of reference they may develop a relatively negative mathematics self-concept (see, e.g., Marsh & Craven, 1997; Marsh & Johnston, 1993; Marsh, Walker, & Debus, 1991; see also Bong, 1998). This is sometimes referred to as an *external frame of reference.* Furthermore, according to Marsh, we tend to compare our self-perceived skills in one area (such as mathematics) with our self-perceived skills in another (such as English) and use this internal, relativistic impression as a second basis for arriving at our self-concept in particular areas (Marsh, 1991; Skaalvik & Skaalvik, 2002). This is often referred to as an *internal frame of reference*. Hence, students who are good at both mathematics and English may, nevertheless, have a more negative self-concept in mathematics if they perceive that they are better at English and vice versa. This explains why even slow learners differentiate their self-concepts across subjects and hold high self-concepts in some areas even though their objective performance may be poor (Marsh & Craven, 1997; Skaalvik & Skaalvik, 2002). This effect, called *internal-external frame of reference* (Marsh, 1990), seems to be universal among students from a wide range of cultures (Marsh & Hau, 2004). Practically, this means that teachers should not make the assumption that those students who are perceived to have high ability and who are doing well academically must have uniformly high positive self-concepts in all areas, while those who are perceived as having low ability and are doing less well academically must have uniformly low self-concept across all areas.

Teachers should also be aware of the relationship between a student's self-concept, average school performance, and the student's school achievement. This relationship is often referred to as the *big-fish-little-pond* effect (Marsh & Hau, 2003; Marsh, Hau, & Craven, 2004). That is, it is often better for a bright student to be a "big fish" in a "little pond" (i.e., doing well among a mixed-ability group) than to be a "little fish" in a "big pond" (i.e., performing at an average level in a high-ability group). In the former case, it is easier for students to establish and maintain positive feelings about their academic accomplishments, which serve to reinforce further academic pursuits. In selective educational environments, where the average ability of students is high, it is more difficult to establish and maintain these positive feelings, and high-ability students may choose less demanding coursework and have lower academic self-concepts, lower achievement scores, lower educational aspirations and lower occupational aspirations than similar students in non-selective educational environments. The implementation of ability grouping and streaming must therefore consider the big-fish-little-pond effect on the students' academic self-concepts. In addition, to develop positive self-concepts in educational settings, Marsh and Craven (1997) recommend that teachers should develop assessment tasks that encourage individual students to pursue their own projects that are of particular interest to them; reduce social comparison and competitive learning environments; provide students with feedback in relation to criterion reference standards and personal improvement over time, rather than

comparisons based on the performance of other students; emphasize to each student that they are a very able student, and value the unique accomplishments of each students so that all students feel good about themselves; and enhance students' feeling of being connected to other students in the classroom.

THE TEACHER

The way teachers perform their teaching role has a significant impact not only on how well students learn, but also on how motivated they are to learn. Teaching was often conceptualised in the past as an active process, while learning was considered relatively passive. In other words, good learning was the result of what the teacher did to students, rather than what the students did. Many of the teaching practices based upon this model inhibited motivation for many children.

Among teaching practices that may inhibit motivation are the following: poor organisation; poor discipline and management practices; routinisation; authoritarian control; drill and practice routines; learning activities that bear little relationship to student interest and perceived needs; inappropriate difficulty levels (work that is too easy or too hard); unclear expectations in assigned work; unfair marking and grading; undue emphasis on assessment; excessive social comparison between students and competition; lack of resources; students ridiculing each other; poor modelling of attitudes; impersonal, detached and uncaring teachers; and favouritism. Good teachers strive to meet students' personal, emotional and cognitive needs, and when they do so they enhance student motivation for learning. Effective teachers provide an emotionally safe environment and model risk taking in a safe environment. The classrooms of these teachers are tolerant of mistakes. Learning occurs in a warm interpersonal context in which the development of self-confidence, belonging, personal control, recognition and autonomy are supported (McInerney, 2005; McInerney & McInerney, 2006).

Teachers can create meaningful and positive classroom environments by using teaching strategies that meet students' basic affective, learning and motivational needs. Among the features of classrooms that are important to facilitate this are the following: a physically safe environment; cooperation between teachers and students and an encouragement of mutual respect; attractive, well resourced and stimulating learning environments; variety in curriculum and teaching approaches; active involvement in learning; low competitiveness; clear rules and good organisation; teaching for learning outcomes; setting appropriate instructional objectives; demonstrating appropriate knowledge; implementing effective questioning techniques; using motivational strategies; monitoring and evaluating student learning; communicating enthusiasm, warmth and humour; monitoring and evaluating student learning; utilising appropriate management skills; and a sense of efficacy in both students and teachers (McInerney, 2005; McInerney & McInerney, 2006; see also Brophy, 2004; Good & Brophy, 2003; Schunk *et al*., 2008; Stipek, 2002).

We have been discussing a whole raft of features of effective teaching to enhance motivation. We believe that teachers should focus on providing effective feedback, helping students set goals for learning, fostering their self-efficacy, and

emphasising the importance of effort and persistence in learning; all which are the recurring themes throughout the chapter, and should become the goals that teachers must pursue in the classroom. But sometimes the problems associated with student motivation are located with teachers and not students. Teachers often engage in behaviours that are inimical to effectively motivating students. Some questions teachers should ask themselves are:

- How enthusiastic and motivated are you to teach your subject?
- How inspiring and energetic are you? Do you instil a love of the subject in your students?
- How well organised are you? Is your teaching well structured?
- Do you clearly articulate to your students the relevance, utility, and meaningfulness of the material and subject?
- Do you provide appropriate and transparent feedback, assessment and evaluation?
- How much variety do you employ in teaching and assessment, such as aids, activities, peer group collaboration?
- What elements of motivated behaviour do you model to your students?

CONCLUSION

To sum up, in this chapter we have recommended a range of motivation theories and research-based practices and principles that can enhance a possibility of having more motivated and engaged students in the classroom. There are things that can be changed, and there are things that can't. One thing is certain, however, that if we want our students to **choose** to invest their **energy** in our subjects, and to set **high standards** for their work, and **continue** to engage in learning beyond the minimum teachers have to ensure they themselves are motivated teachers with the capacity to generate motivation in their students. Hence, the successful implementation of the principles recommended above will be fully your **choice**, depend on how much **energy** you want to invest on and put each of them into practice, how **high** the **standards** you set to your teaching practices, and how **continuous**, determined, persistent you are in doing so, even at the face of setbacks and, at times, failures. It begins with you, the teachers.

NOTES

1. Note that the term "goal" used in the goal-setting theory (Locke & Latham, 1990) refers to a different meaning from the term "goal" used in the achievement goal theory (Elliot, 2005; Urdan, 2004). In the former, it refers to the standard of performance that individuals are trying to achieve (e.g., get an A or get 10 problems correct on a math exam). In the latter, goal or goal orientation, is concerned with the general purposes of reasons for engaging in achievement tasks combined with some general standards for evaluating progress (e.g., why individuals want to get an A or 10 problems correct on the math exam and how they approach and engage in learning math). Thus, in the goal-setting theory goal refers to a target outcome, whereas in the achievement goal theory goal, or goal orientation, refers to individuals' motive to achieve (see also "Mastery Goals" in this chapter).
2. Self-concept may also be distinguished from self-efficacy (see, e.g., Bong, 1998; Bong & Clark, 1999; see also "Self-efficacy" in this chapter). Recall that self-efficacy refers to a person's

conviction about their capacity to actualise a desired outcome. In this sense, self-efficacy, compared with self-concept, deals primarily with the cognitively perceived capability of the self. It concerns people's own competence assessments in a given area among other personal attributes. Self-concept is a broader construct because it embraces a range of descriptive and evaluative inferences, with their ensuing affective reactions (Bong & Clark, 1999).

REFERENCES

Ablard, K. E., & Lipschultz, R. E. (1998). Self-regulated learning in high-achieving goals, and gender. *Journal of Educational Psychology, 90*, 94–101.

Alexander, P. A. (1995). Superimposing a situation-specific and domain-specific perspective on an account of self-regulated learning. *Educational Psychologist, 30*, 189–193.

Anderman, L. (1999). Classroom goal orientation, school belonging, and social goals as predictors of students' positive and negative affect following the transition to middle school: Schools can make a difference. *Journal of Research and Development in Education, 32*, 131–147.

Assor, A., & Kaplan, H. (2001). Mapping the domain of autonomy support: Five important ways to enhance or undermine students' experience of autonomy in learning. In A. Efklides, J. Kuhl, & R. M. Sorrentino (Eds.), *Trends and prospects in motivation research* (pp. 101–120). Boston: Kluwer Academic Publishers.

Assor, A., Kaplan H., Kanat-Maymon, Y., & Roth, G. (2005). Directly controlling teacher behaviours as predictors of poor motivation and engagement in girls and boys: The role of anger and anxiety. *Learning and Instruction, 15*, 397–413.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.

Bandura, A. (2006). Adolescent development from an agentic perspective. In F. Pajares & T. Urdan (Eds), *Self-efficacy beliefs of adolescents* (pp. 1–44). Greenwich, CT: Information Age Publishing.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development, 67*, 1206–1222.

Biehler, R. F., & Snowman, J. (1990). *Psychology applied to teaching* (6th ed.). Boston: Houghton Mifflin.

Biggs, J. B., & Telfer, R. (1987). *The process of learning* (2nd ed.). Sydney: Prentice Hall.

Boekaerts, M. (1995). Self-regulated learning: Bridging the gap between metacognitive and metamotivation theories. *Educational Psychologist, 30*, 195–200.

Boekaerts, M. (1998). Do culturally rooted self-construals affect students' conceptualization of control over learning? *Educational Psychologist, 33*, 87–108.

Boekaerts, M., & Corno, L. (2005). Self-regulation in the classroom: A perspective on assessment and intervention. *Applied Psychology, 54*, 155–185.

Boekaerts, M., Pintrich, P. R., & Zeidner, M. (Eds.). (2000). *Handbook of self-regulation*. San Diego, CA: Academic Press.

Bong, M. (1997). Generality of academic self-efficacy judgments: Evidence of hierarchical relations. *Journal of Educational Psychology, 89*, 696–709.

Bong, M. (1998). Tests of internal/external frames of reference model with subject-specific academic self-efficacy and frame-specific academic self-concepts. *Journal of Educational Psychology, 90*, 102–110.

Bong, M., & Clark, R. E. (1999). Comparison between self-concept and self-efficacy in academic motivation research. *Educational Psychologist, 34*, 139–153.

Bong, M., & Skaalvik, E. M. (2003). Academic self-concept and self-efficacy: How different are they really? *Educational Psychology Review, 15*, 1–40.

Bråten, I., Samuelstuen, M. S., & Strømsø, H. I. (2004). Do students' self-efficacy beliefs moderate the effects of performance goals on self-regulatory strategy use? *Educational Psychology, 24*, 231–247.

Brophy, J. (2004). *Motivating students to learn*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Butler, R. (1998). Age trends in the use of social and temporal comparison for self-evaluation: Examination of a novel developmental hypothesis. *Child Development, 69*, 1054–1073.

Butler, R. (2007). Teachers' achievement goal orientations and associations with teachers' help seeking: Examination of a novel approach to teacher motivation. *Journal of Educational Psychology*, *99*, 241–252.

Caprara, G. V., Barbaranelli, C., Borgogni, L., & Steca, P. (2003). Efficacy beliefs as determinants of teachers' job satisfaction. *Journal of Educational Psychology*, *95*, 821–832.

Covington, M. V. (2000). Goal theory, motivation, and school achievement: An integrative review. *Annual Review of Psychology*, *51*, 171-200.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, *11*, 227–268.

Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist*, *26*, 325–346.

Deemer, S. A. (2004). Using achievement goal theory to translate psychological principles into practice in the secondary classroom. *American Secondary Education*, *32*, 4–15.

Dweck, C. S., & Legget, E. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*, 256–273.

Eccles, J. S. (2005). Subjective task value and the Eccles et al. model of achievement-related choices. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 105–121). New York: The Guilford Press.

Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, *34*, 169–219.

Elliot, A. J. (2005). A conceptual history of the achievement goal structure. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 52–72). New York: The Guilford Press.

Elliot, A. J., & Church, M. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, *72*, 218–232.

Elliot, A. J., & Harackiewicz, J. (1996). Approach and avoidance achievement goals and intrinsic motivation: A mediational analysis. *Journal of Personality and Social Psychology*, *70*, 461–475.

Elliot, A. J., & McGregor, H. A. (2001). A 2 x 2 achievement goal framework. *Journal of Personality and Social Psychology*, *30*, 957–971.

Elliot, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology*, *54*, 5–12.

Good, T., & Brophy, J. (2003). *Looking in classrooms* (9th ed.). Boston: Allyn & Bacon.

Grant, H., & Dweck, C. S. (2003). Clarifying achievement goals and their impact. *Journal of Personality and Social Psychology*, *85*, 541–553.

Gronlund, N. E. (1985). *Measurement and evaluation in teaching* (5th ed.). New York: Macmillan.

Hancock, D. R. (1995). What teachers may do to influence student motivation: An application of expectancy theory. *The Journal of General Education*, *44*, 171–179.

Hattie, J. A. (1999, June). *Influences on student learning* (Inaugural professorial address, University of Auckland, New Zealand). Retrieved from http://www.arts.auckland./ac.nz.staff/index.cfm?P=8650

Hattie, J. A., Biggs, J., & Purdie, N. (1996). Effects of learning skills intervention on student learning: A meta-analysis. *Review of Research in Education*, *66*, 99–136.

Hattie, J. A., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, *77*, 81–112.

Hayes, S. C., Rosenfarb, I., Wuhfert, E., Munt, E. D., Korn, Z., & Zettle, R. D. (1985). Self-reinforcement effects: An artefact of social standard setting? *Journal of Applied Behavior Analysis*, *18*, 201–214.

Hogan, T., Rabinowitz, M., & Craven, J. A. (2003). Representation in teaching: Inferences from research of expert and novice teachers. *Educational Psychologist*, *38*, 235–247.

Kaplan, A., & Maehr, M. L. (1999). Achievement goals and student well-being. *Contemporary Educational Psychology*, *24*, 330–358.

Kaplan, A., & Maehr, M. L. (2007). The contributions and prospects of goal orientation theory. *Educational Psychology Review*, *19*, 141–184.

Kaplan, A., & Midgley, C. (1999). The relationship between perceptions of the classroom goal structure and early adolescents' affect in school: The mediating role of coping strategies. *Learning and Individual Differences*, *11*, 187–212.

Kluger, A. N., & DeNisi, A. (1996). The effects of feedback intervention on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, *119*, 254–284.

Locke, E. A., & Latham, G. P. (1984). *Goal-setting: A motivational technique that works*. Englewood Cliffs, NJ: Prentice-Hall.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year Odyssey. *American Psychologist, 57*, 705–717.

McInerney, D. M. (2005). *Helping kids achieve their best: Understanding and using motivation in the classroom*. Greenwich, CT: Information Age Publishing.

McInerney, D. M. (in press). The motivational roles of cultural differences and cultural identity in self-regulated learning. In D. Schunk & B. Zimmerman (Eds), *Motivation and self-regulated learning: Theory, research, and applications*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

McInerney, D. M., & McInerney, V. (2006). *Educational psychology: Constructing learning*. Sydney, NSW: Pearson Education.

McInerney, D. M., Roche, L., McInerney, V., & Marsh, H. W. (1997). Cultural perspectives on school motivation: The relevance and application of goal theory. *American Educational Research Journal 34*, 207–236.

Maehr, M., & Meyer, H. (1997). Understanding motivation and schooling: Where we've been, where we are, and where we need to go. *Educational Psychology Review*, *9*, 371–409.

Maehr, M. L., & Midgley, C. (1996). *Transforming school cultures*. Boulders, CO: Westview Press.

Marsh, H. W. (1990). Influences of internal and external frames of reference on the formation of math and English self-concepts. *Journal of Educational Psychology*, *82*, 107–116.

Marsh, H. W. (1991). Failure of high-ability high schools to deliver academic benefits commensurate with their students' ability levels. *American Educational Research Journal*, *28*, 445–480.

Marsh, H. W., & Craven, R. (1997). Academic self-concept: Beyond the dustbowl. In G. Phye (Ed.), *Handbook of classroom assessment: Learning, achievement, and adjustment* (pp. 131–198). San Diego, CA: Academic Press.

Marsh, H. W., & Hau, K. T. (2003). Big-fish-little-pond effect on academic self-concept: A cross-cultural (26 country) test of the negative effects of academically selective schools. *American Psychologist*, *58*, 364–376.

Marsh, H. W., & Hau, K. T. (2004). Explaining paradoxical relations between academic self-concepts and achievements: Cross-cultural generalizability of the internal/external frame of reference predictions across 26 countries. *Journal of Educational Psychology*, *90*, 56–67.

Marsh, H. W., Hau, K. T., & Craven, R. (2004). The big-fish-little-pond effect stands up to scrutiny. *American Psychologist*, *59*, 269–271.

Marsh, H. W., & Johnston, C. F. (1993). Multidimensional self-concepts and frame of reference: Relevance to the exceptional learner. In F. E. Obiakor & S. W. Stile (Eds.), *Self-concept of exceptional learners: Current perspective for educators* (pp. 72–112). Dubuque, IA: Kendall/Hunt.

Marsh, H. W., Walker, R., & Debus, R. (1991). Subject specific components of academic self-concept and self-efficacy. *Contemporary Educational Psychology*, *16*, 331–345.

Meece, J. L., Anderman, E. M., & Anderman, L. H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of Psychology, 57*, 487–503.

Meece, J. L., Blumenfeld, P. C., & Hoyle, R. H. (1988). Students' goal orientations and cognitive engagement in classroom activities. *Journal of Educational Psychology*, *80*, 514–523.

Midgley, C., Arunkumar, R., & Urdan, T. C. (1996). "If I don't do well tomorrow, there is a reason": Predictors of adolescents' use of academic self-handicapping strategies. *Journal of Educational Psychology*, *88*, 423–434.

Midgley, C., & Urdan, T. C. (2001). Academic self-handicapping and achievement goals: A further examination. *Contemporary Educational Psychology, 26*, 61–75.

Nolen, S. B. (1988). Reasons for studying: Motivational orientations and study strategies. *Cognition and Instruction, 5*, 269–287.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research, 66*, 543–578.

Pajares, F. (2006). Self-efficacy during childhood and adolescence: Implications for teachers and parents. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 339–367). Greenwich, CT: Information Age Publishing.

Pajares, F., & Urdan, T. C. (2006). *Self-efficacy beliefs of adolescents*. Greenwich, CT: Information Age Publishing.

Paris, S. G., & Ayres, L. R. (1994). *Becoming reflective students and teachers with portfolios and authentic assessment*. Washington DC: American Psychological Association.

Paris, S. C., & Paris, A. H. (2001). Classroom applications of research on self-regulated learning. *Educational Psychologist, 36*, 89–101.

Pintrich, P. R. (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology, 92*, 544–555.

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated leanring components of classroom academic performance. *Journal of Educational Psychology, 82*, 33–40.

Purdie, N., & Hattie, J. A. (1996). Cultural differences in the use of strategies for self-regulated learning. *American Educational Research Journal, 33*, 845–871.

Reeve, J., Deci, E. L., & Ryan, R. M. (2004). Self-determination theory: A dialectical framework for understanding sociocultural influences on student motivation. In D. M. McInerney, & S. Van Etten (Eds.), *Big theories revisited* (pp. 31–60). Greenwich, CT: Information Age Press.

Reeve, J., & Jang, H. (2006). What teachers say and do to support students' autonomy during a learning activity. *Journal of Educational Psychology, 98*, 209–218.

Reeve, J., Jang, H., Carell, D., Jeon, S., & Barch, J. (2004). Enhancing students' engagement by increasing teachers' autonomy support. *Motivation and emotion, 28*, 147–169.

Roeser, R. W., Midgley, C., & Urdan, T. C. (1996). Perceptions of the school psychological environment and early adolescents' psychological and behavioural functioning in school: The mediating role of goals and belonging. *Journal of Educational Psychology, 88*, 408–422.

Ryan, A. M., & Pintrich, P. R. (1997). "Should I ask for help?" The role of motivation and attitudes in adolescents' help seeking in math class. *Journal of Educational Psychology, 89, 329–341*.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*, 54–67.

Schunk, D. H. (1990). Goal setting and self-efficacy during self-regulated learning. *Educational Psychologist, 25*, 71–86.

Schunk, D. H. (1995). Self-efficacy and education and instruction. In J. E. Maddux (Ed.), *Self-efficacy, adaptation, and adjustment: Theory, research, and application* (pp. 281–303). New York: Plenum Press.

Schunk, D. H. (2006). Self-efficacy and effective learning. In D. M. McInerney & V. McInerney (Authors), *Educational psychology: Constructing learning* (pp. 196–198). Sydney, NSW: Pearson Education.

Schunk, D. H., & Pajares, F. (2004). Self-efficacy in education revisited: Empirical and applied evidence. In D. M. McInerney & S. Van Etten (Eds.), *Big theories revisited* (pp. 115–138). Greenwich, CT: Information Age Press.

Schunk, D. H., & Pajares, F. (2005). Competence perceptions and academic functioning. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 85–104). New York: Guilford Press.

Schunk, D. H., Pintrich, P. R., & Meece, J. L. (2008). *Motivation in education: Theory, research, and applications* (3rd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Skaalvik, E. M., & Skaalvik, S. (2002). Internal and external frames of reference for academic self-concept. *Educational Psychologist, 37*, 233–244.

Stipek, D. (2002). *Motivation to learn: Integrating theory and practice* (4th ed.). Boston: Allyn & Bacon.

Togut, T. D. (2007). *High-stakes testing: Educational barometer for success, or false prognosticator for failure*. Retrieved August 28, 2007, from http://www.harborhouselaw.com/articles/highstakes.togut.htm

Turner, J. C., Midgley, C., Meyer, D. K., Gheen, M., Anderman, E. M., & Kang, Y. (2002). The classroom environment and students' report of avoidance strategies in mathematics: A multimethod study. *Journal of Educational Psychology, 94*, 88–106.

Urdan, T. C. (2004). Can achievement goal theory guide school reform? In P. R. Pintrich & M. L. Maehr (Eds.), *Advances in motivation and achievement* (Vol. 13, pp. 361–392). Oxford: Elsevier, Ltd.

Urdan, T. C., & Midgley, C. (2001). Academic self-handicapping: What we know, what more there is to learn. *Educational Psychology Review, 13*, 115–138.

Urdan, T. C., & Turner, J. C. (2005). Competence motivation in the classroom. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 297–317). New York: Guilford Press.

Valentine, J. C., DuBois, D. L., & Cooper, H. (2004). The relation between self-beliefs and academic achievement: A meta-analytic review. *Educational Psychologist, 39*, 111–133.

Weiner, B. (1992). *Human motivation: Metaphors, theories, and research*. Newbury Park, CA: Sage.

Weiner, B. (2004). Attribution theory revisited: Transforming cultural plurality into theoretical unity. In D. M. McInerney & S. Van Etten (Eds.), *Big theories revisited* (pp. 13–29). Greenwich, CT: Information Age Press.

Weiner, B. (2005). Motivation from an attributional perspective and the social psychology of perceived competence. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 73–84). New York: Guilford Press.

Wigfield, A. (1994). Expectancy-value theory of achievement motivation: A developmental perspective. *Educational Psychology Review, 6*, 49–78.

Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology, 25*, 68–81.

Wigfield, A., & Eccles, J. S. (2002). The development of competence beliefs, expectancies for success, and achievement values from childhood through adolescence. In A. Wigfield & J. S. Eccles (Eds.), *Development of achievement motivation* (pp. 91–120). San Diego, CA: Academic Press.

Wigfield, A., Eccles, J. S., & Rodriguez, D. (1998). The development of children's motivation in school contexts. *Review of Research in Education, 23*, 73–118.

Wigfield, A., Tonks, S., & Eccles, J. S. (2004). Expectancy-value theory in cross-cultural perspective. In D. M. McInerney & S. V. Etten (Eds.), *Big theories revisited* (pp. 165–198). Greenwich, CT: Information Age Publishing.

Wiggins, G. (1993). Assessment: Authenticity, context, and validity. *Phi Delta Kappan, 75*, 200–214.

Winne, P. H. (1995). Inherent details in self-regulated learning. *Educational Psychologist, 30*, 173–187.

Wolters, C., Yu, S., & Pintrich, P. (1996). The relation between goal orientation and students' motivational beliefs and self-regulated learning. *Learning and Individual Differences, 8*, 211–238.

Wolters, C. (2003a). Regulation of motivation: Evaluating an underemphasized aspect of self-regulated learning. *Educational Psychologist, 38*, 189–205.

Wolters, C. (2003b). Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology, 95*, 179–187.

Zimmerman, B. J. (1998). Academic studying and self-regulation. *Educational Psychologist, 33*, 73–86.

Zimmerman, B. J. (2004). Sociocultural influences and students' development of academic regulation: A social-cognitive approach. In D. M. McInerney & S. V. Etten (Eds.), *Big theories revisited* (pp. 139–164). Greenwich, CT: Information Age Publishing.

Zimmerman, B. J. (2006). Self-regulation and effective learning. In D. M. McInerney & V. McInerney (Authors), *Educational psychology: Constructing learning* (pp. 190–191). Sydney, NSW: Pearson Education.

Zimmerman, B. J., & Clearly, T. J. (2006). Adolescents' development of personal agency: The role of self-efficacy beliefs and self-regulatory skills. In F. Pajares & T. C. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 45–69). Greenwich, CT: Information Age Publishing.

Zimmerman, B. J., & Martinez-Pons, M. (1990). Student differences in self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use. *Journal of Educational Psychology*, *82*, 51–59.

Dennis M. McInerney and Arief D. Liem
Centre for Research in Pedagogy and Practice,
National Institute of Education,
Nanyang Technological University,
Singapore

CATHERINE SINCLAIR

2. HOW CAN WHAT WE KNOW ABOUT MOTIVATION TO TEACH IMPROVE THE QUALITY OF INITIAL TEACHER EDUCATION AND ITS PRACTICUM?

INTRODUCTION

Motivation is what moves us to do something. It involves energy and drive to learn, work effectively, and achieve potential. Motivation also plays a large part in the interest and enjoyment of study (Martin, 2003). Research (e.g., Dowson & McInerney, 2003; McInerney, Maehr, & Dowson, 2004) suggests that salient motivations determine: (a) what activities people do or do not engage in ("attraction"), (b) how long they engage in these activities ("retention") and, (c) the depth to which they engage in these activities ("concentration"). Therefore, motivation may, determine what attracts individuals to teaching, how long they remain in their initial teacher education courses and subsequently the teaching profession, and the extent to which they engage with (concentrate on) their courses and the teaching profession (e.g., Martin, Marsh, & Debus, 2003).

Motivation, including motivation to teach, may be externally or internally referenced (Marsh, 1986, 1990). Externally referenced motivations (extrinsic motivations) are those motivations that primarily involve people or conditions external to individuals. For example, individuals motivated to enter teaching because of extrinsic motivations may be attracted by a teacher's pay, working conditions or because others think it would be good for them to become teachers. On the other hand, internally referenced motivations (intrinsic motivations) are those motivations where the impetus to initiate, persist, and engage deeply in an activity is primarily attributed to the beliefs, values and perceptions of the individual. These individuals would be motivated by reasons of personal interest, satisfaction or a desire to help others.

Further, much motivation research has investigated the motivation of children and adolescents. Adult learning theory, however, reports on the particular motivations of adults, such as those aspiring to be teachers, and what motivates them to engage in productive adult learning (e.g., Rochester, Kilstoff, & Scott, 2005). Therefore, adult learning theory can also contribute to what we know about motivation to teach. According to adult learning theory, adult motivation to undertake a learning project, for example learn to teach, can include some external motivators such as to get a better job, be promoted or obtain a higher salary. However, the theory asserts that adults are more likely to be motivated by intrinsic motivators such as a desire for increased job satisfaction, self-esteem or quality of

P.A. Towndrow, C. Koh and T.H. Soon (eds.), Motivation and Practice for the Classroom, 37–61.

life. Thus while external payoffs have some relevance, internal need satisfaction is the more potent motivator for adults (Knowles, Holton III & Swanson, 1998). Having the motivation to teach (initial or entry motivation), however, is just the first step in becoming a teacher. Teacher preparation through an initial teacher education course is required for individuals aspiring to be teachers (i.e., student teachers). Initial teacher education courses are generally conducted both on university or other higher education institution campuses, and in schools or early childhood communities (centres). Traditionally, campus-based study (the coursework) is where student teachers develop formal knowledge generated through research and scholarship. The practicum, on the other hand, is the experiential aspect of a course where student teachers are immersed in school or early childhood communities (centres); develop and integrate their knowledge, feelings, experience and thinking with the reality of teacher professional practice; undergo a learning process; and create a professional identity (based upon research by Sinclair, Trimingham-Jack, & Pollnitz, 2006). So what motivates individuals to become teachers? Further, once an individual (student teacher) enters an initial teacher education course, does his/her initial motivation to teach change? Finally, what role does initial teacher education and its practicum play in sustaining, enhancing or weakening motivation particularly when motivation has such a strong role to play in adult learning, achievement and retention?

This chapter begins by discussing what we know from the research literature about motivation to teach. It then describes a research study, conducted by the author over a four-year period, of the initial and changing motivations to teach of two separate cohorts of elementary student teachers during the first semester of their four-year initial teacher education courses at a suburban university in Sydney, Australia. The study also investigated the impact of initial teacher education coursework and the practicum on any changes to student teacher motivation to teach, commitment to teaching (in terms of intended retention in their courses and teaching careers) and achievement. After a discussion of the results, the chapter concludes with recommendations for educators wishing to enhance the "attraction", "retention" and "concentration" of student teachers by improving the quality of initial teacher education and its practicum.

MOTIVATION TO TEACH

Research has demonstrated that not everyone is similarly motivated to teach but that there are some motivations commonly expressed by those considering a career in teaching. Individual research studies have also investigated the motivations to teach held by different groups of people, including school students, student teachers, new teachers, qualified teachers, principals, school superintendents, teacher educators, women, second career teachers, minority groups, those with differing levels of academic achievement, and those from developing nations. Research studies have drawn upon different theoretical bases and used a variety of research methods including essays, interviews and questionnaires. While findings differ

across individual studies, as a whole, these studies have shown that people are, or would be, attracted to teaching by:

- a "calling": having always wanted to teach (Dinham & Scott, 2000; Gordon 1993; Hart & Murphy, 1990; Stiegelbauer, 1992; Whately, 1998; Yong, 1999);
- students: a "love" of children, a desire to work with children or adolescents, previous involvement with children, or for the benefit of children (Allard *et al*., 1995; Ferrell & Daniel, 1993; Gordon 1993; Hart & Murphy, 1990; Serow, Eaker & Forrest, 1994; Stiegelbauer, 1992; Weiner, Swearingen, Pagano & Obi, 1993; Whately, 1998; Yong, 1995);
- altruism: the perceived worth or value of teaching to others, to make a difference in the lives of others, to help other people, to change society or to help a troubled profession (Allard *et al*., 1995; Ferrell & Daniel, 1993; Gordon 1993; Hart & Murphy, 1990; Johnson & Birkeland, 2002; O'Brien, & Schillaci, 2002; Public Agenda Online, 2000; Serow *et al*., 1994; Stiegelbauer, 1992; Weiner *et al*., 1993; Whately, 1998; Yong, 1999);
- intellectual stimulation: including a love of learning, teaching, or a particular subject area (the latter more likely reported by secondary teachers), or the desire to impart knowledge (Gordon 1993; Serow, 1993; Serow *et al*., 1994; Stiegelbauer, 1992; Whately, 1998; Yong, 1999);
- the influence of others: including family members, past teachers or members of the community (Allard *et al*., 1995; Ferrell & Daniel, 1993; Gordon 1993; Hart & Murphy, 1990; Serow *et al*., 1994; Stiegelbauer, 1992; Yong, 1995);
- the perceived benefits and/or convenience of teaching; including work schedules, work hours, vacations, career security and salary (Allard *et al*., 1995; Ferrell & Daniel, 1993; Gordon 1993; Hart & Murphy, 1990; Serow, 1993; Weiner *et al*., 1993; Yong, 1999);
- the nature of teaching work: especially the opportunities teaching provides for satisfying interpersonal interactions with others (Crow, Levine & Nager, 1990; Ferrell & Daniel, 1993; OECD, 2005; Weiner *et al*., 1993; Yong, 1999);
- a desire for a career change: through dissatisfaction with a previous career, or a stressful life event such as divorce, unemployment or geographic relocation (more common in second career student teachers) (Hart & Murphy, 1990; Richardson & Watt, 2006; Serow, 1993);
- the perceived relative ease of entry into initial teacher education courses, or of the job of teaching itself (Weiner *et al*., 1993; Yong, 1995); and/or,
- the status of teaching; including the opportunities teaching provides for career or social advancement (Allard *et al*., 1995; Dilworth, 1991; Yong, 1999).

Whilst a substantial amount of research has investigated what initially motivates people to become teachers (i.e., entry motivations) much of it was undertaken more than a decade ago and most is situated within the North American context. Further, much less is known about if or how motivation may change over time, or the affect of initial teacher education and its practicum on motivation to teach. Thus research into the motivation of Australian student teachers in the twenty-first century, changes to that motivation, and the affect of initial teacher education on that motivation has the potential to:

– attract suitable student teachers to teaching by broadening the knowledge base of what motivates individuals to teach in today's more complex society where there are increasing demands on teachers and increasing opportunities for individuals to engage in other professions (Commonwealth of Australia, 2007; Zammit, Sinclair, Cole, Singh, Costley, Brown a'Court & Rushton, 2007);
– design better initial teacher education courses by understanding the positive and negative effects of initial teacher education and its practicum on motivation to teach; and,
– help offset forecasted teacher shortages (Preston, 2002; Ramsay, 2000) by enhancing the retention of student teachers throughout their initial teacher education courses and into the teaching profession.

A TRANS-THEORETICAL, MIXED-METHOD APPROACH TO STUDYING MOTIVATION TO TEACH

Over a four-year period, two entire first-year cohorts of student teachers enrolled in the four-year elementary initial teacher education course at the University of Western Sydney were invited to participate in the study. The study took a trans-theoretical stance, drawing upon a number of theoretical bases including adult learning theory, career stage theory, teacher education research and general motivational theory. The study aimed to answer the following research questions:
– What motivates student teachers to be teachers?
– How do motivations to teach change over time?
– How are student teacher motivations to teach affected by initial teacher education coursework and practicum experiences?

Instrumentation and Procedures

One hundred and eighty-six (186) student teachers completed a validated, reliable survey instrument, Motivational Orientations to Teach Survey (MOT-S) (Sinclair, Dowson & McInerney, 2006) on two occasions, once at the beginning of the first semester of their courses and then again at the end of the first semester (approximately five months later) after their initial practicum experiences in elementary schools (response rate up to 80.0% in a year). All participants gave their active, informed consent to participate in the study prior to its administration and the study had University ethics approval. MOT-S comprised 80 items measuring motivations to teach. It also measured student teacher demographic (background) variables and the effect of their initial teacher education coursework and practicum experiences on their motivation to teach. MOT-S used both open-ended questions and forced-choice Likert-type scales ranging from 1 (strongly disagree) to 5 (strongly agree). Completion of each survey took approximately 30 minutes. Additional data was provided by "Why I wanted to be a teacher" essays completed by student teachers in their first campus-based tutorial of their initial teacher education courses.

Participants

One hundred and sixty-four (88.6%) student teachers who participated in this study were female and 21 (11.4%) were male. Of the 184 student teachers who reported their age, more than a third (36.4%) were school leavers at 18 years of age or younger. More than a third (39.1%) of student teachers were young adults at 19-25 years of age and about a quarter of the group was over 25 years of age (24.5%). Most student teachers (84.9%) were born in Australia with the remainder originating in the Middle East (3.2%), United Kingdom and Europe (2.2% each), Asia (1.6%), South Africa (0.5%) or self-identified as other (7.6%). Most spoke English at home (86.5%) with other common home languages being Arabic (3.8%), Indian (2.2%), and Chinese (1.6%). Generally, student teachers came from middle class backgrounds with fathers working mainly in managerial (43.5%) and professional (21.5%) occupations, or to a lesser extent as tradespersons (10.2%). Mothers also worked in managerial (31.5%) and professional (29.2%) occupations. Some mothers were identified as performing household duties (9.6%) or working as clerks (10.1%)[1]. In summary, then, these student teachers are generally representative of student teachers entering initial teacher education courses in Australia. In other words, they are predominantly Australian born, English language speakers from middle class backgrounds; a mixture of school leavers and mature-aged students; and, predominately female, though at higher levels than the norm for female teachers in New South Wales primary schools (Ramsay, 2000).

THE APPEAL OF A TEACHING CAREER: WHAT MOTIVATES STUDENT TEACHERS TO TEACH?

Confirmatory factor analyses of MOT-S found that motivation to teach was multi-dimensional and hierarchical, consisting of 11 factors (dimensions), six of which were internally referenced (intrinsic) motivations and five of which were externally referenced (extrinsic) motivations (see Figure 1). The intrinsic motivations related to the student teachers themselves. These motivations were working with children, intellectual stimulation, self-evaluation, altruism, personal and professional development and authority and leadership. The extrinsic motivations related to factors external to the person and referenced more to their lives, others or the job of being a teacher. These motivations were the nature of teaching work, working conditions, life-fit, influence of others and career change. Motivations such as being attracted to teaching because of the status of teaching, by default or because teaching was easy to do or get into were not evident as factors (dimensions) for these student teachers.

Motivations to Teach

Student teachers reported multiple reasons why they were attracted to the teaching profession rather than a single motivation. In other words, they have a complex set of reasons for becoming teachers, not just one or another motivation to teach. Table 1 outlines a profile of the student teachers' motivations to teach as well as changes

in these motivations over the first semester of their initial teacher education courses. Neither age nor sex significantly influenced student teachers' motivations to teach.

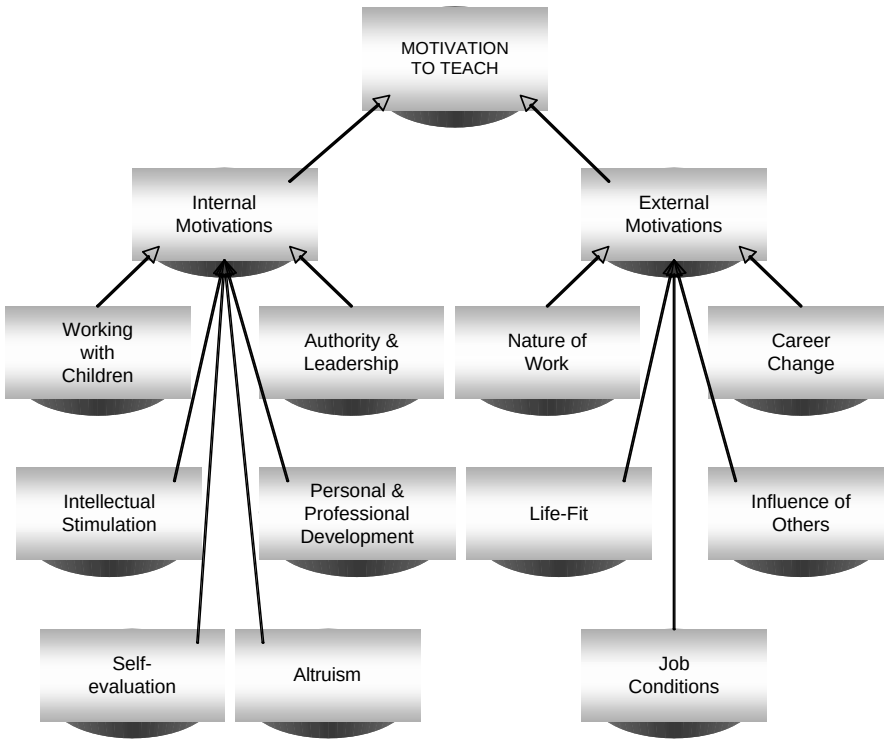

Figure 1. Hierarchical representation of student teachers' motivation to teach.

These student teachers are motivated to be teachers more by intrinsic than by extrinsic motivations as intrinsic motivations are statistically significantly higher than extrinsic motivations at both the beginning and end of the first semester (see Table 1). In particular, the strongest intrinsic motivations at both times were working with children, intellectual stimulation and self-evaluation. As three student teachers expressed in their "Why I want to be a teacher" essays:

> Being a teacher is very important for me. I love children and have a real affinity with them. To see their faces when they get something right, that they have struggled with, is beyond words. It's a delight. (ID 011, 31-40 year old female)

> I enjoy being able to pass on knowledge to others [and] would enjoy being part of the start of that learning for children (ID 021, 26-31 year old female)

Table 1. Motivations to teach

	Mean Time 1	*Mean Time 2*	*Difference*	*Standard Error Mean*	*T-value*
Intrinsic Motivations					
Working with children	**4.33**	**4.18**	**0.15**	**0.04**	**3.43****
Intellectual stimulation	**4.07**	**3.95**	**0.12**	**0.04**	**3.462*****
Self-evaluation	3.96	4.01	-0.05	0.05	-1.03
Altruism	3.77	3.72	0.05	0.05	0.99
Personal and professional development	3.58	3.51	0.07	0.05	1.36
Authority and leadership	2.70	2.75	-0.05	0.05	-1.05
Average Time 1 vs. Average Time 2	**3.75**	**3.66**	**0.09**	**0.03**	**3.01****
Extrinsic Motivations					
Nature of teaching work	3.97	3.94	0.03	0.04	0.67
Working conditions	**3.71**	**3.61**	**0.10**	**0.05**	**2.02***
Life-fit	3.25	3.27	-0.02	0.06	-0.36
Influence of others	2.45	2.46	-0.01	0.05	-0.15
Career change	1.96	1.99	0.03	0.05	-0.66
Average Time 1 vs. Average Time 2	3.09	3.07	0.02	0.03	0.56
Intrinsic vs. Extrinsic					
Mean Difference	0.66	0.59			
SE Difference	0.03	0.03			
T-Value	**20.02*****	**18.20*****			

Note. *, **, *** refers to a statistical difference significant at the 0.05, 0.01, and 0.001 levels respectively

> I believe I always have been a teacher, through my years as a child playing teachers with the neighbourhood kids, teaching and coaching swimming and netball when I became a teenager. As a parent I have taught my children many things about life, growing up, working with others, responsibility, learning to accept failure and dissappointments [sic]. Finally I have been a teacher of swimming for the past eight years in which time I have developed skills which I believe will assist in my ability to teach primary [elementary school students] … I suppose I have been working towards this all my life … (ID 068, 31-40 year old female)

While the strength of working with children for student teachers aspiring to be elementary teachers is to be expected, these student teachers were also attracted to teaching through its intellectual stimulation demonstrating that they considered teaching as intellectual work not just being with children. As such, this motivation may reflect something of a transition in the perception of teaching as a deliberate, cognitive and decision-driven activity, that is, a profession rather than a craft.

The strongest extrinsic motivations at both the beginning and end of the semester were the nature of teaching work, working conditions, and life-fit. As these three example segments from the "Why I want to be a teacher" essays demonstrate:

> I chose primary teaching over secondary teaching as I would be extremely bored teaching only one or two subjects. I'm very creative and need to be able to express this and involve other people. (ID 013, 18 year old female)

> [Teaching] would be the best career choice … because of the hours, the holidays, the pay which all are of great concern to me once I have started my own family in the near future. (ID 060, 18 year old female)

> I chose teaching because when I do have children it will be a good career for a working mother. I will share my children's hours and holidays. I won't have to sacrifice my family to bring home a pay packet. (ID 014, 18 year-old female)

These results demonstrate that while extrinsic motivations are less important to student teachers than intrinsic motivations, some are still important[2]. Even aspiring, predominantly intrinsically motivated student teachers made their choice of career based upon considered judgements about their future work, working conditions and how that fitted with their personal lives.

Changing motivations to teach

As Table 1 demonstrates, motivations to teach are statistically fairly stable across the first semester of the initial teacher education course. While six motivations declined over time, only three did so statistically significantly (working with children, intellectual stimulation, working conditions). None of the five motivations which increased over the semester (self-evaluation, authority and leadership, life-fit, influence of others, career change) did so significantly. In addition, the relative strength of each motivation to the others remained the same over the semester, except for self-evaluation and nature of teaching work which changed places in the overall ranking.

Student teachers also commented on the degree of, and reasons for, any change in their motivation to teach. The results are outlined in Table 2.

While just under a quarter (22.6%) of student teachers reported no change in motivation, the remainder reported some change and nearly half reported "a little" or "somewhat" (48.6%) change in motivation. Student teachers reported increasing motivation and enthusiasm for teaching, and a confirmation of their initial career choice. As one student teacher commented:

Table 2. Degree of changing motivation to teach

Not at all		*Slightly*		*A little*		*Somewhat*		*A lot*			*Total No.*
No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*		*Mean*
My motivation to teach has changed:											
40	22.6	33	18.6	44	24.9	42	23.7	18	10.2	2.8	177

> I'm much more motivated now. I really can't wait to be a teacher!!! The first prac [practicum] experience was just sooo [student teacher's emphasis] good so I am really motivated at the moment to continue. (ID 002, under 18 year old female, motivation changed "somewhat")

The most commonly reported reason for changing motivation reflected the initial motivation of working with children especially the strong desire to work or help children, to make a difference in their lives and the affect their work as teachers would have on their students. Other commonly reported reasons for changes to motivation were self-evaluation of one's suitability as a teacher, an enactment of altruism, personal and professional development, the real nature of teaching work as a result of practicum experiences, life-fit, and the influence of others. Student teachers often spoke of multiple reasons for change. Their reasons for changing their motivations to teach and the direction of these changes are evident in the following representative comments:

> I have thoroughly enjoyed prac[ticum] and have enjoyed being with the children. I enjoyed teaching the children, watching them learn and seeing them learn from my lessons. (ID 161, under 18 year old female, motivation changed "a lot")

> I am more enthusiastic and encouraged in becoming a teacher because of being able to experience real classroom activities and the life of teachers and students from the practicum of first semester. (ID 029, 22-25 year old male, motivation changed "a little")

Three student teachers, however, felt de-motivated. Reasons for decreasing motivation to teach included better awareness of the nature of teaching work, stress, and difficulties experienced with the initial teacher education course. De-motivation led student teachers to reassess the original career choice, for example to teaching younger or older students, or an entirely different career. As this student teacher commented:

> I have experienced what a teacher's life is intended to be like [and] have a better understanding of the teaching profession now, but essentially, I still don't think it's something I want to do right now. My heart isn't really in

> it. I'd like to explore other options first then reconsider. (ID 193, 26-30 year old female, motivation changed "slightly")

Thus it is evident that these student teachers are multi-dimensionally motivated to be teachers, predominantly but not solely by intrinsic motivations (especially working with children, intellectual stimulation and nature of teaching work). There is some but generally non-significant change to their motivations over the first semester (except working with children, intellectual stimulation and working conditions). Where change in motivation is reported, it comes about as a result of the reality experienced in the practicum of working with children, nature of teaching work, and influence of others. As a result, student teachers undergo a self-evaluation of their capabilities to be a teacher, achieve personal and professional development, remain altruistic (altruism), and assess the fit between their own lives and a teaching job (life-fit). For a few student teachers the nature of teaching work, stress and difficulties with their initial teacher education courses reduced their motivations to be teachers. The next section takes a more in-depth look at the impact initial teacher education, its coursework and practicum have on student teacher motivation.

EFFECTS OF INITIAL TEACHER EDUCATION ON STUDENT TEACHER MOTIVATION

Motivation (including student teacher motivation) is considered important in determining what people do, how effectively they work or engage with their education, to what extent their achievements realise their potential and how long they engage in their courses (e.g., Dowson & McInerney, 2003; McInerney, Maehr, & Dowson, 2004). In addition, teachers' academic qualifications as acquired through initial teacher education courses are also important as they are good indicators of quality teaching as well as positively impacting on student learning outcomes (Darling-Hammond, 2000; Darling-Hammond & Youngs, 2002; Goe, 2002; Laczko-Kerr & Berliner, 2002; Lovat, 2003). Within initial teacher education, the practicum, in particular, is considered by governments, employers, researchers and participants as crucial for student teacher professional development (e.g., Australian Council of Deans of Education, ACDE, 2004; Committee for the Review of Teaching and Teacher Education, 2003; Darling-Hammond, 2000; Parliament of Victoria, 2005; Watson, 2005; Weasmer & Woods, 2003; Zeichner, 2002). Therefore, the quality of initial teacher education and its practicum are paramount in enhancing or undermining student teacher motivation; and resultant student teacher engagement with, retention in and achievements from their professional preparation as teachers. So, how are student teacher motivations to teach affected by initial teacher education coursework and practicum experiences?

Table 3 outlines student teachers' perceptions of the degree to which their initial teacher education coursework and practicum experiences have affected changes in their motivations to teach. Their responses to open ended questions in MOT-S indicated the direction and the cause of these changes.

Table 3. Affect of initial teacher education coursework and practicum on student teachers' changing motivation

	Not at all		*Slightly*		*A little*		*Somewhat*		*A lot*			*Total*
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*Mean*	*No.*
My coursework has affected changes in motivation:												
	47	27.5	29	17.0	39	22.8	33	19.3	23	13.5	2.72	171
My practicum experiences have affected changes in motivation:												
	32	18.8	25	14.7	18	10.6	41	24.1	54	31.8	3.36	170
Mean Difference	0.64											
SD	1.40											
P < 0.0001												

According to these student teachers, initial teacher education coursework has a limited affect on their motivations to teach, particularly in comparison with the practicum. For example, almost one in three student teachers (31.8%) reported practicum as affecting their motivation "a lot" compared to slightly more than one in ten (13.5%) for the same level of affect attributed to coursework. More than half of this group of student teachers (55.9 %) reported practicum experience in elementary schools affecting their motivation to teach "somewhat" or "a lot", compared with almost a third (32.8%) reporting their coursework changing their motivation to the same degree. Further, more than a quarter of student teachers (27.5%) reported their coursework as not affecting their motivation "at all". Admittedly, these student teachers were only in the first semester of a four-year course and so perhaps over time the impact of coursework would be greater. Many initial teacher education courses, however, are one year postgraduate courses or shorter "fast track" courses (Darling-Hammond, 2000; Darling-Hammond & Youngs, 2002; Johnson & Birkeland, 2002; Laczko-Kerr & Berliner, 2002; Ramsay, 2000). Therefore, these findings identify a potential difficulty for short duration initial teacher education courses to have any impact on student teachers or to offset their prior socialisation into teaching from 12 years of being a school student (Hatton, 1998; Lortie, 1975). If initial teacher education coursework cannot change student teachers' entering motivations, particularly unrealistic ones, how can it enhance motivation or effect student teacher engagement with, and retention in, their courses? In addition, will it be able to change their beliefs about what constitutes quality teaching, or their professional practices? The variable quality of the supervising teachers' professional practices observed by student teachers during the practicum combined with the limited influence of initial teacher education

coursework makes highly problematic the likelihood of initial teacher education changing outdated or less effective practices in schools and so transforming education through the preparation of future teachers (i.e., student teachers).

Coursework Effects on Changing Motivation

Although limited in comparison to the practicum, student teachers reported, in response to open ended questions, that coursework enabled them to learn about themselves, gain knowledge of theory and achieve good marks (personal and professional development). They also reported enjoying their courses, were more aware of the need to change society (altruism) and had a better understanding of being a teacher (nature of teaching work). As a result they were more motivated, enthusiastic, confident, focussed, equipped and challenged. Almost a third (29.8%) commented that they would work harder in their coursework to achieve better outcomes. Two student teachers who reported increased motivation as a result of their initial teacher education coursework commented:

> University is good in that it gives [student] teachers the background [and] theory necessary to be effective teachers in the school system. My studies have been able to provide [and] will continue to provide the theoretical knowledge necessary as well as adding to the enthusiasm [and] motivation that I have in becoming a teacher. (ID 029, 22-25 year old male, coursework affected motivation “a little”)

> [I] found learning at uni[versity] very related to how [it] is in real life. Found my learnings insightful [and] helpful. (ID 214, 31-40 year old female, coursework affected motivation “a lot”)

Conversely, in response to an open ended question on why motivation had changed, more than a third of student teachers (39.4%) reported negative views of the courses they were undertaking, in particular, assignments, university workload, poor university administration, lack of support from university staff, difficulty with class timetables, receiving poor marks (personal and professional development), difficulties were reported as reducing their motivation, commitment to a teaching career (i.e., intentions to remain in their initial teacher education courses and pursue a teaching career) and achievement. The difficulties they experienced also resulted in a negative self-evaluation of their suitability to be teachers. One student teacher even reported concern over possible limitations to her employability with a teaching degree, commenting: “The course is very long and at the end doesn’t qualify you for anything but teaching” (ID 210, 18 year old female, coursework affected motivation “somewhat”). Other representative comments included:

> At times I feel judging by my hard work that doesn’t reflect the marks I get, that I am not smart enough [or] good enough to do the course. (ID 154, 19-21 year old female, coursework affected motivation “a lot”)

> The assignments and everything you have to do is too much. On occasions I wonder if some of the assignments will benefit me in the future. (ID 136, 18 year old female, coursework affected motivation "a little")
>
> The admin[istration] problems and conflicting perspectives of lecturers [i.e., professors] etc as well as the HUGE amount of work required [student teacher's emphasis] has made me sure that this is not something I truly want to do. (ID 193, 26-30 year old female, coursework affected motivation "somewhat")
>
> It is difficult balancing family [and] study. (ID 134, 31-40 year old female, coursework affected motivation "a lot")
>
> I need a bit more sleep and ability to earn some money. (ID 207, 31-40 year old female, coursework affected motivation "a lot")

Practicum Effects on Changing Motivation

Contrary to university-based coursework experiences, the practicum was reported as a positive experience by almost all student teachers. Two thirds (67.3%) reported being more motivated, committed and enthusiastic as a result of the hands-on and successful experience of working in real classrooms with real teachers and real students. Practicum showed what the job of being a teacher was really like and confirmed their initial choice of teaching as a career. As individuals commented, "Loved it - can't wait until I have my own class" (ID 157), and "Teaching became my life. I love it" (ID 188). The reasons cited were often multi-dimensional and again reflected experiences complementary with their initial motivations to teach such as working with children, including positive responses from school students and the affect of their teaching on school students. Other reasons included matching the job of teaching with their self-assessed capabilities (self-evaluation); the value of teaching to others (altruism); gaining practical ideas for teaching (personal and professional development); real experiences of being a teacher (nature of teaching work) including the social nature of working with colleagues; and, good and bad experiences with practicum supervisors (influence of others). As a representative sample of student teachers commented:

> I want to do it more than ever. I enjoyed helping the kids [and] seeing smiles on their faces. (ID 164, 19-21 year-old male, practicum affected motivation "somewhat")
>
> I feel more sure [and] confident in my suitability to the profession. (ID 158, 18 year-old female, practicum affected motivation "somewhat")
>
> … being able to see the differences you can make increased my motivation [and] commitment and I can't wait to teach. (ID 156, 18 year-old female, practicum affected motivation "a lot")
>
> [Practicum] has made me more motivated and committed to continuing to do my best, improve [and] do well so that I can become a [sic] excellent teacher

> which [sic] students will enjoy learning from. (ID 187, 19-21 year-old female, practicum affected motivation "somewhat")
>
> Yes! MY teacher [student teacher's emphasis] was not a very positive role model and I know that I don't want to end up like her!!!! Her lessons consisted of stencil individual work and were not stimulating. I am more commited [sic] because I don't want to be that way. (ID 096, female, age unknown, practicum affected motivation "somewhat")

Six student teachers commented on the negative impact of the practicum on their motivations to teach. These students didn't like school politics or the reality of being a teacher (nature of teaching work), had poor relationships with their practicum supervisors (influence of others) or experienced conflict between coursework and practicum work. As two of these student teachers explained:

> I did not get on well with my prac[ticum] teacher, though this will change in future prac[ticum]s. (ID 082, 18 year-old female, practicum affected motivation "slightly")
>
> [There was a problem with] overload of workload assignments, not much time-clashing with professional experience. (ID 176, 22-25 year old female, practicum affected motivation "a lot")

In summary, motivation to teach is affected by initial teacher education and its practicum. Both coursework and practicum positively and negatively (though practicum to a lesser extent) impact student teacher motivation, commitment to continuing with initial teacher education and a teaching career, and achievement. These findings are discussed in the next section.

DISCUSSION

This study of the motivations to teach of student teachers beginning a four-year elementary initial teacher education course demonstrates that people are attracted to teaching not because of status and money (neither of which are high for Australian teachers anyway) nor because courses are easy to enter or teaching is an easy profession. These student teachers who aspire to be elementary teachers possess other, multi-dimensional motivations to teach. Supporting adult learning theory, they are more likely, but not solely, motivated by internally-referenced (intrinsic) motivations. They are also extrinsically motivated, making considered judgements about their future work, working conditions and their personal lives. Thus extrinsic motivations may be important supplementary reasons for choosing to teach. In other words, while these reasons are not the main motivators, they are likely to further enhance motivation if the main motivators (i.e., intrinsic motivations) are met.

In addition, student teachers retain most of these motivations over the first semester of their initial teacher education course although there is significant decline in two of the top three motivators (working with children and intellectual stimulation) as well as working conditions. The motivations working with children,

intellectual stimulation and working conditions may be particularly vulnerable to the experiences of the first practicum as student teachers have their first experience of working with and trying to teach real children in real classes. They also experience the reality of teachers work. These experiences are likely to have been for some positive while for others problematic.

Effect of Initial Teacher Education on Student Teacher Motivation

Initial teacher education coursework and practicum affect motivation to teach to varying degrees, with practicum having the greater and more positive effect according to these student teachers. Different motivations to teach changed to various degrees as student teachers "tested out" their initial (entry) motivations in the university and their practicum classrooms and schools. As a result, the experience of working with real children was more or less rewarding than expected, the nature of teaching work and working conditions more or less desirable, an appraisal of one's suitability as a potential teacher (self-evaluation) found one more or less suitable, and there was more or less opportunity to demonstrate authority and leadership. The experience of helping others (altruism) and the personal and professional development achieved by student teachers also increased or decreased their motivation to teach.

When the reality experienced at the university or during the practicum (i.e., initial teacher education) represented a match between motivation, or "motivational expectations", and the reality of working with children, the nature of teaching work, working conditions, personal and professional development and life fit etc., initial teacher education was favourably received by student teachers. The outcomes of this "match" for student teachers were personal benefits (such as enjoyment, enthusiasm, satisfaction and confidence); continuing or improved motivation to teach and commitment to initial teacher education and a teaching career; and, enhanced academic achievement (including increased knowledge and understanding of theory, teachers and teaching). Student teachers also had a better understanding of themselves, felt better equipped for teaching, and had their initial career choices confirmed. When coursework and practicum experiences conflicted with personal motivations, it was then observed that motivation, commitment and achievement declined. For example, positive self-evaluation might be in contrast with poor achievement in the form of poor marks, balancing study with family or personal life (life-fit) might be difficult, initial perceptions of the nature of teaching work might not match the reality experienced during the practicum, or problems may have resulted from poor relationships with practicum supervisors (influence of others). A similar decline in motivation occurred when problems were experienced with the course itself (e.g., workload, assignments, administration, timetables and staff support), or there was conflict between coursework and practicum demands.

Therefore, it seems that student teachers start with motivational expectations of what teaching involves and why they want to be a teacher (i.e., initial motivation to teach). The reality of teaching and being a teacher as experienced through initial teacher education (both its coursework and its practicum) enables these motivations to

be played out in real life. As such, the practicum and initial teacher education coursework act as a filter for student teachers' initial motivations to teach. Initial teacher education coursework and practicum experiences support or counter their initial motivations to teach (or motivational expectations). Both intrinsic and extrinsic motivations act as motivators or de-motivators. As a result student teachers reassess their initial motivations and whether or not these motivations are sufficient to counter-balance the reality being experienced at university and in schools (centres). The outcome of this process then may be a continuation of current levels of motivation and commitment to teaching; enhanced or reduced motivation, commitment and achievement; personal benefits such as enjoyment, satisfaction and confidence; and confirmed or changed career choice. What then are the implications of these results for initial teacher education, its university classroom (i.e., coursework), and its practicum? Also, what are the implications for classroom practice? Some implications and recommendations are outlined in the next section.

RECOMMENDATIONS FOR INITIAL TEACHER EDUCATION AND ITS PRACTICUM

The present study has added to what we know about motivation to teach. Further, understanding student teacher initial and changing motivations to teach, and the positive and negative effects of initial teacher education coursework and practicum on student teacher motivation have the potential to improve the quality of initial teacher education. It is acknowledged that the generalisability of results from the present study may be limited by the relative small sample size, the single Australian university and elementary teacher education context, and the predominance of female participants (though the latter is common for elementary teachers). Therefore, the implications for attracting individuals into initial teacher education courses (recruitment), and enhancing the quality of those courses so that student teachers may engage more deeply with (concentrate), achieve and remain in their courses (recruitment) are drawn from the results of this study, supported by other research literature. A number of recommendations are now made for student teacher recruitment, the practicum and initial teacher education coursework. Each is discussed in turn.

Recruitment

In a post-modern world where there are increasing employment choices for individuals and negative working conditions for teachers (e.g., less job security; low pay and prestige; subordinate status; limited career opportunities; and, increased hours of work, work complexity and intensity, and accountability for student success or failure) it can be difficult to attract individuals to initial teacher education courses (Aronsson, Gustafsson & Dallner, 2002; Johnson & Birkeland, 2002; Johnson & Landman, 2000; Kittel & Leynen, 2003; Malloy & Wohlstetter, 2003;

OECD, 2005; Ramsay, 2000; Roulston, 2004). As Johnson and Birkeland (2002) asserted:

> Today, prospective teachers have access to occupations offering high pay and status, comfortable, well-equipped work settings, continuous training, and opportunities for rapid career advancement. Thus, there is no guarantee that they will choose teaching over other options. Nor do they necessarily expect to teach for the long term; serial careers are the norm and short-term employment is common. (pp. 6–7)

The present study has shown, though, that individuals (student teachers) who are attracted to teaching and initial teacher education have exercised choice based predominantly on intrinsic motivations such as their capabilities, likes and dislikes. In other words, motivation to teach represents an interface between their future students, the intellectual nature of teaching, and self as a potential teacher. Therefore, if teacher education providers wish to attract people to initial teacher courses, it is recommended that they appeal to intrinsic motivations such as a desire to work with children, to be intellectually stimulated in that work and to be a great teacher.

In addition, initial motivation to teach is multi-dimensional. In other words, student teachers are attracted to the teaching profession and intend to remain in the profession by more than a single motivation. While primarily intrinsically motivated, extrinsic motivations do play a part in attracting individuals to teaching (especially the nature of teaching work, working conditions and life-fit) so extrinsic motivations should not be ignored in any recruitment strategies employed. Teacher education providers should, therefore, market these courses to appeal to the range of factors that attract individuals to teaching as a profession (both their intrinsic and extrinsic "motivations to teach") and so maximise the attractiveness of those courses.

Finally, assessment measures of initial motivations to teach may help attract and retain suitably motivated student teachers. These are student teachers who will be strongly committed to teaching rather than entering teaching by default, be better able to sustain their motivation and commitment throughout the rigors of university study and the practicum (i.e., initial teacher education), and be capable of meeting the increasing demands being made on teachers in today's more complex society.

A Well Designed, Quality Practicum

The positive impact of, and student teacher support for, the practicum as demonstrated in the study presented in this chapter reinforces once again the importance of practicum in initial teacher education. Student teacher comments of some negative impact of the practicum, however, suggests that practicum by itself is not sufficient for the professional preparation of teachers, Therefore, a quality practicum is needed, not instead of but integral with, university-based coursework. Drawing upon the results of the present study and the literature, a well designed quality practicum is one that is integrated, developmental, and a collaborative enterprise undertaken by university-based and school (or centre)-based educators. For

enhanced student teacher professional preparation to occur there must be the integration of research and scholarship-derived knowledge (theory) and reflective, experientially-derived knowledge (practice), and of the university-based (coursework) and school/centre-based (practicum) components of initial teacher education. In learning to be a teacher, one form of knowledge cannot be privileged over another but rather student teachers integrate their theoretical and pedagogical content knowledge with reflective, practical experiences (Commonwealth of Australia, 2007) through continual inquiry and the testing of research, theory, and practice rather than just being exposed to the practices and ways of thinking of a limited number of experienced teachers.

Practicum experiences also need to be carefully designed, developmental and individualised for student teachers (Commonwealth of Australia, 2007) commensurate with their growing knowledge, competence and confidence (Gaffey, 1994). This integrative, developmental approach enables the generation of metaphors and generalisable approaches to teaching and learning rather that incident-specific recipes.

As a collaborative enterprise or partnership, practicum is jointly designed, implemented and evaluated by university-based teacher educators and school or centre-based educators. In this way, there is a shared ownership of and responsibility for initial teacher education, more clearly defined roles for all participants, professional discourse in schools and centres around being a teacher and a support network amongst practicum supervisors. Collaboration can also result in the development of a closer and more professional working relationship between the university and the schools (centres) with the creation of mutually shared goals, joint dialogue, improved perceptions by the partners of each other, increased teacher knowledge of the initial teacher education course, a shared frame of reference by practicum supervisors and university advisors for assessing student teachers, and greater alignment between what is taught at the university and what is considered by schools and centres as important for student teacher professional preparation. It may also allow student teachers to feel that they belong in both schools/centres and the university.

Important in this collaboration is the direct and ongoing involvement of university faculty in the practicum in order to offset student teacher expressed concerns as to the lack of support they reported being provided by university staff. In addition, university faculty (advisors) have an important role to play in the professional development of both student teachers and supervising teachers, working with them as mentors and consultants (Eyers, 2005 cited in Commonwealth of Australia, 2007; Ramsay, 2000; Sinclair-Gaffey & Dobbins, 1996). University advisors are an integral part of the practicum, not merely school visitors or outsiders whose sole responsibility is liaison or assessment. They should work in collaboration with practicum supervisors to develop ongoing supervisor commitment and involvement in the practicum, promote a positive image of both school (centre) and university-based initial teacher education, guide the professional learning of student teachers, minimise misunderstandings and problems, develop open and ongoing communication, improve the supervision student teachers experience during the

practicum, and increase the influence of coursework in student teacher professional preparation (something shown as limited in the present study). In addition, significant rather than superficial contact between university advisors and student teachers facilitates the development of in-depth, mentoring relationships with student teachers. Such contact enables advisors to understand the real concerns of student teachers, promotes student teacher learning; helps student teachers integrate their theoretical and experientially-derived knowledge, improves student teacher reflectivity, and encourages student teachers to challenge what they see, hear and experience. Advisors also push student teacher thinking beyond immediate teaching concerns and fulfilling practicum requirements to a deeper level involving consideration of broader teaching and societal issues, and the ethical and moral dilemmas embedded in teaching (Sinclair-Gaffey & Dobbins, 1996).

Relevant, Engaging, Substantial Initial Teacher Education Coursework

The limited impact of university coursework on student teacher motivation and commitment to teaching (especially in comparison with the practicum), as well as a dissatisfaction with coursework as expressed by these student teachers, show how important it is to design and implement a substantial (rather than short-term) initial teacher education program that is relevant to being a teacher, recognises that student teachers are adult learners, engages student teachers in their learning, and enhances student teacher motivation, commitment and professional preparation as future teachers. Student teachers, like qualified teachers, are people as well as professionals. As Hargreaves (1993) commented:

> ... teachers don't just have jobs. They have professional and personal lives as well. Although it seems trite to say this, many failed efforts in in-service training, teacher development and educational change more widely are precisely attributable to this neglect of the teacher as person - to abstracting the teacher's skills from the teacher's self, the technical aspects of the teacher's work from the commitments embedded in the teacher's life. Understanding the teacher means understanding the person the teacher is. (p. viii)

The same can be said of the student teachers in the present study. Student teachers were critical of the overall workload of their courses; the relevance, timing (especially during practicum) and overload of assignments to be completed; the lack of staff support; poor university administration; difficulties with class timetables; achieving poor marks (a situation exacerbated when universities apply the normal curve to student teacher marks); and balancing the demands of study with their families or personal lives. Therefore, it is important to design initial teacher education for real, adult student teachers. Adults, including student teachers, want to be successful learners, want to feel a sense of choice in their learning, want to learn something they value (in this case relevant to becoming a teacher), and want to experience learning as pleasurable (Knowles *et al*., 1998). In addition, as adults, student teachers want to be active in their learning (not passive), a consistent linking of theory and practice; a logical progression in their learning (i.e., developmental);

flexible learning pathways; timely, constructive and detailed feedback on assignments; convenient access to learning times, locations and resources; and easily accessible and responsive support and administrative services (Vescio, 2005). Many teacher education programs, however, consist of a "jigsaw" of disparate, unrelated, unconnected, forgotten content, subjects and experiences. As a result, not only is student teacher motivation, professional learning and retention diminished but there can be duplication and overload of assignments, many due at similar times. Add practicum to this mix and student teachers not only have coursework assignments to complete, but classrooms to observe; lessons to prepare, teach and evaluate; and action research projects and the like to be completed during the practicum at the same time as coursework assignments. Therefore, workload and assignment requirements need to be reasonable, realistic and appropriate for post-modern student teachers juggling work, family and university responsibilities. Flexible approaches to course delivery, including online learning and negotiated assessment types and dates need also to be considered. Finally, university administration of student enrolments, progress and class timetables need to support student teachers during their courses. University academic and administration staff, as well as school or centre-based staff, need to communicate and work together in the design, implementation and evaluation of initial teacher education courses. In this way, it may be possible to create a "tapestry" (rather than a "jigsaw") where all aspects of learning to teach (and be a teacher) are interwoven so as to enhance student teacher professional learning and metamorphosis into quality beginning teachers (Sinclair, 2007).

Classroom Practice

While this study focused on student teachers and their university and practicum classrooms, there are also implications for the classroom practice of qualified teachers. Firstly, it could be argued that teachers who are intrinsically motivated to be teachers prefer and are more likely to utilise intrinsic motivation to motivate and engage their students in learning. Reeve, Bolt and Cai (1999), for example, demonstrated that teachers' and student teachers' motivating styles (i.e., an extrinsic "controlling" versus an intrinsic "autonomy supportive" style) affected the teaching practices they exhibited. Rather than rely on extrinsic incentives and consequences to control student behaviour, "autonomy supportive" teachers taught and motivated students by identifying and supporting students' interest in and valuing of education. These teachers listened to students, allowed time for independent work, asked questions about what students wanted to do (i.e., sought student initiative), and supported students' intrinsic motivations and internalisation.

The study has also demonstrated that those aspiring to be elementary teachers were most commonly motivated by working with children, intellectual stimulation and self-evaluation of their own capabilities as future teachers. The study showed that student teacher motivation to teach was enhanced when these motivations were "matched" by coursework and practicum experience. For example, student teachers motivated by working with children keenly and enthusiastically engaged with the

children in their practicum classes, and so demonstrated the enthusiasm, passion and commitment evident in quality teachers (Zammit *et al*., 2007).

In addition, student teachers motivated to teach because of existing self-assessed capabilities (i.e., self-evaluation) are likely to exhibit strong teacher efficacy (something found in the present study but not the focus of this chapter). Such teachers exhibited confidence in their ability to perform actions that lead to effective student learning. Self-efficacy research has found that it is not how capable teachers are, but how capable they believe themselves to be that makes competent and effective teachers (e.g., Poulou, 2007; Raudenbush, Bhumirat & Kamali, 1992; Soodak & Podell, 1997). Therefore, it could be argued that individuals drawn to teaching because of a self-evaluation of existing capability have stronger teacher efficacy and so may be more likely to be effective teachers.

Finally, it is possible that individuals drawn to teaching because of the intellectual stimulation it provides are likely to promote intellectual quality in their teaching practice and in the tasks they design for their students. Curricula with high intellectual quality, such as higher-order thinking, deep knowledge, deep understanding, substantive conversation, metalanguage and knowledge as problematic (see Education Queensland, 2002 for details), has been shown to improve student outcomes and engagement (e.g., Fair Go Team, 2006; Newmann, Bryk & Nagaoka, 2001; Queensland School Reform Longitudinal Study, QSRLS, 2001). At present, however, there is little research evidence specifically linking motivation to teach, teaching quality and student outcomes. This is an area worthy of future study.

CONCLUSION

It has been a privilege through the present study to gain some understanding of what attracts those aspiring to be elementary teachers to their initial teacher education courses and the teaching profession, how their motivations can change even within a relatively short time frame, and how initial teacher education and its practicum can impact on their motivation, commitment (i.e., retention intentions), and achievement. At times initial teacher education seems to be "done to" student teachers without much consideration of their motivations and experiences at university, in practicum schools and in life in general. Initial and changing personal motivations, and initial teacher education coursework and practicum experiences have the potential to attract individuals to initial teacher education courses, encourage them to persist and engage deeply with their those courses, allow them to be successful in terms of their achievements in the courses and allow them to complete their courses and pursue teaching careers. On the other hand, personal motivations and initial teacher education can also deter individuals from pursuing a career in teaching. It is, therefore, of the utmost importance to ensure that initial teacher education classrooms, whether at university or in practicum schools and centres, are of the highest quality. It is hoped that readers will take up this challenge.

ACKNOWLEDGEMENT

I would like to thank Dr Martin Dowson for his contribution to the confirmatory factor analyses presented in this chapter.

NOTES

1. 177 student teachers reported on their fathers' occupations and 178 student teachers reported on their mothers' occupation.
2. *Career Change* is possibly less noted as a motivator by these student teachers as they were enrolled in four-year initial teacher education courses. It is more likely that "career changers" holding initial university degrees would enrol in one or two-year postgraduate initial teacher education courses.
3. "Gaffey" and "Sinclair-Gaffey" refer to an earlier married name for "Sinclair"

REFERENCES

Allard, A., Bransgrove, E., Cooper, M., Duncan, J., & MacMillan, M. (1995). 'Teaching is still a good job for a woman': The influence of gender on career and life choices. *South Pacific Journal of Teacher Education, 23*(2), 185–194.

Aronsson, G., Gustafsson, K., & Dallner, M. (2002). Work environment and health in different types of temporary jobs. *European Journal of Work and Organizational Psychology, 11*(2) 151–175.

Australian Council of Deans of Education (ACDE). (2004). *New teaching, new learning. A vision for Australian education*. Canberra: Author.

Committee for the Review of Teaching and Teacher Education. (2003). *Australia's teachers: Australia's future: Advancing innovation, science, technology and mathematics*. Canberra: Department of Education, Science and Training.

Commonwealth of Australia. (2007). *Top of the class. Report of the inquiry into teacher education. House of Representatives Standing Committee on Education and Vocational Training*. Canberra: Author.

Crow, G. M., Levine, L., & Nager, N. (1990, May). No more business as usual: Career changers who become teachers. *American Journal of Education*, 197–223.

Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Educational Policy Analysis Archives, 8*(1), 1–46.

Darling-Hammond, L., & Youngs P. (2002). Defining "highly qualified teachers": What does "scientifically-based research" actually tell us? *Educational Researcher, 31*(9), 13–26.

Dilworth, M. E. (1991). *Motivation, rewards, and incentives. Trends and issues Paper No. 3*. Washington, DC: ERIC Clearinghouse on Teacher Education. (ERIC Document Reproduction Service No. ED330692)

Dinham, S., & Scott, C. (2000). Moving into the third, outer domain of teacher satisfaction. *Journal of Educational Administration, 38*(4), 379–396.

Dowson, M., & McInerney, D. M. (2003). What do students say about their motivational goals? Towards a more complex and dynamic perspective on student motivation. *Contemporary Educational Psychology, 28*, 91–113.

Education Queensland. (2002). *A guide to productive pedagogies. Classroom reflection manual*. Retrieved September 14, 2006, http://education.qld.gov.au/public_media/reports/curriculum-framework/productive pedagogies/ pdfs/proped.pdf

Eyers, V. (2005). *Guidelines for quality in practicum*. Canberra: National Institute for Quality Teaching and School Leadership.

Fair Go Team. (2006). School is for me: Pathways to student engagement. Sydney: NSW Department of Education and Training.

Ferrell, C. M., & Daniel, L. G. (1993, November). *Construct validation of an instrument measuring teacher career motivations*. Paper presented at the annual meeting of the Mid-South Educational Research Association, New Orleans, MS. East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED 365 719)

Gaffey[3], C. (1994). *An Evaluation of the effects of a training program on the knowledge and performance of primary school teachers involved in the supervision of the practicum*. Unpublished doctoral dissertation, Macquarie University, New South Wales.

Goe, L. (2002). Legislating equity: The distribution of emergency permit teachers in California. *Educational Policy Analysis Archives*, *10*(42). Retrieved November 23, 2005, http://epaa.asu.edu/epaa/v10n42/

Gordon, J. A. (1993). *Why did you select teaching as a career? Teachers of color [sic] tell their stories.* East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED383653)

Hargreaves, A. (1993). Series editor's forward. In A. M. Huberman (Ed.), *The lives of teachers*. London: Cassell.

Hart, A. W., & Murphy, M. J. (1990, May). New teachers react to redesigned teacher work. *American Journal of Education*, 224–250.

Hatton, E. J. (1998). Social and cultural influences on teaching. In E. Hatton (Ed.), *Understanding teaching. Curriculum and the social context of schooling* (pp. 3–25). Sydney: Harcourt Brace.

Hatton, E. (Ed.). (1998). *Understanding teaching. Curriculum and the social context of schooling*. Sydney: Harcourt Brace.

Huberman, A. M. *The lives of teachers*. London: Cassell.

Johnson, S. M., & Birkeland, S. E. (2002). Pursuing a 'sense of success': New teachers explain their career decisions. Project on the next generation of teachers. *American Educational Research Journal*, *40*(3), 581–617.

Johnson, S., & Landman, J. (2000). "Sometimes bureaucracy has its charms": The working conditions of teachers in deregulated schools. *The Teachers College Record*, *102*(1), 85–124.

Kittel, F., & Leynen, F. (2003). A study of work stressors and wellness/health outcomes among Belgian school teachers. *Psychology and Health*, *18*(4), 501–510.

Knowles, M. S., Holton III, E. F., & Swanson, R. A. (1998). *The adult learner. The definitive classic in adult education and human resource development*. Houstan, TX: Gulf Publishing Co.

Laczko-Kerr, I., & Berliner, D. (2002). The effectiveness of "Teach for America" and other under-certified teachers on student academic achievement: A case of harmful public policy. *Educational Policy Analysis Archives*, *10*(37). Retrieved October 11, from http://epaa.asu.edu/epaa/v10n37

Lortie, D. C. (1975). *School-teacher. A sociological study*. Chicago: The University of Chicago Press.

Lovat, T. (2003). The role of the 'teacher': Coming of age? Building teacher quality. What does the research tell us? *Proceeding of the ACER Research Conference*, 35–37.

Malloy, C., & Wohlstetter, P. (2003). Working conditions in charter schools: What's the appeal for teachers? *Education and Urban Society*, *35*(2), 219–241.

Marsh, H. W. (1986). Verbal and math self-concepts: An internal/external frame of reference model. *American Educational Research Journal*, *23*, 129–149.

Marsh, H. W. (1990). The influence of internal and external frames of reference on the formation of math and English self-concepts. *Journal of Educational Psychology*, *82*, 107–116.

Martin, A. J. (2003). The student motivation scale: Further testing of an instrument that measures school students' motivation. *Australian Journal of Teacher Education*, *47*(1), 88–106.

Martin, A. J., Marsh, H. W., & Debus, R. L. (2003). Self-handicapping and defensive pessimism: A model of self-protection from a longitudinal perspective. *Contemporary Educational Psychology*, *28*, 1–36.

McInerney, D. M., Maehr, M. L., & Dowson, M. (2004). Motivation and culture. In C. D Spielberger (Ed.), *Encyclopaedia of applied psychology* (Vol. 2, pp. 631–639). St Louis, MO: Elsevier.

Newmann, F., Bryk, A., & Nagaoka, J. (2001). *Authentic intellectual work and standardized tests: Conflict or coexistence*. Chicago: Consortium of Chicago School Research.

O'Brien, L., & Schillaci, M. (2002). Why do I want to teach anyway? Utilizing autobiography in teacher education. *Teaching Education, 13*(1), 25–40.

Organisation for Economic Cooperation and Development (OECD). (2005). *Teachers matter: Attracting, developing and retaining effective teachers*. Paris: Author.

Parliament of Victoria (Education and Training Committee). (2005). *Step up, step in, step out. Report of the inquiry into the suitability of pre-service teacher training in Victoria*. Melbourne, Victoria: Author.

Poulou, M. (2007). Personal teaching efficacy and its sources: Student teachers' perceptions. *Educational Psychology*, *27*(2), 191–218.

Preston, B. (2002, December). *Tracking trends in principal and teacher demand and supply*. Paper presented at the annual Australian Association for Research in Education Conference symposium: 'Are Australian schools running out of potential principals?', Brisbane, Qld.

Public Agenda Online. (2000). *A sense of calling: Who teaches and why*. Retrieved August 9, 2005, from http://www.public agenda.org/specials/teachers/teachers.htm

Queensland School Reform Longitudinal Study. (2001). *The Queensland school reform longitudinal study final report*. Brisbane: Education Queensland.

Ramsay, G. (2000). *Quality matters. Revitalising teaching: Critical times, critical choices. Report of the review of teacher education, New South Wales*. Sydney: NSW Department of Education and Training.

Raudenbush, S., Bhumirat, C., & Kamali, M. (1992). Predictors and consequences of primary teachers' sense of efficacy and students' perceptions of teaching quality in Thailand. *International Journal of Educational Research, 17*(2), 165–177.

Reeve, J., Bolt, E., & Cai, Y. (1999). Autonomy-supportive teachers: How they teach and motivate students. *Journal of Educational Psychology*, *91*(3), 537–548.

Richardson, P. W., & Watt, M. G. (2006). Who chooses teaching and why? Profiling characteristics and motivations across three Australian universities. *Asia-Pacific Journal of Teacher Education*, *34*(1), 27–56.

Rochester, S., Kilstoff, K., & Scott, G. (2005). Learning from success: Improving undergraduate education through understanding the capabilities of successful nurse graduates. *Nurse Education Today*, *25*, 181–188.

Roulston, K. (2004). An investigation of music teachers' work in changing times. *Journal of Educational Change*, *5*(1), 31–56.

Serow, R. C. (1993). Why teach?: Altruism and career choice among non traditional recruits to teaching. *Journal of Research and Development in Education*, *26*(4), 197–204.

Serow, R. C., Eaker, D. J., & Forrest, K. D. (1994). "I want to see some kind of growth out of them" What the service ethic means to teacher-education students. *American Educational Research Journal*, *31*(1), 27–48.

Sinclair, C. (2007). Professional preparation standards for the practicum. In D. M. McInerney, S. Van Etten, & M. Dowson (Eds.), *Research on sociocultural influences on motivation and learning. Vol. 7. Standards in education* (pp. 217–272). Charlotte, NC: Information Age Press.

Sinclair, C., Dowson, M., & McInerney, D. M. (2006). Motivations to teach: Psychometric and longitudinal perspectives. *Teachers College Record, 108*(6), 1132–1154.

Sinclair, C., Trimingham-Jack, C., & Pollnitz, L. (2006). Taken for granted: What does 'professional experience' mean? *International Journal of PEPE. Practical Experience in Professional Education Journal*, *9*(1), 1–13.

Sinclair-Gaffey, C., & Dobbins, R. (1996). Tertiary teacher educators: Do they make a difference in the Practicum? In A. Yarrow, J. Millwater, S. De Vries, & D. Creedy (Eds.), *Research monograph 1. Practical experiences in professional education* (pp. 105–122). Brisbane: Queensland University of Technology.

Soodak, L. C., & Podell, D. M. (1997). Efficacy and experience: Perceptions of efficacy among preservice and practicing teachers. *Journal of Research and Development in Education*, *30*(4), 214–221.

Stiegelbauer, S. (1992). *Why we want to be teachers: New teachers talk about their reasons for entering the profession*. East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED348867)

Vescio, J. (2005). *UTS successful graduates project: An investigation of successful graduates in the early stages of their career across a wide range of professions*. Sydney: University of Technology Sydney Planning and Quality Unit.

Watson, L. (2005). *Quality teaching and school leadership: A scan of research findings*. Acton, ACT: Teaching Australia.

Weasmer, J., & Woods, A. M. (2003). The role of the host teacher in the student teaching experience [Electronic Version]. *The Clearinghouse*, *76*(4), 174–180.

Weiner, L., Swearingen, J., Pagano, A., & Obi, R. (1993). *Choosing teaching as a career: Comparing motivations of Harvard and Urban college students*. East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED357013)

Whately, A. (1998). Gifted women and teaching: A compatible choice? *Roeper Review*, *21*(2), 117–125. Retrieved July 7, 2003, from http://proquest.umi.com/pqdweb

Yong, B. C. S. (1995). Teacher trainees' motives for entering into a teaching career in Brunei Darussalam. *Teaching and Teacher Education*, *11*(3), 275–280.

Yong, B. C. S. (1999). The career commitment of primary teachers in Brunei Darussalam: Perceptions of teaching as a career. *Research in Education*, *62*, 62–70.

Zammit, K., Sinclair, C., Cole, B., Singh, M., Costley, D., Brown a'Court, L., et al. (2007). *Teaching and leading for quality Australian schools: A review and synthesis of research-based knowledge*. Canberra, ACT: Teaching Australia.

Zeichner, K. (2002). Beyond traditional structures of student teaching. *Teacher Education Quarterly*, *29*(2), 59–65.

Catherine Sinclair
School of Education,
University of Western Sydney,
Australia