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MOTIVATIONAL GOALS, PERCEIVED ABILITY, AND THE  
PURPOSE OF SCHOOL: A STUDY OF FORM FIVE  
STUDENTS

A thesis presented in partial fulfillment of  
the requirements for the degree of  
Master of Arts in Psychology  
at Massey University

Susan R. Hunt

1989

For my parents,

Ron and Joy Hunt

### ABSTRACT

Students' motivational goals, perceived ability, and beliefs about the purpose of school were investigated by questionnaire. 450 Form Five students participated in the study. The extent to which students differentiate between motivational goals was examined. Predictions were made regarding the relationships between motivational goals and students' perceived ability and beliefs about the purpose of school.

It was found that students did not clearly distinguish between 'task', 'ego', and 'work avoidance' motivational goals. However, when these goals were considered separately they were found to be related to students' perceived ability and beliefs about the purpose of school. Predictions regarding subject - specificity of perceived ability were supported, but predictions of ethnic differences in perceived ability were not. There were slight gender differences in perceived ability and beliefs about the purpose of school.

The findings were discussed in terms of their relationship to other studies, and the implications for past and future methods of studying motivational goals.

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## TABLE OF CONTENTS

CHAPTER	PAGE
ONE	
INTRODUCTION.....	1
TWO	
REVIEW OF LITERATURE AND RESEARCH.....	6
THEORIES OF ACHIEVEMENT MOTIVATION .....	6
METHODOLOGICAL ISSUES .....	12
ACHIEVEMENT MOTIVATION AND BELIEFS ABOUT THE PURPOSE OF SCHOOL .....	23
ACHIEVEMENT MOTIVATION AND PERCEIVED ABILITY .....	27
GENDER AND ACHIEVEMENT MOTIVATION .....	31
ETHNICITY AND ACHIEVEMENT MOTIVATION.....	36
SUMMARY AND HYPOTHESES.....	42
THREE	
METHOD.....	47
SAMPLE SELECTION.....	47
INSTRUMENTS.....	50
PILOT STUDY .....	53
PROCEDURE.....	54
SUMMARY OF PROCEDURE .....	55
DESIGN .....	55
FOUR	
RESULTS .....	57
MOTIVATIONAL GOALS OF NEW ZEALAND FORM FIVE STUDENTS.....	57
SUBJECT - SPECIFICITY .....	62

PERCEIVED ABILITY AND BELIEFS ABOUT THE PURPOSE OF	
SCHOOL .....	63
GENDER DIFFERENCES .....	70
ETHNIC DIFFERENCES .....	74
FIVE	
DISCUSSION .....	75
MOTIVATIONAL GOALS OF NEW ZEALAND FORM FIVE	
STUDENTS.....	75
PERCEIVED ABILITY AND BELIEFS ABOUT THE PURPOSE OF	
SCHOOL .....	79
SUBJECT - SPECIFICITY .....	85
GENDER DIFFERENCES .....	86
ETHNIC DIFFERENCES .....	88
CONCLUSIONS .....	89
SUGGESTIONS FOR FUTURE RESEARCH .....	91
REFERENCES .....	93
Appendix 1.....	113
Appendix 2.....	114
Appendix 3.....	115
Appendix 4.....	118
Appendix 5.....	131



## LIST OF TABLES

TABLE	PAGE
1. Percentage of Final Sample as a Function of School.....	48
2. Comparison of Original Sample with Final Sample by Gender and Ethnicity.....	49
3. Classification of Students According to Motivational Goal - Using Standard Deviations.....	60
4. Means and Standard Deviations for Three Group Cluster Analysis.....	61
5. Multiple Regression Summary Data for Task Motivational Goal.....	66
6. Multiple Regression Summary Data for Ego Motivational Goal.....	68
7. Multiple Regression Summary Data for Work Avoidance Motivational Goal.....	69
8. Means and Standard Deviations for Discriminant Analysis.....	72

## CHAPTER ONE

### INTRODUCTION

The importance of motivation for achievement in school and in later life is widely acknowledged. Indeed, for society to progress, it is important that individuals be committed to increasing their understanding of their world. As Dewey argued, "The most important attitude that can be formed is that of the desire to go on learning" (1963, p. 48).

Initially, motivation was seen as a unitary construct and early theories dealt with a limited range of cognitions associated with motivation. The complexity of the achievement motivation construct has now been acknowledged. In particular, attribution theory has been responsible for major advances in our understanding of achievement-related behaviours. Attribution theory is based on the assumption that people search for understanding as to why events occur and that these views, or attributions, can in turn influence future behaviour. Heider (1958) is generally accepted as the first attribution theorist and has influenced subsequent work in the field. Weiner (e.g., 1972) has developed cognitive reformulations of attribution theory and has been largely responsible for the application of concepts of attribution theory to education.

More recently, some other researchers have moved beyond the phase of testing the hypotheses associated with Weiner's model, to a phase of theory revision and elaboration. Causal attributions appear to be at least partly an expression of the individual's world view, including their personal goals. Thus, educational programmes designed to enhance achievement motivation may be improved by attending to

students' personal and educational goals as well as more commonly addressed factors, such as attributions for success and failure (Nicholls, Patashnick & Nolen, 1985).

The work of Maehr and Nicholls in particular, has broadened current conceptions of achievement motivation. Maehr (1983) argued that achievement motivation should be seen as a function of the meaning of achievement for the individual and includes goals and values in addition to causal attributions. Accordingly, individual differences, for example gender and ethnic influences, are receiving considerable attention.

Nicholls has extended Weiner's attribution theory by drawing distinctions between different conceptions of ability and motivational goals. The theories and research findings of Nicholls and Maehr have drawn attention to the ways in which several of the variables they studied may be interrelated. Specifically, the present study focused on the relationships between students' motivational goals, beliefs about the purpose of school, and perceived ability.

Nicholls has distinguished between several distinct forms of motivation which are associated with different motivational goals. The present research investigated 'task', 'ego', and 'work avoidance' motivational goals. Different behaviours are said to be associated with these motivational goals. Positive achievement outcomes have been found to be related to 'task' motivational goals (e.g., Nicholls, 1979; Nicholls et al., 1985). However, in competitive societies the nature of the school environment (e.g., emphasis on norm-referenced examinations) is likely to lead to students adopting 'ego' motivational goals (Nicholls, 1976b). Nicholls (1983) noted that ego-involvement is likely to predominate over task-involvement when conditions, for example competition, induce self-focus or self-evaluation. Before

addressing problems in the school environment which are likely to lead to ego-involvement, it would be useful to determine whether New Zealand high school students distinguish between the motivational goals, and whether they typically have 'task', 'ego', or 'work avoidance' motivational goals. Therefore, the present study addressed the issue of whether New Zealand Form Five students can be clearly grouped according to their predominant motivational goal.

Also, the situation-specificity of motivational goals and perceived ability has not been fully explored in terms of consistency across subject areas. Several researchers (Stipek & Weisz, 1981; Brophy, 1983; Maehr, 1983; Gottfried, 1985; Harter, 1982) have indicated that there may be subject-specific differences, but those who have studied subject-specificity have not been equally specific in their definition of possible forms of motivation. Thus, the present research attended to this problem by studying specified motivational goals ('task', 'ego', and 'work avoidance' goals) and levels of perceived ability, using both 'general school' and subject-specific measures (English and Mathematics). The intent was to determine whether motivational goal and perceived ability vary between academic domains.

Another area of interest to the present study was the relationship of achievement values and achievement motivation. Stipek (1984) noted that little attention has been given to the effect of achievement values on achievement behaviour, and Maehr and Nicholls (1980) have stressed that achievement motivation research must take the function and meaning of behaviour into account. The present research investigated the meaning of school, that is, students' beliefs about the purpose of school. In particular, it was suggested that specified beliefs about the purpose of school may be associated with different motivational goals.

Self-concept of ability, or perceived ability, is seen as an important mediator of achievement behaviour (e.g., Nicholls, 1976a; Kukla, 1978). Despite the documented effects of perceived ability on achievement behaviour however, it is often studied in general terms and as an adjunct to other variables. In the present study perceived ability was examined in relation to motivational goals, in order to investigate relationships between perceived ability and the motivational goals held by students.

Additional variables of interest were gender and ethnic differences in motivational goals, beliefs about the purpose of school, and perceived ability. Research has indicated gender differences in achievement related behaviours and recent conceptions of achievement motivation have pointed to gender differences in the meaning of achievement. Maehr and Nicholls (1980) noted that it is important that researchers take account of the possibility that in many achievement situations, males and females have different goals, and that we must first define these goals before we can adequately explain the behaviours associated with them. Thus, one purpose of this study was to identify the motivational goals typical of males and females. Other studies have indicated that females often see themselves as having low ability (e.g., Sherman, 1980; Nicholls, 1980; Kukla, 1978). Such self-perceptions would have a negative effect on females' current and future levels of achievement. Given that females are often suggested to be more 'socially' oriented than males, predictions were also made regarding females' beliefs about the purpose of school.

With regard to ethnicity, an examination of the literature has indicated the need to take ethnic differences into account when studying achievement motivation. It has become apparent that there are cultural variations in how students value school and that not only

may students have different achievement goals, but they may pursue these goals in different ways (Maehr & Nicholls, 1980). While stereotypes regarding Maori/Pakeha differences abound in New Zealand, there is a lack of objective evidence, particularly with regard to ethnic differences in motivational goals. The present study examined ethnic differences in motivational goals and perceived ability.

In conclusion, the findings of achievement motivation research suggest that motivational goals are related to students' perceptions of ability and beliefs about the purpose of school. However, the relationships between these variables have not been fully investigated as yet; nor have subject-specificity or gender and ethnic differences been taken into account adequately. Thus, the purpose of the present research was to investigate relationships between motivational goals, beliefs about the purpose of school, and perceived ability. The need to determine the motivational goal groups of New Zealand high school students, and the possibility of subject-specificity of motivational goals and perceived ability was addressed. Predictions were also made concerning gender and ethnic differences.

## CHAPTER TWO

### REVIEW OF LITERATURE AND RESEARCH

The following literature review will outline historical conceptions of achievement motivation, followed by more recent theories of achievement motivation. Methodological issues will be discussed, with attention to the classification of students by motivational goal. Subject-specificity, contextual, measurement, and developmental issues and their relevance to the present study will also be considered here. Achievement motivation and its relation to students' beliefs about the purpose of school will then be examined, followed by a discussion of the relation between achievement motivation and perceived ability. Finally, studies which have examined gender and ethnic differences in achievement motivation, perceived ability and beliefs about the purpose of school will be considered.

### THEORIES OF ACHIEVEMENT MOTIVATION

In early conceptions of motivation, needs, or drives, were viewed as the source of actions, and the 'motive to achieve' was seen as a rather global construct. More comprehensive and cognitively based theories were formulated by McClelland and Atkinson. These are known as expectancy - value theories, and dealt with a limited range of cognitive constructs. Expectancy - value theories attempted to relate action to the perceived attractiveness or aversiveness of expected consequences. The actions of the individual were seen to be related to the expectations held by the individual, and the subjective value of the consequences of following the action. Expectancy - value approaches emphasised the

cognitive restructuring of reality and the purposive behaviour of the individual. Atkinson's theory is one of the most widely known theories of achievement motivation (Atkinson, 1957, 1964; Atkinson & Raynor, 1977). It held that achievement behaviour is the result of an emotional conflict between fear of failure and hope of success. Two more recent models (Eccles, 1983; Dweck & Elliott, 1983) have focused on the task value dimension, and have detailed relationships among students' goals, values, achievement behaviour, and social factors.

There are also other theoretical viewpoints from which to approach motivation and achievement-related behaviour. In recent years major advances in the understanding of achievement-related behaviours have resulted from the application of concepts derived from attribution theory. Attribution theory may be included in another class of cognitive theories which incorporate cognitive concepts and processes in addition to goal anticipations (Weiner, 1972). The guiding principle of attribution theory is that individuals search for understanding as to why an event has occurred (Heider, 1958; Kelley, 1967; Weiner, 1985). Attribution analyses of achievement motivation have viewed achievement-related behaviour as a function of perceived causes of success and failure experiences.

Heider (1958) is generally accepted as the founder of attribution theory. He postulated that action outcomes are the result of personal factors and environmental factors and stressed the consequences of different attributions (Weiner, 1972). Heider's work has been extended and refined by Jones and Davis (1965) and Kelley (1967) but much of the impetus for the development and application of attribution theory to education has been provided by Weiner. In cognitive reformulations of attribution theory (e.g., Weiner, 1972; Kukla, 1978; Covington, 1983, 1984; Nicholls, 1984) information, encoded and transformed into a



belief, is seen as the source of action. Cognitive mediators such as perceived ability and effort, perceptions of causality, and emotional states, are particularly important.

Weiner, Frieze, Kukla, Rest, and Rosenbaums' (1971) model proposed that affective and cognitive reactions to success or failure are a function of the causal attributions used to explain why the outcome occurred. Four causal factors have been commonly associated with the model: ability, effort, luck, and task difficulty. However, a wider range of causal factors have now been established, including mood, fatigue, personality, and physical appearance (Elig & Frieze, 1975). The causal factors were first classified along two dimensions: 'causality' and 'stability' (Weiner et al., 1971). Later, Weiner (1979) included a third dimension labelled 'controllability'. Several subordinate dimensions have also been investigated, including 'internality' and 'globality' (Weiner, 1979).

Maehr (1983) viewed achievement motivation as a direct function of the meaning of achievement for the individual. That is, the demonstration of achievement motivation depends on how the person constructs the achievement situation in terms of personal goals, beliefs, and available information. Maehr (1974) has argued against McClelland's approach, which saw motivation as a stable, trait-like motive to achieve. Instead, Maehr's approach explored a variety of cognitions associated with a general sense of "meaning", including beliefs about goals and values, as well as attributions and expectancies (Maehr, 1984).

Nicholls' approach represents another extension of Weiner's attribution theory. Nicholls proposed that the desire to demonstrate high ability and avoid demonstrating low ability can be an important motivator (Nicholls, 1984). Thus, achievement behaviour, as the term

has been used by Nicholls and will be used in the present study, is defined as behaviour which is engaged in for the purpose of developing or demonstrating competence, rather than incompetence (Maehr & Nicholls, 1980).

Nicholls distinguished between three important motivational forms: task-involvement, ego-involvement, and extrinsic involvement (Nicholls, 1979). Nicholls used the term 'involvement' when referring to situation-specific motivational states, and 'orientation' when referring to motivational traits. When assessing specific school subjects it would be most appropriate to focus on the 'involvement' dimension.

These motivational forms have been associated with different goals. In extrinsic involvement, learning is seen as merely a means to an end, (e.g., a child may learn solely to please the teacher) whereas in task- and ego- involvement, the individual aims to develop or demonstrate high, rather than low ability. Thus, task- and ego-involvement are more distinct forms of achievement motivation. However, they are different psychological states and are associated with different behaviours. Task-involved individuals aim to increase their understanding or skill. In ego-involvement, the aim is to establish the superiority of one's ability relative to that of others, that is, gaining understanding or skill is a means to an end in ego-involvement, whereas in task-involvement it is an end in itself.

Several studies have found evidence supporting the distinction between task- and ego- involvement (e.g., Jagacinski & Nicholls, 1984; Deiner & Srull, 1979; Nicholls et al., 1985; Nicholls, 1987; Butler, 1988). Task choice and performance were found to be different in task- and ego- involvement (Nicholls, 1984). Maladaptive task choices and performance impairment were not found in task-involved individuals.

Recently Nicholls has defined other motivational goals. 'Work avoidance' describes someone with a goal of 'doing as little as possible', and 'goofing off' represents the goal of 'having a good time'. However, 'work avoidance' and 'goofing off' were found to be closely associated, so there may be little to be gained from this distinction (Nicholls, 1987).

The importance of effort for achievement has been highlighted by attribution theorists. Specifically, a common educational objective has been to teach students to use an adaptive pattern of causal perception of success and failure. Students were taught to attribute success to internal causes and failure to a lack of effort because effort, being an unstable and controllable factor, can be changed (e.g., Bartal, 1982). Attribution retraining has been applied particularly in the field of learned helplessness (e.g., Mark, 1983). Nicholls' position, however, was that the emphasis should be on developing an environment which encourages task-involvement. In such an environment causal attributions would be much less relevant.

An important distinction between Nicholls' approach and other approaches to achievement motivation is that Nicholls' theory explicitly recognised that competence can be construed in different ways, hence his distinction between task- and ego- involvement. Most other theories of achievement motivation apply more directly to ego-involved states. For example Weiner's (1972) attribution theory distinguished between effort, difficulty, and ability; a distinction which can only be made in ego-involved states (Nicholls, 1983). Learned helplessness theory (Abramson, Seligman, & Teasdale, 1978, Dweck & Goetz, 1978) implicitly employed the conception of ability as capacity, and thus applies best to ego-involved states (Nicholls, 1983). The predictions of Kukla's theory apply to task-involvement in some

cases (1972) and to a state between task- and ego- involvement in others (1978) (Nicholls, 1983).

Hence, it can be seen that achievement motivation is not a unitary construct, but includes a variety of motivational states which differ among models of motivation. Despite differences among theories, the importance of motivation for achievement in school is widely accepted. Uguroglu and Walberg (1979) conducted a meta-analysis of studies that examined the effects of motivation on performance. They concluded that "... it appears that motivation is a necessary condition for learning, and that increasing other factors, such as the quality and amount of instruction will be relatively fruitless if motivation remains at low levels" (p. 133).

However, theorists differ in their views regarding the most important sets of variables determining motivation, and they often focus on achievement outcome, based on motivational level, rather than looking closely at the processes involved in achievement motivation, and at motivational goals (e.g., Murray & Mednick, 1975; Frieze, 1973; in Frieze, Fisher, Hanusa, McHugh, & Valee, 1978). Some researchers however, have addressed these issues. Maehr and Brophy emphasised the importance of belief systems and socialisation experiences of both teacher and student. Others, (e.g., Weiner, 1979; and Nicholls, 1979) focused on a more cognitive attributional model, and studied variables such as enduring motivational orientations which characterise the individual, and how these relate to achievement (Maehr, 1983). Harter has looked at motivational orientation in terms of intrinsic and extrinsic motivation and examined perceived competence and perceived control as critical correlates of motivational orientation. Thus Harter's research has addressed the issue of type, rather than

level of motivation, but there is a need to examine types of motivation in more detail.

Of the theories reviewed here, the approaches of Nicholls and Maehr have central importance to the present study. As conceptions of achievement motivation have become increasingly refined, it is clear that individuals may have different motivational goals. These may vary according to the achievement situation, and to individual factors such as personal beliefs and values. Thus, it is important that these factors be taken into account rather than merely studying 'levels' of motivation.

## METHODOLOGICAL ISSUES

The following discussion covers several aspects of achievement motivation research relevant to the present study. Many of the issues discussed need to be given further attention by achievement motivation researchers. In particular, studies often take account of some issues, while disregarding others. This may result in unnecessary limits being placed on the development of knowledge of achievement motivation.

An important issue of relevance to the present study concerns the distinctions between three of the motivational goals identified by Nicholls and used in this study. According to Nicholls (1987) task-involvement and ego-involvement can be seen as motivational 'states' (situation-specific) or 'orientations' (traits). 'Work avoidance' and 'goofing off' are two other forms of approach motivation identified by Nicholls. The case for distinguishing between 'task' and 'ego' motivational goals has been supported by a non-significant association between them for fifth graders ( $N=541$ ) and low associations for high

school students (Nicholls, in press, in Nicholls, 1987). Nicholls also found that 'task' orientation was negatively correlated with 'work avoidance' and 'goofing off'. However, 'ego' orientation was positively correlated with 'work avoidance'. The distinction between 'task' and 'ego' orientation was also supported by Butler's (1988) study of students' attributions for their effort on a divergent thinking test. Butler's results pointed to the importance of distinguishing between task-involved and ego-involved task engagement when conceptualising and predicting how interest and performance can be maintained or enhanced. The study indicated that promoting task-involvement will enhance the interest and performance of most students (Butler, 1988).

According to Nicholls (1987) the different motivational orientations involve different personal criteria of success, or different goals, which are meaningfully related to other variables such as beliefs about the causes of success. For example, Nicholls (in press, in Nicholls, 1987) found that students higher in 'task' orientation were also more likely to believe that success follows cooperative work, high effort, interest in work, and attempts to understand. Nicholls (1987) noted that "...students with different motivational orientations collect different data and analyze them in different ways that reflect their diverse purposes" (p. 6).

Nicholls (1987) has also extrapolated from the individual to the classroom situation in an attempt to determine whether the motivational orientations of classrooms are similar to the aggregated motivational orientation scores of the individuals in those classrooms. It was found that associations between the orientations were similar for class and individual analyses, that is, it was possible to distinguish classes according to their motivational orientation. In particular, 'task' and 'ego' orientation were not associated, and 'task', but not 'ego'

orientation was negatively associated with 'work avoidance' and 'goofing off'.

The above discussion indicates that, in the case of U.S. students at least, it is possible to distinguish between students on the basis of their predominant motivational goal. It seems that this holds most clearly for students with 'task' motivational goals. It is important to determine whether New Zealand high school students can be grouped according to 'task', 'ego', and 'work avoidance' motivational goals. There is little New Zealand research in this area as yet. Loveridge (1986) asked students ( $N=108$ ) to identify motivational goals by choosing which one of five motivational goals ('task', 'ego', 'social solidarity', 'work avoidance' or 'extrinsic reward') best described the goal they had in reading and in science. 73% of students indicated a 'task' motivational goal in science, and 62% did so in reading. In the present study, students were asked to respond to a range of statements designed to assess the extent to which they held 'task', 'ego', or 'work avoidance' motivational goals. Accordingly, it was hypothesised that New Zealand Form Five students in the present study will be characterised by three motivational goals; that is, 'task', 'ego', and 'work avoidance' motivational goals.

One of the purposes of the present study was to examine the subject-specificity of motivational goals and perceived ability. Research to date has, for the most part, failed to take account of possible variations in motivational goals and perceived ability across school subjects. Studies which have allowed for subject-specificity have not studied motivational goals and perceived ability simultaneously. It may be useful to determine the pervasiveness of these factors before reducing the scope of motivational studies by using only general measures of motivational orientations and perceived ability.

A review of the literature by Maehr and Nicholls (1980) has suggested that it is possible to categorise the various goals that students define as success. Nicholls et al. (1985) have developed motivational orientation scales. These were modified by Nicholls and Thorkildsen (in preparation, in Nicholls, 1987) to include measures of 'task orientation', 'ego orientation', 'work avoidance', and 'goofing off'. Maehr (1983) has used Nicholls' (1980) categories of 'task' and 'ego' goals and has labeled another two categories "somewhat arbitrarily" (p. 193) as 'social solidarity' and 'extrinsic rewards'.

Theorists such as Nicholls and Maehr, who have looked in detail at motivational goals, have been able to make quite specific predictions about the correlates of different forms of motivation. However, there is a need to be more specific still. Few studies to date have specified 'task-involvement', 'ego-involvement', and 'work avoidance' as motivational goals of interest.

Gottfried (1985) has noted that the role of specific subject domains and "the relation of academic intrinsic motivation to school achievement and school-related non-cognitive factors remains to be extensively investigated" (p. 631). It seems feasible that motivational goals may vary across school subjects according to factors such as perceived ability. Maehr (1983, p. 191) noted that "conceivably, the nature and number of goals could vary depending on the domain in question" and Nicholls (1987 p. 7) has stated that "it is likely that under some circumstances, views about the purpose of school influence motivational orientations, but under others a situationally induced motivational state could well make one rather than another purpose of school seem meaningful". Brophy (1983) proposed that student motivation to learn is both general and situation-specific. Stipek and



Weisz (1981) have suggested a need to examine consistency in childrens' attributions for success and failure across task situations.

Gottfried (1985) studied the relation between academic intrinsic motivation, school achievement and school-related non-cognitive factors (academic anxiety, perceptions of competence). She divided academic intrinsic motivation into school subject domains and a general motivational orientation. She also attempted to determine the generality of findings across varying populations by studying children of different grades, sexes, and races. Gottfried found that academic intrinsic motivation was significantly and positively correlated with children's school achievement and perceptions of academic competence and negatively correlated with academic anxiety. Evidence supported the view that academic intrinsic motivation is differentiated into school subject areas and also represents a general orientation toward school learning. In addition, relations between motivation, perception of competence and anxiety were differentiated by subject area, whereas achievement was more pervasively related to general motivation. Gottfried noted that her results "...revealed the importance of measuring academic intrinsic motivation separately in subject areas" (p. 637). While Gottfried's study looked at situation-specific motivation, she studied only academic intrinsic motivation. It seems reasonable to consider the possibility that, when studying the situation-specificity of motivation, one form of motivation (e.g., intrinsic motivation) will not necessarily adequately describe the characteristics of motivation across all situations.

Harter (1982) has hypothesised that children do not feel equally competent in every skill domain and has therefore distinguished between cognitive, social, and physical competence. An important aspect of her model is the assumption that the constructs of perceived

competence and perceived control are domain-specific. Hence it is possible that variations in perceived ability will also be found within the cognitive domain, that is, across school subjects. Gottfried (1985) noted that the curriculum is generally organised into subject areas and students may develop varying competencies and experience differential success across different subject areas. Maths and English are two subjects which require different cognitive skills, thus they should clearly reflect individual differences in perceived ability. Also, established research has indicated that gender differences in perceived ability are most evident when comparing mathematical versus verbal academic areas.

When investigating the relationship between motivational goals and the purpose of school, it is appropriate to look at the more global construct of motivational orientation, rather than subject-specific motivational goals.

In light of the evidence on subject-specificity discussed here (e.g., Gottfried, 1985; Harter, 1982) it is predicted that motivational goals and perceived ability may differ between school subjects. Specifically, students may have different motivational goals on measures of 'general school', 'English', and 'Maths' motivation. They may also have different levels of perceived ability on measures of 'general school', 'English', and 'Maths' ability.

Research into achievement motivation has often been conducted in laboratory settings (Stipek & Weisz, 1981; Blumenfeld, Pintrich, Meece, & Wessels, 1982) or using classroom questionnaires describing hypothetical tasks and outcomes (e.g., Covington & Omelich, 1985). Therefore, findings may not be directly applicable to the classroom. Investigating students' motivational goals and perceived ability in

actual school subjects should help to determine how these factors affect students in real achievement situations.

Instruments used to measure factors associated with achievement motivation can generally be classified into two types; structured and open-ended. Both structured and open-ended response formats are useful for particular types of research questions. Elig and Frieze (1979) examined both open-ended and structured measures and concluded that structured response measures have better inter-test validity and reliability. They also noted that most studies use structured ratings rather than open-ended data. Of the structured response measures studied, structured scales were noted to have moderately good inter-method correlations with percentage measures, and good face validity and ease of response. Elig and Frieze added that "overall, scale measures seem to be the method of choice" (p. 621). However, open-ended response formats are useful for research questions designed to explore beliefs. For example they can be used in open-ended pre-testing, and as a check on the validity of structured scales (Elig & Frieze, 1979). As the present study will investigate a set of pre-determined variables it would be more appropriate to use a structured response format. In addition, structured scales are seen as easy to respond to (Elig & Frieze, 1979) and this factor needs to be taken into account when studying adolescents.

Developmental issues are relevant to all approaches to achievement motivation, although this has not been widely recognised until relatively recently. Even now, theorists acknowledge the relevance of developmental factors to varying degrees. Many have focused on developmental change in achievement-related cognitions (particularly performance expectancies, self-perceptions of competence, and perceptions of the cause of achievement outcomes) and cognitive processes, such as information processing (Stipek, 1984).

Affect-related motivational constructs (e.g., value placed on achievement outcomes, attitudes towards school) have received less attention, and only a few studies (e.g., Nicholls et al., 1985; Gottfried, 1985) have combined the two. Nicholls et al. (1985) examined consistencies between students' views about the purpose of education, beliefs about the causes of academic success, and personal goals in the classroom; and Gottfried (1985) studied academic anxiety and perceptions of academic competence.

Perhaps because of the current interest in developmental changes in achievement behaviour, many researchers have studied young children. For example, perceptions of ability have recently been recognised as having a developmental aspect, and the developmental process of differentiation of ability, difficulty, and effort, has been taken into account (e.g., Blumenfeld et al., 1982). By adolescence, students are presumed to have attained adult conceptions of achievement behaviours. In contrast, researchers not directly studying developmental factors have often studied adults (typically undergraduate university students), in a laboratory setting (e.g., Covington & Omelich, 1985). Subsequently, high school students have not been the subject of much attention.

In addition, the academic environment of high school students, who are still in the compulsory academic system, is likely to be different from that of university and primary students. These differences may be manifest in areas such as beliefs about school, general affect regarding school, predominant motivational goals, and level of perceived ability.

Research on the developmental aspects of achievement motivation has frequently highlighted a general decline with age of 'positive' motivational factors, so that by 11-12 years of age children have low

perceptions of competence and expectations of success, negative affect towards school, and extrinsic motivational goals. Various explanations have been put forward to account for this trend. For example, Nicholls and Miller (1984) believed it to be a result of the differentiation of the concept of ability, and Stipek (1984) suggested the influence of different classroom environments. Typically, expectations for success and self-perceptions of competence decline with age, particularly upon entering junior high (e.g., Rosenberg, 1979; Ruble, Parsons and Ross, 1976; ). Attitudes towards school become more negative with age (e.g., Haladyna & Thomas, 1979), and children become increasingly concerned about achievement outcomes and less concerned about intrinsic satisfaction (e.g., Gottfried, 1981, in Stipek, 1984; Harter, 1981a). On average, most children value academic achievement more as they progress through school. However some students, particularly those who have experienced repeated failure or those who value peer approval and demonstration of physical prowess, are likely to devalue school (Stipek, 1984). Again, most of these studies looked at children up to junior high, or intermediate level. Therefore it would be a useful approach to study high school students, as their educational environment (e.g., formal classes, external examination) is likely to affect factors such as motivational goals, and perceived ability and purpose of school, in a manner different to that of primary school or university students. In addition, according to Nicholls (1984) by adolescence students have attained a fully differentiated conception of ability, and therefore can distinguish between different motivational goals.

A further factor may influence achievement motivation in New Zealand in particular. The New Zealand school system is unique in that students in Form 5 have an external examination at the end of the year

(School Certificate) which is of considerable significance to them, as it serves as a pre-requisite for more advanced education and for many positions of employment. The salience of the School Certificate examination may serve to highlight individual differences in motivational goals, perceived purpose of school, and perceived ability.

The measurement of perceived ability can be undertaken in various ways. Although several useful measures are described here it should be noted that when perceived ability has been included in studies of achievement motivation it is often as an adjunct to other variables of interest. As a result, measurement of perceived ability has often been restricted to a small number of questions which have not been subject to validation (e.g., Gottfried, 1985; Nicholls et al., 1985).

Other studies of self-concept of ability have used measures of resultant achievement motivation, test anxiety, and self-esteem, rather than measures designed specifically to measure self-concept of ability. Although it is generally considered (Kukla, 1972, 1978, Nicholls, 1984) that most such measures do measure perceived ability, or self-concept of ability, this is only in the differentiated sense. There are also several more direct measures of perceived ability.

A problem with many measures of self-concept of ability is that they view perceived ability as a unitary construct. Harter (1982) addressed this and other issues in the development of the Perceived Competence Scale for Children. She hypothesised that children do not feel equally competent in every skill domain, and therefore developed separate competence subscales, covering cognitive, social, and physical competence, and a general self-worth subscale. Factor analysis indicated that children do indeed make clear differentiations among these domains (Harter, 1982). However, the Perceived Competence Scale

has only been validated for use with third through ninth grades, not with 15-16 year old students.

Nicholls (1979) has developed a Self Perception of Attainment Scale, which consists of a schematic depiction of 28 faces representing the children in a class and ranked from poorest to best. Likert-type scales have also been used to determine perceived ability (e.g., Gottfried, 1985; Pintrich & Blumenfeld, 1985; Nicholls et al., 1985).

The Self-Concept of Ability Scale (SCAS) (Brookover, Thomas, & Patterson, 1964) is a reliable and well-established measure of academic self-concept. The SCAS has two scales, a SCA scale and a specific SCA scale, covering specific subjects. It has been noted (Paterson, 1967) that "although there is reason to believe that the specific subject scales are directly parallel to the SCA scale, it would be unwarranted to assume that the establishment of validity and reliability for the SCA scale will generalise to the specific subject scales" (p. 161). However, it has been found that the specific SCA scales are positively and significantly correlated with achievement in parallel subjects. This is taken as evidence that the specific SCA scales are related to achievement in a manner analogous to the relation of the SCA scale scores with GPA (grade point average) (Paterson, 1967).

Burke, Ellison, and Hunt (1985) compared the Self Perception of Attainment Scale with the well-established Self-Concept of Ability Scale (SCAS) to predict achievement in reading. They found that both scales were significant predictors of achievement in reading. (The SCAS and the Self Perception of Attainment Scale accounted for 18% and 13% of the variance, respectively). Also, a linear combination of the two scales accounted for more variance (21%) than either scale alone. However, the SCAS was not a significantly better predictor of achievement than the Self Perception of Attainment Scale (Burke et al., 1985).

Although the SCAS has a broad scope of measurement and appears to be multidimensional, individual items vary in their ability to predict GPA. Item 8 (what grades do you think you are capable of getting?) predicts achievement as well as the full SCA scale (Paterson, 1967). The Self Perception of Attainment Scale is a one-item measure of children's current self-perception of reading ability in comparison with classmates (Burke et al., 1985).

Thus, although the Self Perception of Attainment Scale is a newer measure, with less empirical support, it is equivalent to the SCAS in terms of the self-construct it is designed to measure, and has several other advantages. It is quick and easy to use, requires no reading skill to complete, and seems adaptable to different subject areas and age groups (Burke et al., 1985).

## **ACHIEVEMENT MOTIVATION AND BELIEFS ABOUT THE PURPOSE OF SCHOOL**

One function of cultures is the transmission of value systems. This process involves defining certain personal characteristics as desirable, as well as defining situations and behaviours necessary for developing these characteristics. Value systems and their resulting influence on the definition of the meaning of activities may play an important role in motivation and the way in which the meaning or purpose of school is defined. Activities which allow the person to behave in ways consistent with the characteristics they see as desirable should encourage intrinsic interest (Nicholls, 1979). When schooling is seen as a means to an end learning has little inherent value, and task-involvement is likely to be reduced. Other views such as altruistic views



of the purposes of education appear likely to facilitate task-involvement (Nicholls, 1983).

There is a lack of consensus among motivational theorists regarding concepts such as "importance", or "centrality". It seems reasonable to assume that students will work hardest at things which are most important to them. Also, Nicholls et al. (1985) have pointed out that if different students have different motivational goals, they might try to understand different aspects of life in classrooms. Some theorists have contended that minimising the importance of loss is one way to mitigate negative affect (Weiner & Brown, 1984). Thus, it is possible that failing students, or those with low perceived ability, will minimise the importance, or value, of school. However, Covington and Omelich (1984) suggested that task performance "contributes modestly to achievement affect".

The motivational perspective taken by Maehr (1983) viewed achievement as a direct function of the meaning of a particular situation for an individual. Thus, motivational goals are affected by situational, as well as individual factors. For example, conditions implying competition or intrinsic rewards will have differential effects on behaviour (Maehr, 1976, 1978). Therefore, it would be expected that competitive attitudes fostered in schools would draw students' attention to their ability as compared with others, and would result in ego-involvement. However, a New Zealand study by Loveridge (1986) found that students most frequently expressed task goals in both science and reading. Also, the belief that people go to school to be educated was predominant. Gottfried (1985) in her study of intrinsic motivation mentioned the importance of school-related non-cognitive factors, with regard to school achievement and perceptions of academic competence. It may be that students' beliefs about the purpose of school

represent an important 'school-related non-cognitive' factor influencing achievement motivation.

Hoyt and Hebel (1974) found that some adolescents do believe that learning has altruistic purposes, and Nicholls (1982b, in Nicholls, 1983) found that children believe that schooling is not only a means to gaining employment but is of value in its own right. Nicholls et al. (1985) found that the view that school should enable students to enhance their wealth and status was least likely to be associated with a commitment to learning for its own sake (task orientation) and most likely to be associated with academic alienation (work avoidance). 'Task' orientation was associated with beliefs that school should foster social responsibility, understanding of the world, and achievement motivation. Children with 'ego and social' orientation were likely to endorse all views about the purpose of school. Satisfaction with school learning was negative for 'avoidance of work', almost zero for 'ego and social' orientation, and positive for 'task' orientation. The same pattern of associations, although weaker, was found for perceived ability (Nicholls et al., 1985). Thorkildsen (1987, in Nicholls, 1987) also found that motivational orientation is related to student's views about the purpose of school. For example, 'task' orientation was moderately associated with the view that school should prepare one to work hard and creatively in spite of obstacles. 'Work avoidance' was positively associated with the view that school should help one gain wealth and social status.

As the above studies indicate, most of the research on students' beliefs about the purpose of school and its relation to achievement motivation is quite recent. In addition, the relationship between specific motivational goals (i.e., 'task', 'ego', and 'work avoidance' goals) and different perceived purposes of school has not been widely studied

as yet. It is likely that a better knowledge of the reasons why students believe they go to school will help us to more fully understand variations in achievement motivation. As Maehr and Nicholls (1980) noted, an acceptable definition of achievement motivation must take the function and meaning of behaviour into account. To fail to do this means that researchers "run the risk of comparing behavioural patterns which on the surface seem quite similar but which in fact hold quite different meanings because of the varying purposes they serve" (p. 227).

Thus, although further studies of the relationships between motivational goals and beliefs about the purpose of school are needed, studies have indicated that 'task' motivational goals are associated with a commitment to learning for its own sake (Nicholls et al., 1985) and 'work avoidance' motivational goals are associated with a lack of commitment to learning and with a belief that schools should help students to gain wealth and status (Thorkildsen, 1987, in Nicholls, 1987). Clear associations between 'ego' motivational goals and beliefs about the purpose of school have not yet emerged. Therefore, it was predicted that students' 'general school' motivational goals will be associated with their beliefs about the purpose of school. 'Task' motivational goals will be associated with beliefs that the purpose of school is to foster 'achievement motivation', 'understanding the world', and 'social commitment'. 'Work avoidance' motivational goals will be associated with the belief that the most important purpose of school is to foster 'wealth and status'.

## ACHIEVEMENT MOTIVATION AND PERCEIVED ABILITY

One assumption of attribution theory is that childrens' achievement behaviours are mediated by ability perceptions. Several researchers have investigated this relationship. For example, evidence has indicated that feelings of accomplishment are maximised by high perceptions of ability (e.g., Covington & Omelich, 1979; Nicholls, 1976a) and that attribution for failure to lack of ability mediates maladaptive achievement behaviour (e.g., Dweck & Goetz, 1978). However, Blumenfeld et al., (1982) noted that some studies pointed to the importance of motivational factors such as values and perceived consequences for success and failure, rather than perceived ability, as being important in the classroom situation (Parsons, in press, in Blumenfeld et al., 1982; Covington & Omelich, 1979a; Nicholls, 1979; Brophy, 1983).

Until recently, developmental factors were not taken into account by theorists attempting to explain achievement motivation. Nicholls has provided important evidence indicating that ability can be seen in at least two different ways, and has discussed the implications for achievement behaviour. The development of the concept of ability is a central aspect of the development of achievement motivation and involves a process of differentiation, which changes with age. There are three levels of increasing differentiation of difficulty and ability and four levels of differentiation of effort and ability which take place in a context of social comparison. In the less differentiated conception levels of ability and task difficulty are judged in relation to perceived mastery or understanding, that is, they are self-referenced. In the more differentiated conception ability is judged by comparison with others, and is conceived as capacity. Individuals use different

conceptions of ability when task-involved and ego-involved (Nicholls, 1980, in Nicholls, 1983). By adolescence, individuals are capable of seeing ability in the differentiated sense, which requires an external perspective, thus the term 'ego-involvement' is applied. 'Task-involvement' is applied when the less differentiated conception of ability is involved because the individual is concerned with improving individual mastery, rather than with comparison to others. Only the more differentiated conception allows evaluation of the extent to which mastery reflects ability as opposed to effort or task difficulty (Nicholls, 1984).

Both Nicholls' and Kukla's theories have stressed the importance of the assumption that ability attributions and self-concept of ability play central roles in mediating achievement behaviour. Self-concept of ability, or perceived ability, may be defined as "the assessment of one's own competency to perform specific tasks or to carry out role-appropriate behaviours" (Eccles, 1983). Perceived ability has been noted as an important factor determining achievement behaviour (e.g., Covington & Omelich, 1979; Kukla, 1972, 1978; Nicholls, 1976a; Covington & Beery, 1976). People with high self-concepts of ability will be more likely to choose achievement activities, choose more difficult tasks, and display more effort and persistence when tasks are difficult. In ego-involvement, people with low perceived ability choose tasks at which either success or failure is highly likely, and performance may be impaired. Harter and Connell (1984) found that individuals with high perceived ability are more likely to be task-involved. An absence of doubts about their capacity may encourage a focus on strategies for task mastery (Diener & Dweck, 1978). In contrast, individuals with low perceived ability may see skill tasks as tests of their ability, and become ego-involved (Nicholls, 1984). Nicholls (1976b) noted that children who

perceive their attainment as high are more task-oriented in the classroom than those who perceive their attainment as low. Also, when low-perceived-ability individuals are very certain that they lack ability they also lack commitment to demonstrating ability and avoid successes that could indicate high ability (Maracek & Mettee, 1972).

Dweck's analysis of motivational processes appears to be conceptually similar to Nicholls'. Goals relating to competence fall into two classes: learning goals and performance goals. Achievement behaviour can be adaptive (mastery-oriented) or maladaptive (helpless) and these patterns can have profound effects on cognitive performance. Research has suggested that children's goals (learning or performance) differentially foster mastery-oriented or helpless patterns (Dweck, 1986). Children with performance goals are likely to attribute errors or failures to a lack of ability (Ames, 1984, Ames, Ames, & Felker, 1977).

Given the documented importance of perceived ability for achievement behaviour it is perhaps surprising that the relationships between perceived ability, motivational goals, and beliefs about the purpose of school have not been studied in more detail. Nicholls et al. (1985) studied perceived ability as an adjunct to hypotheses about the aims of education, personal goals in school, and perceptions of the causes of success in school. They noted that the "low to moderate associations" found between the main variables of interest may have been "a consequence of individual differences in history of attainment or perceived ability" (p. 688). Gottfried (1985) found a positive relation between academic intrinsic motivation and perception of academic competence. Gottfried did study how these variables related to separate school subjects, but it could be that by retaining subject-specificity and also partitioning the more general intrinsic-extrinsic categories of

motivation into specific motivational goals, more precise predictions could be made about the relationship between motivation and perceived ability.

The studies reviewed above indicate that achievement behaviour is related to perceptions of ability and that feelings of achievement are maximised by high perceptions of ability (e.g., Covington & Omelich, 1979; Nicholls, 1976a). Several studies have also found relationships between perceived ability and 'task' - involvement (e.g., Harter & Connell, 1984; Nicholls, 1976b). Other researchers found similar relationships although slightly different concepts were used, for example, 'academic intrinsic motivation' (Gottfried, 1985), and 'learning' and 'performance' goals (Dweck, 1986). Further work needs to be done on the relationship between perceived ability and 'ego' - involvement. Nicholls (1984) noted that students with low perceived ability are likely to become ego-involved because they may see schoolwork as a test of their ability. The competitive nature of the New Zealand education system may also encourage ego motivational goals. Students would then be less likely to see themselves as having high perceived ability as they would tend to compare themselves with others. 'Work avoidance' as a motivational goal has not been widely studied as yet, but evidence (e.g., Maracek & Mettee, 1972) has suggested it is likely to be associated with low perceived ability. The goal of 'work avoidance' may be particularly relevant to a study of high school students. Because of the pressure of the School Certificate examination, those students with 'work avoidance' goals would probably be those with very low perceived ability, that is, those who have 'given up'.

Accordingly, it was hypothesised in this study that 'task' motivational goals are likely to be associated with high perceived ability. 'Ego' motivational goals are likely to be associated with

moderate or low perceived ability. 'Work avoidance' motivational goals are likely to be associated with low perceived ability.

## GENDER AND ACHIEVEMENT MOTIVATION

Gender differences<sup>1</sup> have been noted in achievement motivation studies since the earliest work by McClelland and his colleagues in the 1940s and 50s (McClelland, Clark, Roby, and Atkinson, 1949; McClelland, Atkinson, Clark, & Lowell, 1953). However, many of the findings were unclear, possibly because few early studies were specifically designed to address achievement motivation in women. More recent research has centered on the isolation and examination of factors thought to be responsible for gender differences in achievement. For example, studies have typically found gender differences in expectancies of success, patterns of attributions, and 'mastery' versus 'learned helpless' orientations. Explanations for such differences have ranged from theories of genetic predisposition to studies implicating socialisation experiences and patterns of teacher-student interaction in the classroom.

Despite some early findings (e.g., Field, 1951, in Alper, 1974) pointing to different types of achievement motivation in males and females, researchers have often assumed that the same laws govern male and female achievement motivation (Alper, 1974). It was research

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<sup>1</sup>The term 'gender' is used in the present study rather than 'sex' in order to emphasise the distinction between biological ('sex') differences and differences between males and females due to sociological influences ('gender' differences) (Archer & Lloyd, 1982).



such as that by Horner (1968, in Heckhausen, Schmalt & Schneider, 1985) which drew attention to the need to study female achievement motivation. Although Horner's concept of "fear of success" has not been consistently found to be a motivational characteristic specific to women (Maccoby & Jacklin, 1974), it became clear that Horner's instrument measured different things in men and women (Heckhausen, Schmalt, & Schneider, 1985). Although it has recently become more apparent that achievement-related behaviour is not necessarily the same for males and females, more studies are needed which look at gender differences in motivational goals, as much of the recent research has focused on gender differences in the attributional process. Maehr and Nicholls (1980) noted that it is necessary to first specify the goals of achievement behaviour before examining the causes and consequences of attributional and other mediators of behaviour. To do this a measure of achievement motivation which allows for expression of motivational goals is needed, rather than one which rates motivation on a continuum from high to low.

Several studies have examined possible reasons for different achievement motives in males and females. They have suggested that males and females have different affiliative and motivational needs. As early as the 1960's Kagan (1964) expressed the idea that boys try to "figure the task" and girls try to "figure the teacher" (p. 135). Crandall (1967) and Hoffman, (1975) have suggested that women's achievement motivation is related to affiliative needs, while men strive for mastery. Nicholls (1980) noted that girls' efforts are often directed at non-intellectual aspects of work, for example, diligence, conformity, and trying to please the teacher; whereas males are more likely to direct their efforts towards demonstrating ability (Maehr & Nicholls, 1980). It has been found that girls gain higher scores than boys on Crandall's

Social Desirability Test (Harter, 1975; Crandall, Crandall & Katkovsky, 1965) and on a measure of social orientation (Nakamura & Finck, 1973). An analysis by Maehr and Nicholls (1980) suggested that males are characterised by ability-oriented motivation, while females are more concerned with maintaining social approval and are therefore motivated to optimise effort attributions. Steinkamp (1984) has argued that girls' "compliant style", which can be seen as similar to the goal orientations attributed to girls by Maehr and Nicholls (1980), is detrimental to their achievement in science, as science achievement is characterised by the ability-oriented achievement goals characteristic of males, and by a strong sense of competence.

As well as differences in motivational goals, research studies have often documented gender differences in perceived ability. In line with a more 'active' achievement orientation (e.g., preference for difficult tasks), findings (e.g., Veroff, 1969; Kukla, 1978) have suggested that males have higher perceived ability than females. Several studies have shown that males are more likely than females to attribute success to high ability and are less likely to attribute failure to low ability (Parsons, Ruble, Hodges & Small, 1976; Deaux, 1976; Dweck & Goetz, 1978; Lenney, 1977). In addition, girls are less likely than boys to attribute failure to bad luck or insufficient effort (Deaux & Farris, 1977; Dweck & Repucci, 1973; Feather & Simon, 1975; Nicholls, 1978). It seems that girls are less inclined than boys to use relevant cues to make logical inferences about ability (Nicholls, 1980). Developmental changes in the concept of ability serve to amplify this difference. Nicholls (1980) noted that the results of his New Zealand studies concurred with the findings of North American research.

Nicholls also postulated that the differences between the sexes should become more marked over the high school years. This

hypothesis was confirmed by Kessel (1979, in Nicholls, 1980). Nicholls suggested that in addition, low perceived ability would have more negative consequences in the high school years than in the elementary school years. Maccoby and Jacklin (1974) found that female achievement tended to fall behind male achievement during and after the high school years. Prior to the tenth grade there seemed to be no consistent gender differences on tests of quantitative skills but after this varying degrees of gender differences were found. For example, Schratz (1978) found that the direction of gender differences was dependent on ethnic group.

Maehr and Nicholls (1980) noted that motivational differences may vary not only between males and females, but from task to task, for example, across school subjects. Licht and Dweck (1984) found that maths is more likely than verbal areas to involve failure and confusion at the beginning of new units, and that students with 'mastery-oriented' rather than 'helpless' orientations learned more effectively in these cases. It may also be that school subjects differ in their perceived sex-role appropriateness, resulting in differences in perceived ability. For example, Lenney (1977) found that females estimates of their level of performance varied consistently across tasks. They had higher estimates of performance for sex-role appropriate tasks than for sex-role inappropriate tasks. Parsons, Adler and Kaczala (1982) noted that maths is seen as a male achievement domain. Sherman (1980) found that boys see maths as a male subject to a greater extent than do girls, and that girls were not particularly concerned about success in maths. It has also been claimed that teachers respond differently to males and females (e.g., Mark, 1983). Females receive more specific feedback about their work than do males, and this results in females attributing failure to a lack of ability (e.g., Dweck, Davidson,

Nelson & Ennna, 1978). However, some studies have found that the pattern of evaluative feedback is similar for males and females, although males receive more overall criticism (e.g., Heller & Parsons, 1981).

Meece, Parsons, Kaczala, Goff, and Futterman (1982) reviewed studies of gender differences in mathematics achievement. They then developed a psychological model linking academic choice to expectations of success and the subjective value of the course, and specified the relation of these factors to other personal and social variables, namely, perceptions of ability, personal needs, future goals, and perceptions of task characteristics. Meece et al. noted that studies have consistently found that by junior high school, boys perceive themselves as having higher maths ability than do girls. (e.g., Sherman, 1980; Parsons et al., 1982). During elementary school both boys and girls believe that their own gender group is more able at maths (Ernest, 1976). It seems that girls' perceived ability declines earlier and to a greater extent than that of boys (Meece et al., 1982). Studies which have looked at the association between perceived maths ability and course selection have shown that students are more likely to take optional maths courses when they have high perceived maths ability (e.g., Sherman, 1980; Parsons et al., 1982). Parsons et al. also noted that boys see maths as being more useful than girls and Sherman (1980) found that girls' perceptions of the usefulness of maths declined over the high school years, while boys' remained stable. Boys are also more likely to see maths as important for future career goals (Sherman, 1980).

While gender differences in perceived ability have received considerable attention, much of the research has, perhaps prematurely, focused on the effects of perceived ability on factors such

as achievement outcome and estimates of future performance. It would be useful to first consider some of the correlates of perceived ability, for example, motivational goals and beliefs about the purpose of school. When these variables have been studied together (Nicholls et al., 1985) gender differences, particularly with respect to different school subjects, have not been attended to.

Thus, in an attempt to draw together these different lines of research, the present study made the following predictions. First, based on suggestions that males are characterised by ability-oriented achievement goals while females are more concerned with conformity (e.g., Hoffman, 1975; Nicholls, 1980; Maehr & Nicholls, 1980; Steinkamp, 1984) it was hypothesised that females will be more likely than males to hold 'ego' motivational goals. Second, females will be likely to have lower perceived ability than males, particularly in Maths. Finally, females will be more likely than males to believe that the purpose of school is to foster 'social commitment'.

## ETHNICITY AND ACHIEVEMENT MOTIVATION

Recently, the possible effects of social and cultural factors on the meaning of achievement motivation have become of interest to researchers. According to Maehr, one's culture affects achievement behaviour by defining the meaning of success and failure (Maehr & Nicholls, 1980) and by delineating how success and failure should be pursued (Fyans, Salili, Maehr, & Desai, 1983). Maehr's (1978) definition of achievement motivation was derived from the work of McClelland and his colleagues but involved a major shift in emphasis in that it assumed that the will to achieve is universal.

Cross-cultural variations in achievement patterns have been studied and have shown that students place different values on school tasks, quite apart from their ability to perform (e.g., Fyans et al., 1983; Willig, Harnisch, Hill & Maehr, 1983). This evidence indicates that whether, and how, a student becomes involved in a particular activity may depend on what that activity means to him or her. Maehr and Nicholls (1980) postulated that achievement behaviour is a function of its anticipated consequences. If the consequences of a particular achievement behaviour are perceived as desirable by the culture, then the individual is likely to display that behaviour.

Maehr and Nicholls (1980) proposed two complementary approaches to defining achievement motivation in terms of its meaning for people. The first approach involved identification of the subjective meaning of achievement for the individuals within a particular group. In contrast, the second approach involved the application of theoretical assumptions to definitions of achievement goals or behaviours, and then determining the range of cultures in which these goals or behaviours are found. These approaches were designed to overcome the difficulties associated with McClelland's theory, which assumed that motivation is a personality trait which remains stable across situations, time, and culture. Such an approach has resulted in, for example, Black American children being characterised as having low achievement motivation (Maehr & Nicholls, 1980). Thus, by defining achievement behaviour in terms of the goals of the behaviour (e.g., task-involvement, ego-involvement, and work avoidance goals) it is possible to examine the importance of different goals for different cultures.

The impetus for McClelland's theory of achievement motivation came from the "Protestant work ethic" hypothesis put forward by Weber in 1930. He proposed ethnic (Irish versus Italian Catholics) and

religious (Catholic versus Protestant) differences in achievement motivation and explained these in terms of different child-rearing patterns. Two other researchers, Rosen (1959) and Katz (1967) found indications that socio-economic status is more central than ethnic differences in determining achievement motivation. Katz (1967) questioned whether achievement motivation is a general phenomenon, or whether it changes according to the achievement domain. He noted that "the lower-class Negro pupil's disinterest in classroom learning may be less a matter of his lacking the achievement motive than of its being directed into nonintellectual pursuits" (p. 144). Maehr has recently expanded on Katz' research and has stated that achievement behaviour varies from culture to culture and therefore should be examined in the context of both the individual and the cultural group. He noted that different cultural groups are not only likely to establish different achievement tasks, but to expect these goals to be pursued in different ways (Maehr & Nicholls, 1980).

Maehr (1978) referred to three kinds of achievement expectancies held by social groups, which determine the occurrence of achievement behaviour: normative, role-related, and individualised expectations. Normative expectations refer to the expectations within groups regarding behaviour that is acceptable. For example, within some groups, school achievement is highly valued, while among other groups it may be accepted but hold little value. Normative expectations can also define how goals are to be achieved. For example, Salili and Maehr (1976, in Maehr, 1978) found that the meaning of achievement differed among four countries studied (United States, Japan, Iran, and Thailand). Role expectations apply to individuals occupying a specific position within a group. Evidence suggests that role expectations can influence achievement motivation. For example, Zander and Forward

(1968) were able to change the achievement motivation patterns (high versus low) of persons in their study by changing leader and follower roles. Individual expectations are exclusive of role or group membership, and may be expressed by teachers to varying degrees, as was evidenced by the "Pygmalion" research of Rosenthal and Jacobsen. The implication is that achievement motivation can be readily modified according to social or cultural group, task, or individual expectations.

A research review by Cooper and Tom (1984) has illustrated the need for further studies which take account of individual and cultural differences and which look at forms rather than levels of achievement motivation. Cooper and Tom (1984) reviewed 43 studies which compared ethnicity and SES (socio-economic status) and which used need for achievement as the dependent measure. The earliest study was published in 1958, the most recent in 1980. The mean year of publication was 1969. The most commonly used measure of achievement motivation was the TAT (Thematic Apperception Test). It was noted that among U.S. samples high SES was associated with high need for achievement. Results also showed a stronger need for achievement among Anglo-Americans than Black-Americans. However the use of the TAT presents methodological problems. It has a cultural bias, as the cards depict Anglo-Americans and show only Anglo-American achievement situations (Lefkowitz & Fraser, 1980). Maehr and Nicholls (1980) suggested that such measures fail to take account of culture-specific situational norms and social cues signifying acceptable types of achievement. Studies reviewed by Cooper and Tom (1984) involving other cultural groups both within and outside the United States did not show consistent results. This may have been due to problems such as the location, economic background and education of restricted samples.



An illustration of the need to take account of culture can be seen in the example of 'culturally disadvantaged' children in the United States. Until recently Black-American children in the United States were deemed by educators to be culturally deprived because they lacked the school performance and linguistic skills shown by middle-class Anglo-American children. It was not until researchers began to observe the behaviour of these 'culturally disadvantaged' children in their home environments that they realised that the children were in fact competent within their environment. Similarly, while ghetto children often appear to lack motivation at school, they may be highly motivated to achieve other goals, such as sporting prowess (Maehr, 1978).

There are considerable differences in achievement between Maori and Pakeha students in New Zealand. For example, taking into account all New Zealand School Certificate candidates in 1985, 40% passed at least four subjects and 24% failed all subjects. But, of the Maori candidates, only 15% passed at least four subjects and 44% failed all subjects (Department of Education, 1985). A variety of theories have been put forward to account for these differences. For example, Walker (1973) postulated that Maori children see the education system as having little relevance to them. Because they fail at school it becomes a place of little value, and they leave as soon as possible. If this is so, it could be expected that Maori students would be likely to hold 'work avoidance' motivational goals. This has not been investigated as yet. A common stereotype in New Zealand suggests that Maoris are less intelligent than Pakehas and are less highly motivated. Nicholls (1978) suggested that this stereotype may influence judgements of ability in real life. Nicholls' study was designed to investigate ethnic differences in causal attributions for and evaluative reactions to academic success and failure. He found that seven year old Maori and Pakeha children

had different explanations for success and failure but by 13 years of age the ethnic differences had disappeared, apparently as a result of school experience. Nicholls also noted that the difference found between young Maoris and Pakehas appeared to be a qualitative ethnic difference (not a deficit), rather than a difference in maturity.

There is a paucity of New Zealand research on ethnic differences in achievement motivation. The above study is one of a few which look at ethnic differences in causal attributions. Research is needed to determine whether there are ethnic differences in motivational goals and beliefs about the purpose of school. These are factors about which people often hold strong stereotypical beliefs in the absence of objective evidence. Given the marked differences between Maori and Pakeha students with regard to school achievement and participation in advanced education, it would be expected that Maori students would see themselves as having low ability. As attribution theory has suggested, children who consistently fail are likely to attribute failure to stable factors such as low ability, and therefore expect future failure (e.g., Stipek & Hoffman, 1980). Other studies have found significant correlations between academic or general self-concept and school performance (e.g., Byrne, 1984).

As indicated above, the evidence indicating possible ethnic differences in achievement motivation in New Zealand is based more on generalisations from overseas research (much of it theoretical) than on objective evidence gathered in New Zealand classrooms. However, an examination of the above research indicates some predictions for the present study. Specifically, Maori students will be more likely than Pakeha students to have 'work avoidance' motivational goals. Maori students will also be likely to have lower perceived ability than Pakeha students.

## SUMMARY AND HYPOTHESES

Recent advances in achievement motivation research have highlighted the fact that achievement motivation is not a unitary construct but consists of, and is influenced by, a variety of different factors. Based on the findings of available research, it would seem that individual differences in achievement motivation can be expressed in terms of motivational goals, and that these goals are related to students' perceptions of ability and beliefs about the purpose of school. However, the relationships between these variables have not yet been fully investigated. In addition, subject-specificity has not been adequately taken into account. Studies which have allowed for subject-specificity have not studied both motivational goals and perceived ability.

In addition to these questions of central importance to the study, several methodological issues were noted to be relevant. The present study was conducted in classroom settings and investigated students' actual school experiences. It was designed to overcome the problems associated with achievement motivation research which is carried out in laboratory settings and may not be applicable in the classroom situation.

It was also noted that developmental factors relevant to achievement motivation should be taken into account. Attention was drawn to the need for more studies of adolescent students. By adolescence students should be able to distinguish between different types of motivational goals, and the relationship between motivational goals and perceived ability should be apparent. In addition, it was thought that the salience of the School Certificate examination would serve to highlight individual differences in motivational goals, beliefs about the purpose of school, and perceived ability.

The variables of interest in the present study were investigated using structured measures. Structured response formats, and structured scales in particular, have several advantages over unstructured measures and are considered most suitable for studying pre-determined variables (Elig & Frieze, 1979).

Previous research has indicated that distinctions can be made between various motivational goals and that students, and even classes, can be classified by motivational goal (e.g., Nicholls, et al., 1985; Nicholls, 1987; Butler, 1988; Nicholls & Thorkildsen, in preparation, in Nicholls, 1987). However, most previous studies have been conducted in the U.S. Therefore, it would be useful to determine whether New Zealand high school students distinguish between motivational goals. The competitive nature of the New Zealand secondary school system, with its emphasis on the norm - referenced School Certificate examination, may serve to highlight individual differences in motivational goals. In the present study it was predicted that:

- 1.1 Students will be characterised by three motivational goals: 'task', 'ego', and 'work avoidance' motivational goals.

Attention has been drawn to the need for more investigation into the way in which motivational goals and perceived ability may vary across school subject domains. Although Gottfried (1985) has taken school subject areas into account in her study of academic intrinsic motivation she did not apply the same degree of specificity to her measure of motivation. Conversely, Nicholls et al. (1985) distinguished between three forms of motivational goals, but did not investigate the pervasiveness of these goals across all academic areas. Several researchers (e.g., Gottfried, 1985; Maehr, 1983, Nicholls, 1987; Stipek & Weisz, 1981) have recognised the need to examine the role of specific school subjects in the study of achievement motivation. Therefore the

present research will look at the role of subject-specificity in the study of motivational goals and perceived ability.

Accordingly, it was hypothesised that:

- 2.1 Students may hold different motivational goals on measures of 'general school', 'English', and 'Maths' motivation.
- 2.2 Students may have different levels of perceived ability on measures of 'general school', 'English', and 'Maths' ability.

Although recent research has found relationships between students' motivational goals and beliefs about the purpose of school (e.g., Nicholls et al., 1985; Thorkildsen, 1987, in Nicholls, 1987) these factors have not been widely studied as yet. Other researchers, such as Maehr, have alluded to possible such relationships without studying them directly. Based on available evidence, it was hypothesised that:

- 3.1 'Task' motivational goals will be associated with the belief that the purpose of school is to foster 'achievement motivation', 'understanding the world', and 'social commitment'.
- 3.2 'Work avoidance' motivational goals will be associated with the belief that the purpose of school is to foster 'wealth and status'.

Although perceived ability has been quite widely studied, much of the focus has been on ability attributions and factors such as task choice, effort, and persistence. However, several studies have noted associations between high perceived ability and 'task' orientation (Harter and Connell, 1984; Nicholls, 1976b) and Nicholls (1984) suggested that individuals with low perceived ability are likely to be ego-involved. Given the competitive nature of New Zealand education it would be expected that many students would have 'ego' motivational goals and thus would be less likely to see themselves as having high

ability, due to their tendency to compare themselves with others. 'Work avoidance' as a motivational goal has not been widely studied as yet, but evidence (Maracek & Mettee, 1972) has suggested it is likely to be associated with low perceived ability. The present study predicted that:

- 4.1 'Task' motivational goals are likely to be associated with high perceived ability.
- 4.2 'Ego' motivational goals are likely to be associated with moderate or low perceived ability.
- 4.3 'Work avoidance' motivational goals are likely to be associated with low perceived ability.

Studies were reviewed which looked at gender differences in achievement motivation. It was noted that researchers are now recognising that achievement-related behaviour is often different for males and females. It has been suggested that males and females have different motivational needs. For example, several studies have indicated that males tend to be concerned with demonstrating ability, while females are more concerned with non-intellectual aspects of work (Nicholls, 1980; Steinkamp, 1984). Studies of gender differences in perceived ability have indicated that by adolescence, males have higher perceived ability than females. While there is some evidence that this is certainly the case for maths, (e.g., Ernest, 1976, Sherman, 1980, Parsons, et al., 1982) it is not clear whether males also have higher perceived ability in other subjects such as English. In light of the findings reviewed, it was predicted that:

- 5.1. Females will be more likely than males to hold 'ego' motivational goals.
- 5.2 Females will be likely to have lower perceived ability than males, particularly in maths.

Students' beliefs about the purpose of school have not yet been studied in terms of gender differences. However, given the evidence pertaining to females' concern with maintaining social approval, it is predicted that:

- 5.3 Females are more likely than males to believe that the purpose of school is to foster 'social commitment'.

A review of the literature on ethnic differences in achievement motivation has revealed a need for further study of possible ethnic differences in New Zealand. Given the marked differences in achievement between Maori and Pakeha students (Department of Education, 1985) it would be expected that Maori students would see themselves as having low perceived ability (e.g., Stipek & Hoffman, 1980; Byrne, 1984). Also, students with low perceived ability would be likely to try to avoid schoolwork. Researchers looking at the variables of interest in this study, motivational goals and beliefs about the purpose of school in particular, have not taken ethnic differences into account. Maehr (1978) has noted that future considerations of achievement motivation should take into account the context of achievement behaviour and the thoughts and perceptions of the individual within that context. Thus, in the present study it was hypothesised that:

- 6.1 Maori students will be more likely than Pakeha students to have 'work avoidance' motivational goals.
- 6.2 Maori students will be more likely than Pakeha students to have low perceived ability, across all three measures of perceived ability.

## CHAPTER THREE

### METHOD

#### SAMPLE SELECTION

The original sample for the present study comprised 508 Form Five students who were taking both English and Maths. Of the original sample 48.8% were male, and 50.7% female. Two students did not indicate gender. 81.1% considered themselves to be European, 10.4% Maori, and 7.2% Other. Six students did not indicate ethnicity.

Four secondary schools participated in the study. All were co-educational schools and were situated in the lower North Island; one in a medium sized city, two in large towns, and one in a medium sized town. Two schools practiced mixed-ability grouping and two schools had ability-banded classes for some subjects. The participating schools contained between six and 12% Maori students. As a comparison, 12.5% of 1985 New Zealand School Certificate candidates were Maori (Department of Education, 1985). Table 1 shows the percentage of the final sample coming from each school. At each school, all available Form Five students enrolled in both English and Maths participated in the study.

Due to incomplete or incorrect data 58 students were omitted from the final sample. Thus, the final sample consisted of 450 students, of whom 47.1% were male, 52.8% female, 84.2% European, 9.1% Maori, and 6.6.% Other. Table 2 presents a comparison of the original sample with the final sample.



Table 1

Percentage of Final Sample as a Function of School

School	Number of Students	% of Students
A	60	13.3
B	69	15.3
C	144	32.0
D	177	39.3
Total	450	100.0

Table 2

Comparison of Original Sample with Final Sample by Gender and  
Ethnicity (N = 450)

	Original Sample (%)	Final Sample (%)
Gender		
Male	48.8	47.1
Female	50.7	52.8
Ethnicity		
European	81.1	84.2
Maori	10.4	9.1
Other	7.2	6.1

## INSTRUMENTS

The 'Views about School' questionnaire was used to assess students' motivational goals, beliefs about the purpose of school, and perceived ability, and was constructed as follows.

Students' motivational goals were assessed using three of Nicholls and Thorkildsen's (in preparation, in Nicholls, 1987) 'motivational orientation' scales: 'task orientation', 'ego orientation', and 'work avoidance' (see Appendix 1 for scale items). Initially, Nicholls et al. (1985) used a high school sample to develop slightly different motivational orientation scales. Nine subscales on personal goals were formed into three scales by means of 'factor analysis': 'avoidance of work' (academic alienation), 'ego and social orientation', and 'task orientation'. These scales were modified (using a 5th grade sample,  $N = 541$ ) by Nicholls and Thorkildsen (in preparation, in Nicholls, 1987). The resulting scales were 'task orientation', 'ego orientation', 'work avoidance', and 'goofing off'; with Alpha levels of .79, .80, .83, and .77 respectively. The present study did not include 'goofing off' because of its similarity to the 'work avoidance' scale. Expected psychometric distinctions between the scales have been supported by research (e.g., Thorkildsen, 1987, in Nicholls, 1987; Butler, 1988). The questionnaire was used to measure motivational involvement, rather than motivational orientation, as one purpose of the study was to investigate the subject-specificity of motivational goals.

The following modifications were made in order to make the items more appropriate to the New Zealand situation. Where the word 'students' appeared in an item it was changed to 'kids'. "I get higher test scores than my friends" became "I get higher test marks than my friends"; "I didn't have any tough tests" became "I didn't have any hard

tests" and "I score higher than other students" became "I get higher marks than other kids". In addition, "I get a new idea about how things work" was changed to "I get a new idea about something" so that the item would be relevant to Sections C and D, which ask about motivational goals in English and Maths. The items were presented in random order.

Section B of the questionnaire was designed to assess students' motivational goals in general schoolwork, while Sections C and D were designed to assess motivational goals in English and Maths, respectively, so that subject-specific motivational goals could be compared with a more general motivational orientation.

A questionnaire developed by Nicholls et al. (1985) and designed for use with high school students was used to assess students' views on the purposes of schooling. The questionnaire consisted of four scales: 'wealth and status', 'commitment to society', 'understanding the world', and 'achievement motivation' (see Appendix 2). Alpha levels were as follows: 'wealth and status' .63 - .92; 'social commitment' .75 - .87; 'understanding the world' .69 - .89; 'achievement motivation' .73 - .90 ( $N = 587$ ). The items were modified in order to make them more suited for use with New Zealand students and to ensure that the reading level was appropriate at the Form Five level. Appendix 3 shows the modified scale items. The items were presented in random order.

The Self-Perception of Attainment Scale developed by Nicholls (1979) was used to assess students' perceived ability. The scale consisted of a schematic depiction of 28 faces representing the children in a class and ranked from poorest to best. Children are asked to indicate where they perceive themselves to rank in comparison with other children. The Self-Perception of Attainment Scale was adapted slightly for the present study. Blank circles were used instead of faces, in order

to make the scale more age appropriate. Students rated themselves for 'general school' ability, 'English' ability, and 'Maths' ability.

Researchers using the scale have reported relatively high correlations (.67 - .76) between teachers' ratings of achievement and 12 year olds self-ratings of achievement (Nicholls, 1979). Burke, Ellison, and Hunt (1985) reported moderate and positive correlations between the scale and California Achievement Test score ( $r = .36$ ) and between the scale and the Self-Concept of Ability Scale (Brookover et al., 1964) ( $r = .56$ ). In addition, test-retest reliability over a two week period of .83 was reported by Nicholls (1979).

The structure of the questionnaire was as follows and can be seen in Appendix 4. Students were first asked to provide biographical data. Instructions for Section A (Purpose of School) were then explained to students and the 48 items were read out loud. The items were preceded by the statement "A very important thing school should do is ...". Using a five-point Likert-type scale students were asked to circle the answer that they thought was best for them. Response categories ranged from 'Strongly Disagree' (1) to 'Strongly Agree' (5).

Section B consisted of 17 items relating to instances when the student feels most successful in school and were answered on the same five -point Likert-type scale.

Sections C and D consisted of the same 17 items but students were asked to answer with regard to when they feel most successful in English (Section C) and Maths (Section D), using the five-point Likert-type scale.

Finally, students were asked to complete Section E of the questionnaire, 'Ability at School'. Students first rated themselves for general school ability. They were asked to look at the column of 28 circles and indicate their position in their class. It was explained that

the circle at the top of the page represents the person in the class who does best in schoolwork, and the circle at the bottom represents the person who does the poorest in schoolwork. Lastly students were asked to indicate their ability in English, and then Maths. They were then thanked for participating in the study.

## PILOT STUDY

In July, 1988, the questionnaire was trialed with six Form Five students from three high schools in a medium-sized North Island city. There were three male and three female students. Students' self-ratings of ability indicated a wide range of ability perceptions such as would be found in most classrooms. The time taken to complete the questionnaire was between 10 and 40 minutes. After completion of the questionnaire, students were asked if they had any difficulties understanding or reading the instructions and items, and whether they thought there were any items which were unsuitable.

Based on students' comments about the questionnaire, two questions in the 'Purposes of School' section were altered in order to make them more relevant to the New Zealand situation, but without changing the meaning of the question. Thus 'Teach us to do our duty to our country' became 'Teach us to do our best for our country' and 'Make us loyal to our country' became 'Make us support our country'. In addition, the instructions were altered slightly to emphasize the confidential nature of the questionnaire, and to draw students' attention to the importance of answering all questions.

50% of the pilot sample thought that the word "students" should be used instead of "kids", but the other 50% showed a strong preference

for "kids". As the latter group of students were from schools similar to the ones to be used in the study, it was decided to retain the term "kids".

## PROCEDURE

Between May and August, 1988, principals of seven secondary schools were approached with the request that their school participate in the study. Four of these schools were able to take part. Arrangements were then made for the administration of the questionnaire at times convenient to the schools. As a result, the questionnaire was administered at two schools during August, and two schools during September, of 1988.

At each school questionnaires were administered to class groups. Due to the restrictions imposed by school timetables, the questionnaire was administered by either the researcher, a research colleague, or the classroom teacher. Written instructions were provided to ensure standardised administration of the questionnaire (See Appendix 5). In the case of three of the schools, a second questionnaire was administered, as part of a separate research study. In these schools, the order of presentation of the questionnaires was alternated to prevent any bias caused by, for example, fatigue on the part of the students.

Administration of the questionnaire began with a brief outline of the purpose of the research and the kinds of questions that would be asked. It was explained to students that all information would be confidential, and that participation was not compulsory. These points were reiterated on the questionnaire itself. Two students declined to complete the questionnaire. All instructions and items were read out to ensure that poor reading ability did not prevent students from understanding the items. An opportunity was provided for students to

ask for an explanation of any items they did not understand. Administration time was between 15 and 20 minutes per class.

### **SUMMARY OF PROCEDURE**

1. May-August, 1988. Principals approached regarding participation in the study.
2. August 9,10. Questionnaires administered at School A. Copies of questionnaire sent to schools B, C, and D.
3. August 11. Letter sent to thank School A for participating.
4. August 16. Questionnaire administered at School B.
5. August 18. Letter sent to thank School B for participating.
6. September 13. Questionnaire administered at School C.
7. September 14. Letter sent to thank School C for participating.
8. September 20. Questionnaire administered at School D.
9. September 21. Letter sent to thank School D for participating.
10. February, 1989. Feedback to participating schools regarding the results of the study.

### **DESIGN**

The hypotheses in the present study were tested, as appropriate, by non-parametric and parametric statistics. Hypothesis 1.1 was concerned with the grouping of students by motivational goal. This was tested first by examining univariate (means and standard deviations) and bivariate (Pearson correlation coefficients) statistics, followed by multivariate analysis in the form of cluster analysis and principal components analysis.



Due to the results of Hypothesis 1.1, Hypothesis 2.1 (subject-specificity of motivational goals) was not examined. Hypothesis 2.2 (subject-specificity of perceived ability) was tested by means of Pearson correlation coefficients.

Hypotheses 3.1, 3.2, 4.1, 4.2, and 4.3 were concerned with the relationships between motivational goals and students' perceived ability and beliefs about the purpose of school. These were tested using multiple regression analyses. Three separate 'all - in' multiple regression analyses were run, using 'task', 'ego', and 'work avoidance' motivational goals respectively. 'General school perceived ability', 'purpose of school - achievement motivation', 'purpose of school - understanding the world', 'purpose of school - social commitment', and 'purpose of school - wealth and status' formed the set of independent variables for each analysis.

Hypothesis 5.1, relating to gender differences, was not tested due to the results of Hypothesis 1.1. Hypotheses 5.2 and 5.3 were tested by means of a discriminant analysis design. 'General school perceived ability', 'English perceived ability', 'Maths perceived ability', 'purpose of school - achievement motivation', 'purpose of school - understanding the world', 'purpose of school - social commitment', and 'purpose of school - wealth and status' formed the group of independent variables, with males and females forming the discriminant groups.

Hypotheses 6.1 and 6.2 concerned ethnic differences. Hypothesis 6.1 was not tested due to the results of Hypothesis 1.1. Hypothesis 6.2 was tested by means of Pearson correlation coefficients.

## CHAPTER FOUR

### RESULTS

#### MOTIVATIONAL GOALS OF NEW ZEALAND FORM FIVE STUDENTS

Hypothesis 1.1 predicted that Form Five students in New Zealand schools will be characterised by three motivational goals: that is, 'task', 'ego', and 'work avoidance' motivational goals. Several procedures were undertaken to determine whether students can be classified according to these motivational goals.

Pearson correlation coefficients indicated a statistically significant but low to weak positive relationship between 'task' and 'ego' motivational goals ( $r = .207$ ,  $p < .001$ , 1 - tailed sig.) and a statistically significant negative relationship between 'task' and 'work avoidance' motivational goals ( $r = -.249$ ,  $p < .001$ , 1 - tailed sig.). There was a positive but non-significant relationship between 'ego' and 'work avoidance' motivational goals ( $r = .070$ ,  $p > .05$ , 1 - tailed sig.).

Next, students who had scored higher than one standard deviation above the mean on one motivational goal scale and more than one standard deviation below the mean on the other two scales were identified. The results suggested that students could not be clearly classified into one of the three motivational goal groups (i.e., 'task', 'ego', and 'work avoidance'). Only 1.7% of the students could be clearly classified as having one predominant motivational goal. Even when the criteria were changed to include students who had scored more than one standard deviation above the mean on one motivational goal scale and below the mean on the other two scales, only 12.8% of students

could be clearly classified into one motivational goal group (see Table 3).

In order to further investigate whether students could be classified into three distinct motivational goal groups (i.e., 'task', 'ego', and 'work avoidance' motivational goals) the data pertaining to 'general school' motivational goals was analysed using the cluster analysis technique. When the program was forced to provide three clusters, it partitioned the group into three whose means (for the relevant distinguishing questions) were found to be significantly different at the .05 level (see Table 4). However, it was quite clear that no strongly distinct clusters could be determined through the cluster analysis approach.

A further attempt to determine clusters was made via principal components analysis. It was anticipated that the variables could be adequately explained by two principal components, so that a two-dimensional plot of the data (on the principal components) would show the clusters. Again, no obvious clusters could be determined.

A final attempt to determine the existence of any clusters was made using the Macintosh Data-Disk package. This has the ability to visually rotate three dimensional data in real-time. For this purpose the data for each student had to be reduced from 17 dimensions to three. Since the 17 variables consisted of eight, five, and four variables, in three groups, the means of the variables in each of the three groups were obtained as a summary of the data in each group. Thus the data for each student was reduced to three dimensions. This data was analysed via 'rotating plot' in Data-Disk. Again, there was no evidence of clusters in the data.

The above results show that Hypothesis 1.1 was not supported, that is, the students in the present study ( $N = 450$ ) could not be clearly

classified into three motivational goal groups. This finding raises serious questions regarding the applicability of these motivational goals to New Zealand high school students.

Table 3

Classification of Students According to Motivational Goal - Using  
Standard Deviations (N = 450)

<hr/>	
>1 SD above $\bar{x}$ , >1 SD below $\bar{x}$	%
<hr/>	
<u>School Motivational Goal</u>	
Task	.2
Ego	.4
Work Avoidance	1.1
<u>Students not classified</u>	<u>98.2</u>
	100.0
<hr/>	
>1 SD above $\bar{x}$ , below $\bar{x}$	
<hr/>	
<u>School Motivational Goal</u>	
Task	2.4
Ego	3.1
Work Avoidance	7.3
<u>Students not classified</u>	<u>87.1</u>
	100.0
<hr/>	

Table 4

Means and Standard Deviations for Three Group Cluster Analysis  
(N = 450)

	Motivational Goal					
	'Task'		'Ego'		'Work Avoidance'	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
1	3.822	.424	3.480	.674	2.622	.644
2	4.090	.486	4.576	.430	2.530	.622
3	3.738	.766	3.944	.800	3.794	.627

## SUBJECT - SPECIFICITY

Hypothesis 2.1 predicted that students may hold different motivational goals on measures of 'general school', 'English', and 'Maths' motivation. This hypothesis was not tested because the analyses associated with Hypothesis 1.1 showed that students could not be clearly classified into the three motivational goal groups used in this study. Therefore it was inappropriate to compare motivational goal groups across subject areas.

Hypothesis 2.2 predicted that students may have different levels of perceived ability on measures of 'general school', 'English' and 'Maths' ability. Pearson correlation coefficients were computed and indicated low to moderate but statistically significant associations among the variables. There was a moderate positive correlation between 'general school perceived ability' and 'Maths perceived ability' ( $r = .480$ ,  $p < .001$ , 1 - tailed sig.). Similarly, there was a moderate to strong positive correlation between 'general school perceived ability' and 'English perceived ability' ( $r = .575$ ,  $p < .001$ , 1 - tailed sig.). There was a weak positive correlation between 'English perceived ability' and 'Maths perceived ability' ( $r = .125$ ,  $p < .01$ , 1 - tailed sig.). The results show that Hypothesis 2.2 was supported. 'English' and 'Maths' perceived ability could be predicted quite well from a measure of 'general school' perceived ability. However, the associations between specific school subjects were less strong, indicating that students have different levels of perceived ability for English and Maths.

## PERCEIVED ABILITY AND BELIEFS ABOUT THE PURPOSE OF SCHOOL

Because Hypothesis 1.1 indicated that the students in the present study could not be clearly grouped according to motivational goal, the planned analyses of Hypotheses 3.1, 3.2, 4.1, 4.2, and 4.3 were not undertaken. Instead, 'all - in' multiple regression analyses were used to determine how students' perceived ability and beliefs about the purpose of school are related to each of the motivational goals.

Three 'all - in' multiple regression analyses were run using 'task', 'ego', and 'work avoidance' motivational goals respectively, as the dependent variables. 'General school perceived ability', 'purpose of school - achievement motivation', 'purpose of school - understanding the world', 'purpose of school - social commitment', and 'purpose of school - wealth and status' formed the set of independent variables. Multiple regression was seen as an appropriate form of analysis because there were significant correlations between the independent variables.

Using 'task' motivational goal as the dependent variable, the following results were obtained. A statistically significant but weak relationship was found between 'task' motivational goal and the independent variables as a set;  $\text{Adj. } R^2 = .272$ ,  $F(5, 444) = 34.576$ ,  $p < .001$  (2-tailed sig. for all multiple regression analyses). Of the independent variables, 'purpose of school - achievement motivation' ( $p < .001$ ), 'purpose of school - social commitment' ( $p < .01$ ), 'purpose of school - understanding the world' ( $p < .01$ ), and 'general school perceived ability' ( $p < .05$ ) were found to have statistically significant positive relationships with 'task' motivational goal. The relationship between



'task' motivational goal and 'purpose of school - wealth and status' was not statistically significant ( $p > .05$ ) (see Table 5).

A statistically significant relationship was also found between 'ego' motivational goal and the independent variables as a set;  $\text{Adj. } R^2 = .148$ ,  $F(5, 444) = 16.680$ ,  $p < .001$ . 'Purpose of school - wealth and status' ( $p < .001$ ), 'purpose of school - achievement motivation' ( $p < .001$ ), 'general school perceived ability' ( $p < .001$ ) and 'purpose of school - social commitment' ( $p < .05$ ) were found to have statistically significant relationships with 'ego' motivational goal. The relationship between 'purpose of school - social commitment' and 'ego' motivational goal was negative. 'Purpose of school - wealth and status' was found to have the strongest relationship with 'ego' motivational goal. There was no statistically significant relationship between 'purpose of school - understanding the world' and 'ego' motivational goal (see Table 6).

The overall relationship between 'work avoidance' and the set of independent variables was also statistically significant;  $\text{Adj. } R^2 = .146$ ,  $F(5, 444) = 16.396$ ,  $p < .001$ . The three variables accounting for most of this relationship were 'purpose of school - achievement motivation' ( $p < .001$ ), which had a statistically significant negative relationship with 'work avoidance'; 'purpose of school - wealth and status' ( $p < .001$ ), which had a statistically significant positive relationship with 'work avoidance'; and 'general school perceived ability' ( $p < .001$ ). The relationship between 'work avoidance' and 'purpose of school - understanding the world' ( $p < .05$ ) was statistically significant, but that between 'work avoidance' and 'purpose of school - social commitment' was not ( $p > .05$ ) (see Table 7).

In summary, each of the motivational goals was found to be significantly related to the set of independent variables. 'Purpose of school - achievement motivation' was most closely related to 'task-

involvement'. 'Purpose of school - wealth and status', 'purpose of school - achievement motivation' and 'general school perceived ability' were found to be most strongly related to 'ego-involvement'. 'Purpose of school - achievement motivation', 'general school perceived ability' (these variables were negatively correlated with 'work avoidance') and 'purpose of school - wealth and status' were the variables most closely related to 'work avoidance'.

Table 5

## Multiple Regression Summary Data for Task Motivational Goal

Independent Variable	<u>B</u>	$\beta$	<u>t</u>	<u>p</u>
Purpose of School				
-Achievement Motivation	.385	.331	6.720	<.001
Purpose of School				
-Social Commitment	.168	.164	3.155	<.01
Purpose of School				
-Understanding the World	.129	.136	2.677	<.01
Purpose of School				
-General School Perceived Ability	-.009 <sup>a</sup>	-.098 <sup>a</sup>	-2.423 <sup>a</sup>	<.05
Purpose of School				
-Wealth and Status	-.060	-.065	-1.501	n s
Adj. $R^2$ = .272, $F(5, 444)$ = 34.576, $p$ <.001				

Table 5 (continued)

Note. a = Perceived ability was measured as follows: 1=high perceived ability to 28=low perceived ability, therefore negative  $\underline{B}$ ,  $\beta$ , and  $\underline{t}$  values indicate a positive relationship between general school perceived ability and 'task' motivational goal (positive values indicate a negative relationship). This also applies to analyses of perceived ability in Tables 6 and 7.

Table 6

## Multiple Regression Summary Data for Ego Motivational Goal

Independent Variable	<u>B</u>	$\beta$	<u>t</u>	<u>p</u>
Purpose of School				
-Wealth and Status	.383	.256	5.414	<.001
Purpose of School				
-Achievement Motivation	.337	.178	3.352	<.001
Purpose of School				
-General School Perceived Ability	-.023	-.157	-3.577	<.001
Purpose of School				
-Social Commitment	-.194	-.116	-2.072	<.05
Purpose of School				
-Understanding the World	.134	.086	1.578	n s
Adj. $R^2$ =.148, $F(5, 444) = 16.680$ , $p < .001$				

Table 7

Multiple Regression Summary Data for Work Avoidance Motivational  
Goal

Independent Variable	<u>B</u>	$\beta$	<u>t</u>	<u>p</u>
Purpose of School				
-Achievement Motivation	-.448	-.264	-4.962	<.001
Purpose of School				
-Wealth and Status	.323	.242	5.099	<.001
Purpose of School				
-General School Perceived Ability	.024	.177	4.045	<.001
Purpose of School				
-Understanding the World	.174	.125	2.272	<.05
Purpose of School				
-Social Committment	-.087	-.058	-1.031	n s
Adj. $R^2$ =.146, $F(5, 444) = 16.396$ , $p < .001$				

## GENDER DIFFERENCES

Hypothesis 5.1 predicted that females would be more likely than males to hold 'ego' motivational goals. This proposed relationship was not analysed because the results relating to Hypothesis 1.1 indicated that the students in this study could not be clearly classified into three motivational goal groups. Therefore, it would not be possible to clearly classify males and females on the basis of their membership of a particular goal group.

Hypothesis 5.2 predicted that females would be more likely than males to have low perceived ability, particularly in Maths. Hypothesis 5.3 predicted that females would be likely to most strongly believe that the purpose of school is to foster 'social commitment'. In order to test these hypotheses an 'all - in' discriminant analysis was performed on the data. 'General school perceived ability', 'purpose of school - achievement motivation', 'purpose of school - understanding the world', 'purpose of school - social commitment', and 'purpose of school - wealth and status' formed the group of independent, or predictor variables, with males and females forming the discriminant groups.

The results showed that the independent variables made a significant contribution to differences between males and females (Wilks' Lambda = .853,  $\chi^2 = 70.626$ ,  $df = 7$ ,  $p < .001$ ). However, it should be noted that although the discriminant function was statistically significant, it accounted for only 14.6% ( $.383^2$ ) of the variability in the set of predictors. This indicates that the function was not very effective in discriminating between the two groups. The classification results showed that 66.0% of cases were correctly classified. As a 'hit rate' of 50% would be expected by chance alone, this result is not particularly good. 59.9% of males were correctly classified, as were 71.4% of females.

The results of the classification procedure were checked using 'tau', a proportional reduction in error statistic. This showed that classification based on the discriminating variables made 32% fewer errors than would be expected by chance ( $\tau = .32$ ) (Klecka, 1980).

Although the results showed that the function had limited discriminating power, it is still instructive to examine the univariate  $F$  - values. Five of the independent variables were significant at the .05 or .001 level. However, the Wilks' Lambda values were very high, indicating small differences between the group means. 'General school perceived ability' and 'purpose of school - achievement motivation' did not have significantly different group means for the categories of gender. Females had a slightly higher mean score on 'English perceived ability' than males, while males had slightly higher 'Maths perceived ability'. Females were found to have slightly higher mean scores on 'purpose of school - social commitment', as predicted by Hypothesis 5.3. Males had slightly higher means for 'purpose of school - wealth and status' and 'purpose of school - understanding the world'. The 'perceived ability' variables had rather large standard deviations, indicating a considerable degree of overlap between males' and females' scores (see Table 8 for means, standard deviations, and significance levels).

Of the 'purpose of school' variables, 'purpose of school - wealth and status' was the variable on which males and females differed most, with males scoring higher than females. Males scored slightly higher on 'purpose of school - understanding the world', and females slightly higher on 'purpose of school - social commitment'. Again, the standard deviations indicated considerable overlap between males and females scores on these variables (see Table 8). Therefore, it can be seen that the present study found few differences between males and females in



Table 8

Means and Standard Deviations for Discriminant Analysis ( $N = 450$ )

Variable	$\bar{x}$	SD
General School Perceived Ability		
Males	11.259	5.634
Females	11.785	4.873
English Perceived Ability *		
Males	12.849	7.011
Females	11.294	6.294
Maths Perceived Ability *		
Males	11.174	7.716
Females	12.894	7.650
<u>Purpose of School</u>		
Achievement Motivation		
Males	3.999	.418
Females	4.008	.423
Understanding the World *		
Males	3.458	.503
Females	3.353	.519

Table 8 (continued)

## Social Commitment \*

Males	3.424	.495
Females	3.521	.457

## Wealth and Status \*\*\*

Males	3.295	.517
Females	2.958	.497

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\*  $p < .05$

\*\*\*  $p < .001$

perceived ability and beliefs about the purposes of school, indicating little support for Hypotheses 5.2 and 5.3.

### ETHNIC DIFFERENCES

Hypothesis 6.1 predicted that Maori students would be more likely than Pakeha students to have 'work avoidance' motivational goals. This hypothesis could not be meaningfully addressed because Hypothesis 1.1 was not supported. Hypothesis 6.2 predicted that Maori students would be more likely than Pakeha students to have low perceived ability, across all three measures of perceived ability. Pearson point biserial correlation coefficients indicated no significant (i.e.,  $<.05$ ) relationships between ethnicity and perceived ability. Therefore no further analyses were undertaken.

## CHAPTER FIVE

### DISCUSSION

#### MOTIVATIONAL GOALS OF NEW ZEALAND FORM FIVE STUDENTS

The hypothesis that Form Five students in New Zealand would be characterised by three motivational goals (i.e., 'task', 'ego', and 'work avoidance') was not supported. Attempts to clearly distinguish between the motivational goal groups indicated that the Form Five students in the present study did not distinguish between 'task', 'ego', and 'work avoidance' motivational goals. It was expected that due to the salience of the School Certificate examination, a study of Form Five students would serve to highlight individual differences in motivational goals. Also, the competitive nature of the New Zealand school system at this level (i.e., an emphasis on examinations and comparison with others) could be expected to result in a predominance of students with 'ego' motivational goals. As this was not the case, it would not be expected that students at other levels of high school education would be better able to distinguish between the motivational goals. This finding raises serious questions regarding the use of the three motivational goal dimensions in New Zealand.

Several avenues could be investigated in an attempt to explain the apparent inability of New Zealand high school students to identify which motivational goal best characterises them. First, there may be differences between the motivational goals expressed by students in New Zealand and in the U.S., with the result that U.S. students are able to differentiate between the goals, while New Zealand students are not. As previously noted, most research on motivational goals has been

undertaken with U.S. students (e.g., Nicholls et al., 1985; Maehr, 1983; Nicholls & Thorkildsen, in preparation, in Nicholls, 1987), as has much of the research relating motivational goals to other variables. Loveridge (1986) in a study of New Zealand students, used the motivational goals cited by Maehr (1983) (i.e., 'task', 'ego', 'social solidarity', and 'extrinsic reward') in addition to Nicholls et al.'s (1985) goal of 'work avoidance'. She found that most students expressed 'task' motivational goals. However, her study differed from the present one in that students were asked to identify the one motivational goal most characteristic of them, rather than respond to a range of items covering several motivational goals. Loveridge also noted that because the data was collected in an interview situation, students may have felt it socially desirable to express 'task' motivational goals. Thus, although Loveridge's results indicated that students may be able to distinguish between motivational goals the conditions under which the goals were measured were different to those of the present study.

It should also be noted that some students taking part in the present study commented that they thought the motivational goal items were "all asking the same questions". Although the motivational goal scales used in the present study were adapted for use with New Zealand students, it may be that they are still inappropriate. Possibly, students in New Zealand are not taught to express themselves in the same manner as U.S. students. That is, students in the U.S. may be better able to articulate their thoughts and feelings due to a style of teaching, and perhaps parenting, which encourages analysis and expression of ideas. Therefore it may be that New Zealand students do in fact hold motivational goals but that a different method of identifying the goals is needed. That is, one which does not rely as heavily on students'

ability to analyse their feelings about success in school and to express these in a structured format.

There are several indications in the literature that the theory surrounding the distinctions between the various motivational goals has not yet been fully developed. Further investigation may be needed to determine whether it is the case that New Zealand students do not view motivation in the same way as their U.S. counterparts, or whether in fact motivational theory to date has overlooked several important factors.

First, there seems to be a lack of clarity surrounding the use of the terms associated with motivational goals. Nicholls (1987) differentiated between situation-specific states ('involvement') and traits, as assessed by questionnaire ('orientation'). However, the terms have often not been consistently used by researchers in the field of achievement motivation. This indicates that the parameters of what might be termed motivational goals are not yet clear. If individuals are characterised by particular motivational 'orientations' it would be expected that they could clearly identify the motivational goal characteristic of them. It may be that this issue has not arisen before because terms describing motivational goals have been used interchangeably in many studies.

An additional explanation for the results of the present study may be found in an examination of the ways in which motivational goal groups have been identified by previous researchers. Maehr (1983) asserted that goals may be defined as synonymous with 'subjective success' and that this definition leads most readily to procedures for assessing the goals by means of eliciting examples and definitions of successes or failures. This method assesses goals in terms of events with which the person is familiar, suggesting, according to Maehr (1983), the "commonplace nature" (p. 191) of goals. Because there could

conceivably be an unlimited number of goals defined as subjective success, the goal categories have been narrowed to include only a consideration of school-related achievement. Maehr (1983) noted that the term 'goal category' was more suitable than 'goal' due to the "variety of possibilities associated with each goal", the "somewhat arbitrary manner of designating the goals" and the "limited available research specifically directed toward goal analysis" (p. 193). At present, the research supporting the distinctions between the motivational goals proposed by Maehr and by Nicholls consists mainly of correlational data and factor analysis. As previously noted, Nicholls and Thorkildsen (in preparation, in Nicholls, 1987) found non-significant and low correlations between 'task' and 'ego' motivational goals, a negative correlation between 'task' orientation and 'work avoidance' and 'goofing off' and a positive correlation between 'ego' orientation and 'work avoidance'. However, Nicholls et al. (1985) found a positive correlation between 'task' orientation and 'ego and social' orientation. 'Work avoidance' was positively related to 'ego and social' orientation but negatively to 'task' orientation. These associations were seen to be of interest only as background information to questions relating the motivational goals to other variables.

The present study found similar correlations to those of Nicholls et al. (1985). However, the results of Hypothesis 1.1 showed that students did not distinguish between the various motivational goals. This can perhaps be explained by drawing attention to the difference between identifying a set of motivational goals and assuming that there are groups of students who can be classified according to these motivational goals. Previous research has used 'factor analysis' to form separate motivational goal scales, and correlational data has been used to support the proposed relationships between the motivational goals.

On the basis of this kind of data, distinctions have been made between, for example, 'task oriented' and 'ego oriented' students (e.g., Nicholls, 1987; Nicholls et al., 1985; Jagacinski & Nicholls, 1984; Maehr, 1983; Nicholls, 1983) and between 'task' and 'ego' oriented classes (Nicholls, 1987).

The present study found some support for the distinctions between the motivational goals. However, when clustering of cases, rather than of variables was taken into account, the Form Five students studied could not be classified into these motivational goal groups (at least for 'general school' motivational goals). That is, they did not clearly distinguish between the goals. If, as previous research has indicated, distinctions can be made between various motivational goals, then it should be possible to classify students according to their characteristic motivational goal. If students themselves cannot determine which motivational goal they have in schoolwork, then the theory surrounding the existence of motivational goals, and some of the current applications of this theory, must be called into question. It may be that current motivational theory is not robust enough to support some of the conclusions that have been reached by previous researchers.

### **PERCEIVED ABILITY AND BELIEFS ABOUT THE PURPOSE OF SCHOOL**

Hypotheses 3.1, 3.2, 4.1, 4.2, and 4.3 concerned the relationships between motivational goals and students' perceived ability and beliefs about the purpose of school. Multiple regression analyses were used to determine how students' perceived ability and beliefs about the purpose of school were related to each of the motivational goals. The



results showed that each of the motivational goals was found to be significantly related to the set of independent variables. 'Purpose of school - achievement motivation' was most closely related to 'task' motivational goal, followed by 'purpose of school - social commitment' and 'purpose of school - understanding the world'. These findings are consistent with those of Nicholls et al. (1985) and Thorkildsen (1987, in Nicholls, 1987).

The relationship between 'task' motivational goal and 'purpose of school - wealth and status' was not statistically significant. Nicholls et al. (1985) found that 'task orientation' was unrelated to 'purpose of school - wealth and status' in one school, but was positively related to it in another. 'Task' motivation indicates a commitment to learning for its own sake and therefore would not be expected to be associated with the view that school should help students to gain wealth and status. This theory was supported by the present study.

'General school' perceived ability was also found to be positively related to 'task' motivational goal. This finding is also consistent with the literature. Perceived ability has been noted as an important factor determining achievement behaviour (e.g., Covington & Omelich, 1979a; Kukla, 1972; 1978; Nicholls, 1976a; Covington & Beery, 1976). Several studies have found that individuals with high perceived ability are likely to have 'task' motivational goals (Harter & Connell, 1984; Nicholls, 1976b). Other researchers used slightly different concepts but found similar relationships (Gottfried, 1985; Dweck, 1986).

The variables most closely related to 'ego' motivational goal were 'purpose of school - wealth and status', 'purpose of school - achievement motivation' and 'general school perceived ability'. 'Purpose of school - social commitment' had a significant negative relationship with 'ego' motivational goal. The relationship between

'purpose of school - understanding the world' and 'ego' motivational goal was not statistically significant. No specific hypotheses regarding the purposes of school likely to be associated with 'ego' motivational goal were made in the present study, as no clear predictions have yet emerged from the literature. Nicholls et al. (1985) found no consistent pattern of differences in the correlations between motivational goals and the four purposes of school used in the present study. That is, students characterised by 'ego and social orientation' were likely to endorse all views about the purpose of school.

The findings of the present study indicated that 'ego' motivational goals may be more highly associated with some purposes of school than with others, although it is accepted that these findings may not hold if students were more clearly distinguished by motivational goal group. 'Purpose of school - wealth and status' was most closely related to 'ego' motivational goal. This is consistent with theory suggesting that individuals with 'ego' motivational goals are characterised by social competitiveness. A striving for 'wealth and status' may be considered as an extension of competitiveness in the classroom.

'Purpose of school - achievement motivation' was also closely related to 'ego' motivational goal, but 'purpose of school - understanding the world' was not. Possibly, attempts to understand the world are related more closely to 'task' motivational goals, when learning is valued for its own sake than to 'ego' motivational goals. Understanding how the world operates is not likely to lead to doing better than others according to a socially defined standard, which is what individuals with 'ego' motivational goals would aim to do.

The significant negative relationship between 'ego' motivational goal and 'purpose of school - social commitment' may possibly be explained in the same way. That is, it seems that 'ego' motivational goals

may be more closely associated with 'achievement motivation' than with other purposes of school such as 'understanding the world' and 'social commitment', which may give less opportunity for the individual to demonstrate his or her ability as compared to others.

There was a statistically significant positive relationship between 'ego' motivational goal and 'general school perceived ability'. Thus, although high perceived ability has been found to be most closely related to 'task' motivational goals, in the present study perceived ability was found to be more closely related to 'ego' motivational goal ( $p < .001$ ) than to 'task' motivational goal ( $p < .05$ ).

Nicholls (1984) noted that people with low perceived ability are likely to be ego-involved. However, the distinction between high and low perceived ability may at times be rather arbitrary. Clear distinctions between students who have different motivational goals may facilitate comparisons with perceived ability.

Another explanation for this finding may be that 'ego' motivational goals are, by nature, associated with a concern about one's ability in comparison to others. Thus, the individual would be likely to have a clear idea of his or her ability relative to other students in the class. 'Task' motivational goals, on the other hand, are associated with a concern to learn, and the individual may be less likely to have an accurate perception of his or her ability relative to that of others. It should be noted however, that comparisons between the motivational goals should be made with caution, given that students did not clearly distinguish between the motivational goals.

Consideration of the motivational goal 'work avoidance' shows that 'purpose of school - achievement motivation' had a statistically significant negative relationship with 'work avoidance'. This would be expected, given that students who try to avoid work are not likely to be

motivated towards academic achievement in school. 'Purpose of school - wealth and status' was found to be associated with 'work avoidance'. Previous research (Nicholls et al., 1985; Thorkildsen, 1987) also found this association. The relationship between 'purpose of school - understanding the world' and 'work avoidance' was also significant, although less highly so. This finding is in contrast with that of Nicholls et al. (1985), who found that 'work avoidance' was "somewhat diminished in those who believed that school should foster social responsibility, understanding of the world, and achievement motivation" (p. 686).

Given that 'purpose of school - achievement motivation' was negatively related to 'work avoidance' it is surprising that 'purpose of school - understanding the world' had a positive relationship with 'work avoidance'. It would be expected that students who wanted to avoid work would not seek to 'understand the world'. However, it is possible that some students wish to avoid schoolwork because of, for example, its structured nature, but are still interested in finding out about their world. If this were the case, questions could be raised about the appropriateness of the formal school curriculum for some students. The relationship between 'work avoidance' and 'purpose of school - social commitment' was not statistically significant.

'General school perceived ability' had a significant negative relationship with 'work avoidance'. Although there is little evidence for this finding in the literature, it would be expected that if students perceived themselves as having low ability they would be likely to avoid schoolwork. This may be particularly true when there is an emphasis on formal assessment, as there is in most New Zealand high schools.

As noted previously, the finding that students in the present study did not clearly distinguish between the three motivational goal groups raises important questions regarding the applicability of these goals for New Zealand students. In addition, questions must be asked about the comparisons which have been made between motivational goals and other variables. The results of Hypothesis 1.1 did not support current theories of motivational goals, notably those of Nicholls and Maehr. However, much of this previous research has been largely correlational in nature and when a similar approach was taken in the present study (i.e., multiple regression analyses whereby students were not classified into motivational goal groups) many of the previous findings were supported. Thus, while it is interesting to look at variables such as beliefs about the purpose of school and perceived ability, and how they relate to the motivational goals when considered separately, this method may in fact be masking similarities between, for example, different beliefs about the purposes of school. It is difficult to make clear statements about the relationships between motivational goals and other variables when students do not clearly distinguish between motivational goals. This of course leads to another question, that is, do students clearly distinguish between the different purposes of school?. It appears that this question has been studied in the same manner as motivational goals (Nicholls et al., 1985; Nicholls, 1987). The present study has suggested that students do not clearly distinguish between motivational goals. If they do not distinguish between different beliefs about the purpose of school either, then previous findings relating to the purpose of school and relationships between motivational goals and beliefs about the purpose of school may need to be questioned.

## SUBJECT - SPECIFICITY

Hypothesis 2.1 was not tested because Hypothesis 1.1 showed that students did not clearly distinguish between motivational goals. It is likely that because students did not distinguish between motivational goals on a measure of 'general school' motivation, they would not do so for English and Maths either. Conversely, it is possible that measures of 'general school' motivational goals are too broad, although such measures have been used in previous research (Nicholls et al, 1985; Nicholls & Thorkildsen, in preparation, in Nicholls, 1987). Gottfried (1985) studied 'academic intrinsic motivation' and found it was differentiated into school subject areas and was also a general orientation towards school learning. Thus, further investigation is needed to determine whether New Zealand students can differentiate between motivational goals in specific school subjects even though they appear not to do so for school in general.

The prediction that students may have different levels of perceived ability on measures of 'general school', 'English' and 'Maths' ability (Hypothesis 2.2) was supported. 'General school' perceived ability had a statistically significant moderate correlation with 'English' and with 'Maths' perceived ability. Thus, it appears that an individual's 'general school' perceived ability gives a good indication of that individual's perceived ability in specific school subjects, that is, English and Maths. 'English' and 'Maths' perceived ability were weakly related, suggesting that students have different perceptions of ability in these areas. Indeed, the weak relationship implies that students who have high perceptions of Maths ability have lower perceptions of ability in English. Students are better able to distinguish subject - specific ability perceptions than different motivational goals and

purposes of school. Perceptions of ability in English and Maths both relate to General School Ability perceptions, as would be expected. This finding is consistent with Shavelson's hierarchical model of self-concept (Shavelson, Hubner & Stanton, 1976; Shavelson & Bolus, 1982).

## GENDER DIFFERENCES

The prediction that females would be more likely than males to hold 'ego' motivational goals was not examined due to the results of Hypothesis 1.1. The predictions that females would be more likely to have low perceived ability, particularly in Maths, and to believe that the purpose of school is to foster 'social commitment' were supported by the statistical tests associated with the discriminant analysis procedure, but there were indications that, for practical purposes, the results may not be significant.

Males and females did not differ significantly on the measure of 'general school' perceived ability, but females were found to have higher English perceived ability than males. However, it was found that females had slightly lower Maths perceived ability, which was predicted by Hypothesis 5.2. This finding is consistent with those of Sherman (1980) and Parsons et al. (1982). It is possible that the higher perceived Maths ability of females is related to the perceived sex-role appropriateness of different school subjects. Lenney (1977) found that females had higher estimates of their performance for sex-role appropriate tasks than for sex-role inappropriate tasks. Sherman (1980) and Parsons et al. (1982) noted that Maths is seen as a male achievement domain, hence males would be likely to have higher perceived ability in Maths than females. It may be that English is seen as a female achievement domain, therefore females would be likely to

have higher perceived ability in English than in Maths. Loveridge (1986) found that although science and reading were seen by the majority of students to be subjects for males and females, other students generally considered science to be a 'male' subject and reading to be a 'female' subject. Parallels could be drawn here between maths and science and particularly between reading and english.

The finding that females were slightly more inclined to believe that the purpose of school is to foster 'social commitment' was in the direction predicted by Hypothesis 5.3. This finding supports previous research indicating that females are concerned with maintaining social approval (e.g., Hoffman, 1975; Nicholls, 1980; Maehr & Nicholls, 1980; Steinkamp, 1984).

No predictions were made regarding gender differences for the remaining beliefs about the purpose of school. There was no significant difference between males and females for 'purpose of school - achievement motivation'. Males scored higher on 'purpose of school - wealth and status', and 'purpose of school - understanding the world'.

The relationship between gender and the beliefs about the purposes of school used here has not been studied directly before, therefore further studies would be useful to confirm these predictions. The finding that males scored higher on 'understanding the world' is consistent with theories that males are more likely to strive for mastery (Crandall, 1967; Hoffman, 1975) and to have ability oriented achievement goals (Maehr & Nicholls, 1980). It is interesting to note that males may think that the purpose of school is to help them gain wealth and status, whereas this is not generally a goal that females are expected to have. Future research may be able to determine at what age students develop such views about the purpose of school.



However, it should be noted that although many of the above relationships were statistically significant, for practical purposes there were only small differences between males and females. Thus, the suggestions made in the above discussion should be considered tentative.

## ETHNIC DIFFERENCES

Hypothesis 6.1 was not addressed because Hypothesis 1.1 indicated that it would not be possible to classify Maori and Pakeha students on the basis of their membership of a particular goal group. Hypothesis 6.2 predicted that Maori students would be more likely than Pakeha students to have low perceived ability. Pearson correlation coefficients indicated that this hypothesis was not supported, therefore no further analyses were undertaken. As Maori students accounted for only 9.1% ( $N = 41$ ) of students in the present study it may be that significant results would be found if more Maori students were included in the study. In addition, ethnic differences in motivational goals could be studied more meaningfully if students made clearer distinctions between the various motivational goals.

It appears that there are clear and considerable differences in achievement between Maori and Pakeha students in New Zealand, as evidenced by School Certificate results (Department of Education, 1985). It has been suggested (Stipek & Hoffman, 1980; Byrne, 1984) that low achievement is associated with low perceived ability. However, the present study showed no ethnic differences in perceived ability. It is possible that the Maori students in the present study did not have below average levels of achievement and therefore would be less likely to see themselves as having low perceived ability. However, Chapman (1984)

found that when academic achievement and SES were controlled for, Maori students did not have significantly lower academic self-concepts than Pakeha students. Further studies are needed to determine the pervasiveness of this finding for New Zealand students.

## CONCLUSIONS

The main purpose of the present study was to examine the relationships between motivational goals, perceived ability, and beliefs about the purpose of school. It was found that the Form Five students studied did not clearly distinguish between 'task', 'ego', and 'work avoidance' motivational goals. This finding raises questions regarding the applicability of these motivational goals to New Zealand high school students.

Although it was found that students did not clearly distinguish between motivational goals, questions still remain regarding the relationships between motivational goals and students' perceived ability and beliefs about the purpose of school. It was found that 'task', 'ego', and 'work avoidance' motivational goals, when considered separately, were related to the set of independent variables, that is, perceived ability and beliefs about the purpose of school. Consideration of individual variables showed support for some of the results found by previous researchers.

The hypothesis that students may have different levels of perceived ability on measures of 'general school', 'English', and 'Maths' ability was supported. 'English' and 'Maths' perceived ability were less closely related to each other than they were to 'general school' perceived ability.

The predictions that females would have lower perceived ability than males, particularly in maths, and that they would be more likely to believe that the purpose of school is to foster 'social commitment' were supported by tests of statistical significance. However, it was noted that there was considerable overlap between the scores of males and females on measures of perceived ability and beliefs about the purpose of school.

The hypothesis concerning ethnic differences in perceived ability was not supported by the data.

In summary, the findings of the present study raise questions concerning the applicability of 'task', 'ego', and 'work avoidance' motivational goals for New Zealand high school students. In addition, the findings suggest that the methods by which students' motivational goals have been measured in the past may have overestimated the extent to which students discriminate between motivational goals. As a consequence, assumptions suggesting that students can be categorised by motivational goal have been made by researchers, and the motivational goals have been linked to associations with other variables such as perceived ability and beliefs about the purpose of school. If, as the present study suggests, students do not make clear distinctions between motivational goals then the relationships between motivational goals and other variables may need to be re-evaluated.

This study is seen as having made a unique contribution to the field of achievement motivation theory in that it has pointed to the need for more valid methods of examining the motivational goals held by students and has drawn attention to some of the assumptions that exist concerning the relationships between motivational goals and other variables related to achievement motivation. It is hoped that this

study will encourage further research into the motivational goals held by students, particularly those in New Zealand schools.

### SUGGESTIONS FOR FUTURE RESEARCH

The findings of the present study indicated several lines of inquiry which could be investigated in future research. Firstly, it was noted that most research on motivational goals has been undertaken with U.S. students. New Zealand students were studied in the present research, and it was found that they did not clearly distinguish between motivational goals. It would be interesting to determine whether this finding was unique to New Zealand students or whether in fact most students do not distinguish between motivational goals in the way that has been suggested by previous research. In order to ascertain this, new methods of analysis of motivational goals may be needed, that is, methods which emphasise differences between students rather than differences between variables. Further studies could also address the types of items used to assess motivational goals. This may result in clearer distinctions between motivational goals, or may support the views of the students in present study, that "all the questions are asking the same thing".

It was apparent that there are difficulties in describing the relationships between motivational goals and other variables thought to be related to these goals, given that students do not distinguish between the goals. If future research shows that students can be classified according to motivational goal, then relationships between motivational goals and other variables such as perceived ability and beliefs about the purpose of school could be addressed in a more meaningful manner. If, however, future findings support those of the

present study and indicate that students do not distinguish clearly between motivational goals, then a re-examination of the validity of research comparing motivational goals with other variables may be called for.

It was also noted in this study that it would be useful to address the question of whether students clearly distinguish between the various purposes of school. To date these have been assessed in the same manner as motivational goals. In order to more fully understand why some students appear to be motivated to achieve in school and others do not, we need to have a better understanding of students' motivational goals and their beliefs about the purpose of school.

Because of the exploratory nature of the hypotheses regarding subject-specificity of motivational goals and perceived ability further research may be useful in order to determine whether students distinguish between motivational goals for specific school subjects, although they appear not to do so for school in general. In addition, further research investigating subject-specificity of perceived ability would be of value as the present study found some support for this hypothesis and little research has been undertaken in this area.

Studies of ethnic differences which control for academic achievement would be useful to help verify the findings of Chapman (1984) and those suggested by the present study, that is, that Maori students do not appear to have lower levels of perceived ability than Pakeha students.

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## Appendix 1

## Motivational Orientation Scale Items (with modifications)

'Task' items

I feel most successful if something I learned makes me want to find out more.

I feel most successful if I get a new idea about something.

I feel most successful if I learned something interesting.

I feel most successful if I solve a problem by working hard.

I feel most successful if what I learned really makes sense.

I feel most successful if a lesson makes me think about things.

I feel most successful if I keep busy.

I feel most successful if I work hard all day.

'Ego' items

I feel most successful if I do the work better than other kids.

I feel most successful if I get higher marks than other kids.

I feel most successful if I am the only one who can answer a question.

I feel most successful if I get higher test marks than my friends.

'Work Avoidance' items

I feel most successful if I don't have to do any homework.

I feel most successful if I didn't have to work hard.

I feel most successful if all the work was easy.

I feel most successful if the teacher didn't ask any hard questions.

I feel most successful if I didn't have any hard tests.

## Appendix 2

Purpose of School - Scales and Subscales

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## A. WEALTH AND STATUS

1. Wealth and time
2. Competition
3. Select Able

## B. SOCIAL COMMITMENT

1. Community
2. Loyalty
3. Diligence
4. Help World

## C. UNDERSTANDING THE WORLD

1. Science
2. Experts
3. Politics

## D. ACHIEVEMENT MOTIVATION

1. Insight, learn
  2. Persistence
-

## Appendix 3

## Modified Scale Items for Purpose of School Questionnaire

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a = original item

b = modified item

---

- a. Prepare us for jobs that will give us long vacations and the money to travel.
- b. Prepare us for jobs that will give us long holidays and the money to travel.
  
- a. Prepare us to be active in the community.
- b. Prepare us to help our community.
  
- a. Teach us to do our duty to our country.
- b. Teach us to do our best for our country.
  
- a. Make us loyal to our country.
- b. Make us support our country.
  
- a. Teach us to sacrifice pleasures, and work to do the right thing.
- b. Teach us to give up pleasures, and work to do the right thing.
  
- a. Prepare us for jobs that improve other people's health or standard of living.

- b. Prepare us for jobs that improve other people's health or way of living.
  
- a. Prepare us to evaluate critically what experts say.
- b. Prepare us to think carefully about what experts say.
  
- a. Help us to keep working in spite of obstacles.
- b. Help us to keep working in spite of problems.
  
- a. Help us to always work hard to do our best.
- b. Help us to work hard and always do our best.
  
- a. Help us understand how what our country does affects the world.
- b. Help us understand how our country is affected by what other countries do.
  
- a. Help us understand the issues facing our country (foreign relations, environment etc).
- b. Help us understand the problems facing our country (unemployment, defense, etc).
  
- a. Give us the skills that will get us top jobs with high status.
- b. Give us the skills that will get us important jobs.
  
- a. Recognise the talents of able students to ensure they move towards the top jobs.
- b. Recognise the talents of bright kids to ensure they get the top jobs.

- a. Make sure that the smartest students are prepared to be leaders and get top jobs.
  - b. Make sure that the brightest kids are prepared to be leaders and get top jobs.
- 
- a. Find out who is smart enough for top jobs.
  - b. Find out who is bright enough for top jobs.
- 
- a. Prepare us for jobs where we can be imaginative.
  - b. Prepare us for jobs where we can use our imagination.
- 
- a. Prepare us for challenging jobs.
  - b. Prepare us for difficult jobs.
-

Appendix 4

QUESTIONNAIRE  
VIEWS ABOUT SCHOOL

This questionnaire has several sets of questions concerning your beliefs about school and learning. This is not a test, so there are no right or wrong answers. Please answer according to how you really feel. Your answers will not be shown to your teachers or parents.

Please answer the following before you begin the questionnaire.

Name:

School:

Form Class:

Male      Female      (circle)

Do you consider yourself:   Maori   European   Other   (circle)

Card 1

4

8

Now turn to page 2 and begin the questionnaire.

**SECTION A****PURPOSES OF SCHOOL**

This section is about what you believe are the purposes of school. Each statement is followed by several answers: SD D N A SA

SD stands for Strongly Disagree

D stands for Disagree

N stands for Neutral, or No Opinion

A stands for Agree

SA stands for Strongly Agree

Circle the answer you think is best for you. That is, the one that best shows your disagreement or agreement with the statement. Remember, there are no right or wrong answers. Just put what you really think.

Please answer every question, even if you are not sure of the answer. Do not skip any.

Try this practice question first:

I like watching videos.....SD D N A SA



In your opinion, what are the main things schools should do?

A very important thing school should do is...

Help us understand technology and how it works.....	SD	D	N	A	SA	<input type="checkbox"/>	9
Prepare us for jobs where we can keep learning new things.....	SD	D	N	A	SA	<input type="checkbox"/>	
Make sure that the brightest kids are prepared to be leaders and get top jobs.....	SD	D	N	A	SA	<input type="checkbox"/>	
Teach us to respect authority.....	SD	D	N	A	SA	<input type="checkbox"/>	
Teach us to follow orders, even when we don't feel like it.....	SD	D	N	A	SA	<input type="checkbox"/>	
Prepare us to do things that will help others.....	SD	D	N	A	SA	<input type="checkbox"/>	
Prepare us for jobs that will give us plenty of free time.....	SD	D	N	A	SA	<input type="checkbox"/>	15
Prepare us for jobs where we can use our imagination.....	SD	D	N	A	SA	<input type="checkbox"/>	
Teach us to compete with others so we can compete for the top jobs.....	SD	D	N	A	SA	<input type="checkbox"/>	
Help us understand enough to vote wisely in elections.....	SD	D	N	A	SA	<input type="checkbox"/>	
Give us the skills that will get us important jobs.....	SD	D	N	A	SA	<input type="checkbox"/>	
Help us get into Universities or Polytechs.....	SD	D	N	A	SA	<input type="checkbox"/>	20
Teach us to do our best for our country.....	SD	D	N	A	SA	<input type="checkbox"/>	
Help us think clearly about what politicians say.....	SD	D	N	A	SA	<input type="checkbox"/>	
Make us loyal to our country.....	SD	D	N	A	SA	<input type="checkbox"/>	
Help us to keep working in spite of problems.....	SD	D	N	A	SA	<input type="checkbox"/>	
Help us understand how our country is affected by what other countries do.....	SD	D	N	A	SA	<input type="checkbox"/>	25
Help us understand nature and how it works.....	SD	D	N	A	SA	<input type="checkbox"/>	
Help us understand the effect of new inventions.....	SD	D	N	A	SA	<input type="checkbox"/>	
Help us to work hard and always do our best.....	SD	D	N	A	SA	<input type="checkbox"/>	
Teach us to work hard to support our business and government leaders.....	SD	D	N	A	SA	<input type="checkbox"/>	
Teach us to give up pleasures, and work to do the right thing.....	SD	D	N	A	SA	<input type="checkbox"/>	
Find out who is bright enough for top jobs.....	SD	D	N	A	SA	<input type="checkbox"/>	31

Prepare us for jobs that improve other people's health or way of living.....	SD	D	N	A	SA	<input type="checkbox"/>	32
Prepare us to help our community.....	SD	D	N	A	SA	<input type="checkbox"/>	
Help us understand the problems facing our country (unemployment, defence etc).....	SD	D	N	A	SA	<input type="checkbox"/>	
Prepare us for jobs that will give us enough money to buy the best of everything.....	SD	D	N	A	SA	<input type="checkbox"/>	35
Prepare us for jobs that will make the world better for everyone.....	SD	D	N	A	SA	<input type="checkbox"/>	
Prepare us to be useful to others.....	SD	D	N	A	SA	<input type="checkbox"/>	
Prepare us to think carefully about what experts say.....	SD	D	N	A	SA	<input type="checkbox"/>	
Teach us to set high standards for our own work.....	SD	D	N	A	SA	<input type="checkbox"/>	
Make us critical readers of the news.....	SD	D	N	A	SA	<input type="checkbox"/>	40
Prepare us for a job that will give us money for luxuries.....	SD	D	N	A	SA	<input type="checkbox"/>	
Prepare us for jobs making or doing things that are useful to others.....	SD	D	N	A	SA	<input type="checkbox"/>	
Prepare us for jobs that will make other people's lives more interesting or satisfying.....	SD	D	N	A	SA	<input type="checkbox"/>	
Teach us things that will help society.....	SD	D	N	A	SA	<input type="checkbox"/>	
Give us a drive to get higher and higher jobs.....	SD	D	N	A	SA	<input type="checkbox"/>	45
Prepare us to understand the importance of new scientific discoveries.....	SD	D	N	A	SA	<input type="checkbox"/>	
Teach us to be creative problem-solvers at work.....	SD	D	N	A	SA	<input type="checkbox"/>	
Prepare us for jobs that will give us long holidays and the money to travel.....	SD	D	N	A	SA	<input type="checkbox"/>	
Help us think clearly (critically) about what we read and see on T.V.....	SD	D	N	A	SA	<input type="checkbox"/>	
Prepare us to do things we have to do, even if we don't want to.....	SD	D	N	A	SA	<input type="checkbox"/>	50
Prepare us to reach the top in our jobs.....	SD	D	N	A	SA	<input type="checkbox"/>	
Recognise the talents of bright kids to ensure they get the top jobs.....	SD	D	N	A	SA	<input type="checkbox"/>	
Teach us to work cooperatively with others.....	SD	D	N	A	SA	<input type="checkbox"/>	
Make us responsible law-abiding citizens.....	SD	D	N	A	SA	<input type="checkbox"/>	
Prepare us for difficult jobs.....	SD	D	N	A	SA	<input type="checkbox"/>	
Teach us not to give up when work gets hard.....	SD	D	N	A	SA	<input type="checkbox"/>	56

**SECTION B****WHEN SCHOOL GOES WELL**

This section is about what makes you feel school has gone really well for you.

As in the previous section, circle the response that is closest to what you think. There are no right or wrong answers.

Remember,

SD stands for Strongly Disagree

D stands for Disagree

N stands for Neutral, or No Opinion

A stands for Agree

SA stands for Strongly Agree.

When do you feel most successful in school?

I feel most successful if I learned something interesting.....	SD D N A SA	<input type="checkbox"/>	57
I feel most successful if I didn't have to work hard...	SD D N A SA	<input type="checkbox"/>	
I feel most successful if something I learned makes me want to find out more.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I don't have to do any homework.....	SD D N A SA	<input type="checkbox"/>	60
I feel most successful if I do the work better than other kids.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I work hard all day.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if all the work was easy.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I am the only one who can answer a question.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I solve a problem by working hard.....	SD D N A SA	<input type="checkbox"/>	65
I feel most successful if a lesson makes me think about things.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I get higher test marks than my friends.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I keep busy .....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if the teacher didn't ask any hard questions.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I didn't have any hard tests.....	SD D N A SA	<input type="checkbox"/>	70
I feel most successful if I get higher marks than other kids.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if what I learned really makes sense.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I get a new idea about something .....	SD D N A SA	<input type="checkbox"/>	73

### SECTION C

In this section, please think about English in particular. What makes you feel that English has gone really well for you?

Remember,

- SD stands for Strongly Disagree
- D stands for Disagree
- N stands for Neutral, or No Opinion
- A stands for Agree
- SA stands for Strongly Agree

When do you feel most successful in English?

I feel most successful if I learned something interesting.....	SD D N A SA	<input type="checkbox"/>	74
I feel most successful if I didn't have to work hard....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if something I learned makes me want to find out more.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I don't have to do any homework.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I do the work better than other kids.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I work hard all day.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if all the work was easy.....	SD D N A SA	<input type="checkbox"/>	80
I feel most successful if I am the only one who can answer a question.....	SD D N A SA	<input type="checkbox"/>	Card 2 1
I feel most successful if I solve a problem by working hard.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if a lesson makes me think about things.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I get higher test marks than my friends.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I keep busy.....	SD D N A SA	<input type="checkbox"/>	5
I feel most successful if the teacher didn't ask any hard questions.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I didn't have any hard tests.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I get higher marks than other kids.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if what I learned really makes sense.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I get a new idea about something .....	SD D N A SA	<input type="checkbox"/>	10

**SECTION D**

In this section, please think about Maths in particular. What makes you feel that Maths has gone really well for you?

Remember,

- SD stands for Strongly Disagree
- D stands for Disagree
- N stands for Neutral, or No Opinion
- A stands for Agree
- SA stands for Strongly Agree

When do you feel most successful in Maths?

I feel most successful if I learned something interesting.....	SD D N A SA	<input type="checkbox"/>	11
I feel most successful if I didn't have to work hard...	SD D N A SA	<input type="checkbox"/>	
I feel most successful if something I learned makes me want to find out more.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I don't have to do any homework.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I do the work better than other kids.....	SD D N A SA	<input type="checkbox"/>	15
I feel most successful if I work hard all day.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if all the work was easy.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I am the only one who can answer a question.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I solve a problem by working hard.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if a lesson makes me think about things.....	SD D N A SA	<input type="checkbox"/>	20
I feel most successful if I get higher test marks than my friends.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I keep busy.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if the teacher didn't ask any hard questions.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I didn't have any hard tests.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I get higher marks than other kids.....	SD D N A SA	<input type="checkbox"/>	25
I feel most successful if what I learned really makes sense.....	SD D N A SA	<input type="checkbox"/>	
I feel most successful if I get a new idea about something .....	SD D N A SA	<input type="checkbox"/>	27



## SECTION E

### ABILITY AT SCHOOL

This section is about how well you think you do your work. Remember to put what you really think.

Take a look at the line of circles. Now, thinking about schoolwork in general, if the circle at the top of the page shows the person in your class who does best in schoolwork, and the circle at the bottom shows the person who does the worst, where would you be? Please put an x in the circle that shows where you are in your class.

Top

Bottom

29

Now, thinking about English in particular, if the circle at the top of the page shows the person in your class who does best in English, and the circle at the bottom shows the person who does the worst, where would you be? Please put an x in the circle that shows where you are in your class.

Top

Bottom

31

Now, thinking about Maths in particular, if the circle at the top of the page shows the person in your class who does best in Maths, and the circle at the bottom shows the person who does the worst, where would you be? Please put an x in the circle that shows where you are in your class.

Top

Bottom

33

You have finished now. Thank you.

## Appendix 5

# INSTRUCTIONS FOR QUESTIONNAIRE VIEWS ABOUT SCHOOL

- Please read out all instructions and questionnaire items.
- Please emphasise to students:
  1. All information is confidential. They should answer according to how they really feel.
  2. It is very important that every question is answered.
  3. When finished, ask students to check that they have answered every question. Also, that they have filled out the front page and have circled only one of 'Maori' 'European' (pakeha) or 'Other'.

\*\*\*\*\*

- This questionnaire is part of an important survey being done in a number of schools. It has questions about the reasons why you think you go to school, what sorts of things make you feel you've had a good day at school, and how well you think you do at school. The aim of the study is to improve the ways we help students learn at school.

-The questionnaire is completely confidential. Your teachers and parents will not see your answers. The answers will be put straight into the computer at Massey so that the researcher can look at all the answers together. Also, this is a questionnaire, not a test, so there are no right or wrong answers. Just put what you really think.

- We would like to encourage as many people as possible to participate because it's important that we find out what you really think, so that we can help kids to learn at school. However, it's not compulsory.

## Hand out questionnaire.

- Remind students: Answer the questions as honestly as possible, according to how you really feel. All information is confidential.

- Circle only one of Maori, European (pakeha) or other. (Part Maori, part European students should decide which one they see themselves as).

- The boxes on the right hand side of each page are to help the researcher put the answers into the computer, so you can ignore these.

- It is very important that you answer all of the questions. If you're not sure of the answer, put the one that would be true for you most of the time. The first answer you think of is usually the best one. If you don't understand a question put a mark by it and individual questions will be dealt with at the end.

Please read out the rest of the questionnaire.

Thank you,

S.R. Hunt.