CHEATING BEHAVIOR AND MOTIVATION OF STUDENTS
IN LEARNING MATHEMATICS: THE CASE OF 9TH GRADERS IN
GOVERNMENT SCHOOLS OF ADDIS ABABA

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JUNE/2004
ADDIS ABABA UNIVERSITY
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ACKNOWLEDGEMENTS

First of all, I would like to thank my advisor, Dr Belay Tefera, for his constructive comments and suggestions. My thank also goes to Addis Ababa University for financing this paper. I owe my gratitude to friends of mine who have really shown their willingness to help me in editing, computing, and printing processes.
ABSTRACT

The objectives of this study were to investigate the prevalence of cheating behavior in Maths learning among 9th graders and factors predicting this behavior (i.e., mastery goal, performance approach goal, performance avoidance goal, gender and age). A total of 393 9th graders (198 males and 195 females) were randomly selected from six government schools of Addis Ababa as subjects. Data were collected using questionnaires. One sample t-test was employed to determine the prevalence of cheating behavior. Moreover, regression analysis was also employed to determine predictors of cheating behavior. The one sample t-test result indicated that there is less prevalence of cheating behavior in Maths. It was also found that mastery orientation negatively predicted cheating behavior whereas performance avoidance orientation positively predicted cheating behavior. Sex, age, and performance approach goal did not predict cheating behavior significantly. Recommendations to promote mastery orientation and reduce performance avoidance orientation of the students were forwarded.
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CHAPTER ONE

INTRODUCTION

1.1. Background

Student evaluation has been implemented for decades in schools for different reasons: to ascertain to what extent educational objectives are being met, to diagnose areas that need revisions, to classify students for instructional purposes, to make decisions of student promotion and certification. There are, however, various factors that give false impression of these purposes. Among these, students' cheating is worth mentioning.

Students' cheating include those behaviors which are aimed at copying answers from others during examination, classroom exercise or homeworks. Some researchers (Anderman et al., 1998; Newstead et al., 1996; Sprinthall et al., 1994:573) pointed out forms of students' cheating during examination. These include acts like hand signals for true-false tests, side glance to copy answers from other students, using crib sheets, and taking examination for someone else. There are also some sorts of cheating, which occur during class work and homework. These are getting answers from friends, doing another student's course work for some body and to let others do an assignment and a class work for them (Anderman et al., 1998; Newstead et al., 1996).
Various reasons have been forwarded by various scholars why students cheat. According to Hetherington and Feldman (1964) these include demographic, personality and situational factors. The personal and demographic factors include sex, age of the students, academic achievement and discipline studied (Newstead et al., 1996). For Stang (cited in Hetherington and Feldman, 1964) the situational factors are lack of supervision, pressure to get good grades and a poorly organized test. Recently, there is an attempt to link cheating behavior to goal orientation of students more than the situational and the demographic variables (Anderman et al., 1998; Newstead et al., 1996).

Recent researchers have demonstrated that if students learn in an environment which stresses ability and performance of the students, then there is a tendency that students adopt these goals (Ames, 1992; Ames and Archer, 1988). Some researchers (like Maeher cited in Anderman et al., 1998) also indicated that the increasing emphasis of the environment towards ability and performance may motivate students to resort to cheating.

In his study of sources of stress in teachers of government high schools of Addis Ababa, Darge (2001) indicated that students' cheating was mentioned by teachers as one source of stress. It seems then that cheating might be a problem in Addis Ababa high schools. It is, however, that there are little, if any, research in the area to the knowledge of present researcher. Even though cheating is mentioned by high school teachers of Addis Ababa, large scale investigations were not conducted why students do so.
The writer of this paper believes that figures that were reported in U.S.A. by Educational Testing Services (ETS, 1999) would help to visualize the extent of cheating.

As ETS (1999) reported, according to the 1998 poll of “Who is Who among American High School Students”, 80% of the country’s best students cheated to get the top of their class. In another but similar survey report conducted by the Josephson Institute of Ethics, 64% of 20,000 high school students have admitted to cheat in 1996. This number jumped to 70% in 1998 (ETS, 1999).

The above figures clearly reveal how serious and all encompassing cheating is in the academic context and also that it is increasing dramatically from time to time. The important question here is, therefore, finding the reasons or factors that lead students to engage in cheating behavior.

1.2. Statements of the Problems

Cheating behavior is not a recent phenomena. Foreign investigators, however, indicated that its occurrence increases from time to time. In Ethiopia, no attempt was made to investigate the prevalence of cheating behavior in academic context and those factors that lead students to cheat. As a result, this research addresses the following questions.
• What is the prevalence of cheating behavior in grade 9 Maths learning in government school students of Addis Ababa?
• In what manner do sex and age predict cheating behavior?
• In what manner do mastery goal, performance approach goal and performance avoidance goal predict cheating behavior?

1.3. Objectives

1.3.1. General Objectives

This research tried to determine the prevalence and factors that predict cheating behavior in grade 9 Maths learning. By so doing, the writer of this paper tried to indicate some ways that enable to minimize students’ cheating in grade 9 Maths learning.

1.3.2. Specific Objectives

The specific objectives of this research are:

• to determine the prevalence of cheating behavior in Maths learning among 9th graders;
• to determine the role of gender and age in predicting cheating behavior and
• to determine the role of mastery goal performance approach goal and performance avoidance goal in predicting cheating behavior
1.4. Operational Definitions

Cheating Behaviors: refer to those acts like copying from neighbors, taking in and copying from unauthorized material during examination (using crib sheets), copying other student's work during class work or an assignment and premeditated collusion between two or more students to communicate answers in grade 9 Maths learning.

Performance Approach Goal: refers to 9 graders' orientation in Maths learning for the sole reason of earning grades or attainment of competences relative to others.

Mastery Goal: refers to 9 grade students' orientation in Maths learning primarily to satisfy their curiosity and/or seeking challenge and the development of competence and task mastery.

Performance Avoidance Goal: refers to 9 grade students' orientation in Maths learning primarily to avoid looking incompetent relative to others (e.g. preference for easy work, engagement in Maths subject primarily to look smart).
1.5. Delimitations of the Study

Some researchers (for example, Meece et al., 1988) noted that motivational orientation is largely dependant on the class size. It is clear that there is a difference in class size between government and private schools, and also in regular and evening classes in Addis Ababa. For this reason, only regular students of government schools were considered for this study. At the same time, only grade 9 students were selected as contemporary researchers (for example, Bandura; Mischel cited in Bong, 2001) advocate the importance of context specificity in academic situation so as to control differences of individual perceptions across different situations. Among the subject, Maths was selected because it is one of the disciplines where cheating behavior is mostly complained (Anderman, et al., 1998). As a result, this research was delimited to Maths subject and grade 9 students.

1.6 Limitations

This research has got the following limitations.

- Due to time and financial constraints, only limited samples were taken for this study.
- Students might not truly report their engagement in cheating in grade 9 Maths learning. They might under report or over report their cheating behavior. As a result of this, the validity of the research may be decreased.
CHAPTER TWO

LITERATURE REVIEW

The concept of achievement goal theory from various perspectives and why it plays a prominent role in current academic context were presented initially. Then, the motivational properties of mastery goal, performance approach goal and performance avoidance goal; and factors that elicit students' goal adoption will be discussed. Finally, goal orientations, gender, and age in relation to cheating behavior will be presented.

2.1. Achievement Goal Theories

Over the past half century, two broad conceptions of achievement motivations have emerged. The first perspective views motivation as an internal state, need, or condition that impels individuals toward actions (Woodworth cited in Covington, 2000). The second approach which was developed by Atkinson and Macclelland (cited in Covington, 2000) held that achievement is the result of an emotional conflict between striving for success and avoiding failure. Over the years, considering motivation as being trait like or as a learned drive has undergone significant modifications, especially with the rise of alternative view of motives as goals that persuade some body toward action (Covington, 2000).
The concept of achievement goal plays a prominent role in current academia. Urdan (cited in Bandalos, 2003) stated that goal theorists are generally in agreement that goals provide an organized framework through which a variety of cognitive and affective responses to achievement situations can be interpreted.

This is a social-cognitive framework—a framework that emphasizes the importance of how individuals think about themselves, their tasks and their performances (Midgley et al., 2001) or how students derive meaning from their experiences in achievement settings (Ames; Deci and Ryan; Maehr and Midgley cited in Roeser et al., 1996).

In the domain of academic achievement, Harackiewicz et al. (2000) defined achievement goal as an orientation that represents the desire to develop, attain and demonstrate competence in a particular context. These goals in turn are believed to influence the individual behavior tremendously or his course of action (Church et al., 2001; Newman, 1998; Roeser et al., 1996).

Recently, there are two perspectives of achievement goal. These are the normative model (Ames and Archer, 1988; Dweck and Leggett, 1988) and the revised goal model (Harackiewicz et al., 2000) perspectives.

Researchers who advocate the normative goal theory perspective of achievement motivation identified contrasting achievement goals among students. Initially, they have given different names for these goals: learning and performance goals (Dweck and

Even if learning, task-involvement and mastery goals have different names, there is a general agreement among researchers nowadays that they all refer to increasing ones competency, understanding and appreciation for what is being learned. As a result, they are integrated and labeled as mastery goals (Ames and Archer cited in Ames and Archer, 1988).

On the other hand, performance and ego involvement goals are the same in constructs and they refer to outperforming others but differ from task and learning goals. Therefore, they are combined and named performance goals (Ames and Archer cited in Ames and Archer, 1988).

However, researchers who support the revised goal model of motivation, described performance goals in terms of both approach and avoidance components (Bong, 2001; Church et al., 2001; Elliot et al., 1999; Harackiewicz et al., 2000). They suggested the importance of separating performance goal into approach and avoidance and they also challenged the view of the normative goal theorists on the ground that performance goal construct are too general, and encompass theoretically distinct and separable components.

Elliot et al. (1999) further added that collapsing approach and avoidance constructs with in performance goal category is similar to using mixed performance goal measures.
This ambiguity, according to Elliot et al. (1999), would undoubtedly have produced ambiguous pattern of results rather than informative ones. Middleton and Midgley (cited in Midgley et al., 2001) also pointed out the importance of including both components of performance goals to see their independent effect on the use of debilitating strategies.

In sum, there appear controversies between the revised goal theorists and the normative goal theorists. The revised goal theorists reject the propositions of the normative goal theorists of considering performance goals as encompassing both avoidance and approach constructs and considers them as the same entity. The revised goal theorists argue that performance approach orientation may be beneficial in some situation. As a result, they assume the separation of performance goal into approach and avoidance since these two constructs are distinct and affects behavior independently.

2.2. Motivational Properties of the Goals

Motivational orientations are defined as a set of interrelated beliefs and emotions that direct behavior (Wentzel, 1999). Each of the achievement goals indicated above has different motivational orientations (properties). The motivating properties of each goal influence the amount and quality of student learning as well as the will to continue learning (Covington, 2000). Each goal is believed to have a unique influence on achievement relevant processes and outcomes (Elliot et al., 1999) and differs primarily in terms of whether learning is perceived and valued as an end in itself or a means to a
goal external to the task such as gaining social approval, establishing superiority, or avoiding negative evaluation from others (Meece et al., 1988).

In normative models of goal orientation, mastery goals orient students to focus on learning and mastery of the content or task and have been related to a number of adaptive outcomes such as higher levels of efficiency, task value, interest, positive affect, effort and persistence, the use of more cognitive and metacognitive strategies, as well as better performance (Dweck and Leggett, 1988; Midgley et al., 2001; Pintrich, 1999). For the performance goal, on the other hand, Pintrich (1999) also indicated that performance goals orient students to a concern for their ability and performance relative to others and seen to focus the students on goals of doing better than others or of avoiding looking incompetent or less able in comparison to others.

In the view of normative goal theorists, performance goals are generally seen as less adaptive in terms of motivation, strategy and behavior (Ames; 1992; Dweek and Leggett, 1988).

From the perspective of the revised goal theorists, students who are focused on performance approach goal are oriented to doing better than other and to demonstrating their ability and competence, in other words, approaching tasks in terms of trying to outperform other (Pintrich, 1999). For performance avoidance orientation, students are attempting to avoid looking stupid or incompetent (Pintrich, 1999).
Revised goal theorists argue that performance approach may be adaptive in some situations where performance approach goal are consistent with the context in which performance is assessed and grades are assigned. Harackiewicz et al. (2000) have shown that performance approach goals can result in better performance and achievement but not interest whereas mastery goals are linked to more intrinsic interest in the task but not course grades.

The difference between performance approach and performance avoidance orientation lies on willingness to invest effort. Performance oriented students who approach successes invest considerable effort in highly sophisticated strategies, which is not surprising given their goal is outperforming others (Wolters cited in Covington, 2000). By contrast, students with performance avoidance orientation need to avoid looking incompetent (Elliot et al., 1999). As a result, they reflect a pattern of reduced effort and task persistence (Arvilommi et al., 2000; Bouffard et al. cited in Covington, 2000). By not trying hard, performance avoidant subjects create a face-saving excuses for having done poorly (Pintrich, 1999).

In sum, there is an agreement between both perspectives that mastery goal orients the individual towards adaptive behavior. For the normative model, performance goal orients students to maladaptive behaviors. For the revised goal theorists, performance approach goal focused on the attainment of competence relative to others and a performance avoidance goal orients students to avoid their incompetencies.
2.3. Factors Eliciting Goal Adoption

Newman (1998) has indicated that previous researches in education have viewed motivation as either a characteristics of an individual or as a property of events. Nowadays, some researchers criticize these views on the ground that analysis of motivation should consider the characteristics of individuals in specific situations since persons motivational beliefs and behavior are derived from contextual transactions (Paris and Turner cited in Aubusson, 2003). They further added that we should avoid categorizing people according to types or degrees of motivation that they display and identifying environmental events as motivating or not because neither alone is sufficient to predict motivation across context or people (Paris and Turner cited in Aubusson, 2003).

Some researchers (Ames, 1992; Ames and Archer, 1988) proposed contrasting structural features of classrooms that can influence the goal a student follows. These contrasting classroom features are teacher’s definition of success either emphasizing mastery or performance, view of student’s mistakes either emphasizing learning or anxiety eliciting, focus of teacher attention either emphasizing process of learning or one’s performance relative to other, evaluation criteria either emphasizing absolute or normative and placement of value either emphasizing effort or ability.

Every student in the classroom perceives and interprets the mentioned classroom structures either as controlling or informational (Ames, 1992; Ames and Archer, 1988;
Gilbert, 1998: 568-569). When emphasis of ability within the classroom is salient to some students, they are more likely to adopt to performance orientations (Ames and Archer, 1988; Gilbert, 1998: 568-569). On the other hand, if students perceive and interpret their classroom structure as emphasizing learning, they are more likely to orient toward mastery goals (Ames and Archer, 1988).

Shih et al. (2000) also suggest that based on salient classroom structures students develop classroom specific beliefs which in turn are expressed as goals for doing the work and perceptions of ability. Meece et al. (1988) still suggested that classrooms can be characterized as strong situations with fairly explicit expectations, structures and cues that govern behavior.

More recently, Church et al. (2001) have also attempted to indicate classroom conditions that might lead students to adopt performance avoidance goals. These are teachers' negative expectations and criticisms when students' make mistakes.

Similarly, Ames (1992); Roeser et al. (1996) emphasize the perception of the classroom environment or the "psychological environment" in playing the more important role in the goal adoption process. These perceptions of the environment in turn are thought to shape students' own school related beliefs, affect and behavior (Roeser et al., 1996).
Deci et al., (cited in Meece, 1988) also suggested that teachers' orientations towards control versus autonomy can influence students' motivation. They further added that these relationships are established within the first few months and remain fairly constant throughout the school year.

On the other hand, Dweck and Legett (1988) propose that certain learner characteristics like dispositions play a role in pursuing goals. They argue that dispositions can determine a priori probability of adopting a particular goal. They also added that situational factors could alter these prior probabilities if the situation offers strong cues. Mischel et al. (cited in Meece, 1988) also proposed that the situational demands and constraints of these settings can override individual differences in behavioral patterns and rendering them less powerful and influential.

In general, goal orientation might be determined by the interaction of both learner characteristics and the situations. If students learn in an environment that favors either of the goals, however, the chance of exhibiting either of the goals will be greater. That means leaving little room for disposition to affect behavior. The goal students adopt from their environment may affect their behavior in academic context either positively or negatively depending on the nature of goal.
2.4. Cheating Behavior and Motivation

Various reasons of cheating have been forwarded by different scholars at different times. Factors related to personal characteristics and situational characteristics were high on the agenda in the past.

In referring to the situation, a study that was conducted by asking groups of students to fill out a questionnaire, one common reason that was mentioned by almost all cheaters is lack of time management, such as taking too much at once or not leaving enough time to study (Baird cited in Aldrich et al., 2003). Aldrich et al. (2003), however, challenges the above conclusion on the ground that every student has to face, at some point in his or her academic life, some kind of stress or pressure and if so, why do some choose to cheat and others do not? They further argue that we need to discriminate between justification and motivation; and they conclude that there seems to be an underlying pattern that is prevalent among those who cheat behind these alleged responses.

Similarly, Newstead et al. (1996) investigated the incidence and causes of cheating at an English University. Among the reasons respondents indicated to items that ask which of the behaviors they had engaged in, neutralization such as time pressure, extenuating circumstances, peer pressure, and the fact that every body does it were common. Further, Newstead et al. (1996) reported that there was little suggestion of any difference in the frequency of such reasons as a function of gender and age; and they concluded that neutralization does not seem to help in explaining the obtaining individual differences.
Referring to personal characteristics, it was found that students who are low achievers were more likely to cheat in order to pass the exam (Baird cited in Villers, 1997). This explanation, however, does not seem plausible since recent research work has shown that the above average students also engage in cheating behavior (ETS, 1999).

Recent approach in explaining why students motivate to cheat also lies on achievement goal theory. Anderman et al. (1998); Newstead et al. (1996) suggest that the explanation of cheating behavior lies on student's motivation, and especially the distinction between performance and learning goals.

In an attempt to explain the link between cheating and motivational variables, Davis et al. (cited in Case, 1999) compare the level of cheating between American and Australian students. Their findings indicate that American students report more cheating than their Australian counterpart do. They also found out that Australian students are motivated more by learning than by obtaining high grades. By contrast, American students have shown a greater motivation for obtaining high grades than Australian students.

Pulvers and Diekhoff (cited in Hirschy, 2002) found out that students who admitted to cheating described their classes as significantly less personalized, less-task oriented and less satisfying than non-cheaters did. They also pointed out students who engaged in cheating perceived their classes as less involving, less cohesive and less individualized.
In strengthening this idea, Aldrich et al. (2003) disclosed that in large classroom indifference from the part of the instructor alone results in student's lack of motivation and willingness to cheat. Similarly, Newstead et al. (1996) found that students' motivation, in particular whether they are studying to learn rather than simply to obtain good grades is a major factor in explaining differences seen among various groups.

Very recently, Anderman et al. (1998) investigated the relationship between cheating and motivation in science subject in middle schools taking personal, classroom and school variables on the ground that these variables may have unique influence in cheating. Their findings indicate that students who report cheating perceive their schools as focused on grades and ability, and believe that they can obtain some type of reward for doing well in class.

Elliot and Harackiewicz (cited in Midgley et al., 2001) suggested that performance approach goals were grounded in both the motive to achieve and the fear of failure. Midgley et al. (2001) also noted that in achievement setting where performance goals are emphasized, the fear of failure may be activated, and cheating may emerge as an option for some students. Schab (cited in Midgley et al., 2001) reported that fear of failure was the most common reason for cheating among high school students. In strengthening this idea, Martin et al. (2001) also noted that when students fail to perform successfully at a given task in the academic context, and when there is the risk that they may be seen to have low ability, a priority of some students, therefore, will be to protect their sense of ability and try to influence others' evaluation of their ability.
Previous research works employed general motivational measures in an attempt to establish the link between cheating behavior and what causes it. Contemporary academic motivational researchers, however, tend to emphasize the distinctiveness of students motivational orientations across different situations (Winner cited in Bong, 2001). They further added that the emphasis on context specificity is translated into motivational constructs being assessed in reference to particular academic tasks, activities or domains of interest. Some researchers (Bandura and Mischel cited in Bong, 2001) suggested that such assessment practices considerably improve accuracy of behavioral predictions by accounting differences on individual perceptions across different situations.

Even if there was an attempt by some researchers to establish the link between cheating behavior and motivations using context specificity approach, Anderman et al. (1998) still recommended that establishing the link between cheating behavior and students' motivation should proceed in other domains so as to have a conclusive evidence of the link between cheating and motivation in other subjects.

In general, past research employed personal and situational factors in explaining cheating behavior. Nowadays, researchers also emphasize students' achievement goals across different subjects in explaining cheating behavior.
2.5. Gender and Cheating Behavior

Various scholars investigated the relationship between gender and cheating behavior. Baird; Calabrese and Cochran; Davis et al. (cited in Newstead et al., 1996) Bushway and Nash (cited in Vilers, 1997); Newstead et al. (1996) found that female students reported cheating less than male students.

On the other hand, Anderman et al. (1998) and Houston; Haines et al. (cited in Newstead et al., 1996) reported no differences in engaging in cheating between the two sexes.

Still other researchers like Jacobson et al. (cited in Newstead et al., 1996) found that females cheat more than males.

In sum, the issue of gender and cheating behavior is yet found to be controversial as much of the researches disclose conflicting findings.

2.6. Age and Cheating Behavior.

Previous research works compare early and later years of study (age) and cheating behavior. Baird (cited in Newstead et al., 1996) found that students in latter life of their study are less likely to cheat than those in their early years.

However, in opposing this idea, Stern and Havelick (cited in Newstead et al., 1996) found no differences of cheating in relation to years of study.
Even if there is little research that looked directly the effect of age on cheating behavior, Haines et al., Stokes and Newstead (cited in Newstead et al., 1996) found negative correlation between age of students and reported incidence of cheating. Comparing three age groups in cheating behavior in a college, Stokes and Newstead (cited in Newstead et al., 1996) found that both the older age group (aged 25 years or older) and the younger age group (18-20 years) cheat less than the 21-24 years olds category. Some researchers like Anderman et al. (1998) reported no relationship between incidence of cheating behavior and student age on early adolescence. Richardson (cited in Newstead et al., 1996) reported that motivational differences in students’ age are responsible for explaining these differences.

In a nutshell, there were no much researches that compare the effect of age on cheating behavior. Even those which reported the relation between age and cheating are conflicting.

2.7. Summary

Researchers in the past considered personal as well as situational factors in explaining student’s cheating behavior. The current views in education emphasize the importance of student’s achievement goals in explaining much of students’ behavior. Currently there are two prominent theories of achievement goals. These are the normative and the revised goal theories. The normative goal theorists classify achievement goal as mastery and performance goal. On the other hand, the revised goal theorists oppose the idea of the normative goal theorists of considering performance goal as a single
construct. As a result, they bifurcated performance goals into performance approach and performance avoidance goals.

Moreover, the normative goal theorists concluded that performance goal is maladaptive in academic situation. The revised goal theorists, however, claimed that this conclusion is not valid as normative goal theorists failed to separate performance goal into performance approach and performance avoidance goal and see their effect independently. The revised goal theorists also added that performance approach goal may not be always maladaptive.

Even though the revised goal theorists advocate the importance of their model to understand a number of behaviors in education, they have not examined it on maladaptive behavior.

As a result, this paper tried to determine the role of mastery goal, performance approach goal, performance avoidance goal, sex and age in predicting cheating behavior using the revised goal theorists approach of motivation.
CHAPTER THREE

METHODS

The objectives of this study were to investigate the prevalence of cheating behavior in Maths learning among 9th graders; and to determine the role of gender, age, and goal orientations of the students in predicting cheating behavior. To accomplish these objectives, the following methods were used.

3.1. Sampling

The target population of this study was 9 grade regular students of Addis Ababa who were pursuing their education in 2003/04 academic year in government schools. There are about 20 government schools and 11 private high schools in Addis Ababa. Only government schools were taken for this study as motivational orientations is largely dependent on the class size (Meece et al., 1988). Six schools were selected by random sampling. The selected schools were Kokebe Thsibah, Dil-Ber, Menilik, Addis-Ketema, Shimeles Habte and Wondrad. From each of these schools, only one class of grade 9 was selected as participant by simple random employing a lottery method. Consequently, a total of 393 samples/participants/ were selected from the mentioned schools. Out of this, 195 were females and 198 were males. Those students who failed to report their ages were discarded from the final analysis when necessary. The total population of grade 9 and other information were given in Table 1 below.
<table>
<thead>
<tr>
<th>Name of the selected schools</th>
<th>Total number of 9th graders by sex and sample size</th>
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<tr>
<td></td>
<td>Population</td>
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<td></td>
<td>Boys</td>
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<td>Shimeles Habte</td>
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<td>855</td>
</tr>
<tr>
<td>Overall</td>
<td>7337</td>
<td>7517</td>
</tr>
</tbody>
</table>

Source: Addis Ababa Educational Bureau (1996)
3.2. Variables

3.2.1. Independent Variables: the independent variables of this study are sex, age, mastery goal, performance approach goal, and performance avoidance goal.

3.2.2. Dependent Variable: the dependent variable of this study is students' self-reported cheating behavior.

3.3. Instruments

The instruments that were employed for this research consist of five sets of items. The first set consists of items, which were related to demographic variable. The second set which was intended to measure mastery goal consists of seven items. Students responded to a three point Lickert type scale ranging from not true of me to true of me.

The third and the fourth set which were intended to measure performance approach and performance avoidance goals consist of five items each. Students responded similarly as that of mastery goal. The final set, which was intended to measure cheating behavior, consists of nine items. Students also responded similarly by rating a three point Lickert type scale ranging from not true of me to true of me.

All the above achievement goals measures were adapted from Harackiewicz et al. (2000) and Bong (2001) scales. All of them were prepared in a way that probes student's goal in grade 9 Maths class. The cheating measures were adapted from Newstead et al. (1996) and Anderman et al. (1998).
3.4. Pilot Testing and Procedures

Two independent English graduate students made forward and backward translations for all scales before pilot testing. After ensuring that the translations were acceptable, the pilot test was done on forty-five grade 9 students of Yekatit 12 Secondary Schools.

Initially, it was believed that the ages of the 9th graders are somewhat homogeneous. As a result, there was an intention to avoid age if this is true. The pilot test result, however, revealed that the age of the student ranges from 13 - 20. Therefore, it was decided to retain age for the final study. Similarly, there was an intention to see the effect of streams (Natural, Social) on cheating behavior. It was learnt from the pilot test result that there is no such grouping. As a result, it was decided to eliminate the stream-wise grouping in the final study.

The mastery goal scale originally consisted of eight items. It was observed during pilot testing that one item was ambiguous for most of the student. As a result, it was deleted from the final scale, as it was difficult to modify it. The final scale consisted of seven items. The reliability estimate of this scale was found to be 0.81.

The performance approach goal scale consisted of five items. This scale had a reliability estimate 0.62. The performance avoidance goal scale also consisted of five items. The reliability of this scale was found to be 0.49. For the performance approach and
performance avoidance goals scales, the necessary modifications were made on items that were believed to reduce the reliability estimates.

With respect to cheating behavior, Newstead et al. (1996) suggested that it might be a paradox to ask students to be honest about their own dishonesty. There are techniques, however, that serve to render more or less reliable information. These techniques are using confidential questionnaire and establishing good rapport with the subject of the study (Anderman et al., 1996). As a result, cheating scale was prepared that asks students' cheating behavior in grade 9 Maths learning without writing their name.

The cheating scale consisted of nine items. Since all the items are good items when we examine every estimates of their reliability, all were retained for the final study. The reliability estimate of this scale was 0.82.

Immediately before administering the questionnaire to the selected subjects, the researcher and two assistant researchers (who are first year graduate students in Addis Ababa University in the department of measurement and evaluation; and had the role of distributing, monitoring and collecting back the questionnaire) briefed the participants about the purposes of the research. During briefing, students were reminded to be honest of their reply and not to write their names on the questionnaire. They were told that their reply would be kept confidential and it will not affect them by any means.

With the help of assistant researchers who were briefed by the writer of this paper, the final data administrations to the selected samples in different schools were undertaken.
The instruments that were used for the final study along with other information appear in Table 2 below.

Table 2: General description of the adopted versions

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items dropped</th>
<th>Items modified</th>
<th>Total items used</th>
<th>Reliability of total items (Chronbach alpha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Reasons</td>
<td>No.</td>
<td>Modification made</td>
</tr>
<tr>
<td>Mastery goal scale</td>
<td>1</td>
<td>- Creating ambiguity</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Performance approach goal scale</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>In the phrasing</td>
</tr>
<tr>
<td>Performance avoidance goal scale</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>In the phrasings</td>
</tr>
<tr>
<td>Cheating measure</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

3.5. Analysis of Data

Summary statistics of the variables were presented. Then, a zero order correlation was presented to determine variables that are related with cheating behavior significantly. One sample t-test was employed to determine the prevalence of cheating behavior. Finally; regression analysis was also employed to determine predictors of cheating behavior.
CHAPTER FOUR

ANALYSIS AND RESULTS

As indicated time and again in various parts of this paper, the objectives of this study were to investigate the prevalence of cheating behavior in Maths learning among 9th graders; and to determine the role of gender, age, and goal orientations of the students in predicting cheating behavior.

Descriptive summaries of variables presented below in Table 3. For this research female is coded 2 and male is coded 1. The other measures are continuous variables.
Table 3: Descriptive statistics of the variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Minimum Score</th>
<th>Maximum Score</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expected</td>
<td>Observed</td>
<td>Expected</td>
<td>Observed</td>
</tr>
<tr>
<td>(Mal. Code 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex (Fem. code 2)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mastery goal</td>
<td>9</td>
<td>9</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Performance</td>
<td>5</td>
<td>6</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>approach</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>goal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td>5</td>
<td>5</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>avoidance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>goal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheating Scale</td>
<td>9</td>
<td>9</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Age</td>
<td>-</td>
<td>13</td>
<td>-</td>
<td>20</td>
</tr>
</tbody>
</table>

As shown in Table 3 above, the expected mean for the mastery measure was 14. But the observed mean is slightly higher, i.e., 15.868. For the performance approach and performance avoidance goals, the expected mean were 10 and the observed mean for these goals were slightly lower, i.e., 9.903 and 9.270 respectively. For the variable age, the maximum age reported was 20 and the minimum age was 13. The observed mean for age was 15.845. For the cheating measure, the maximum score reported was 27 and
the minimum score reported was 9. For this variable, the observed mean was 13.620 and the expected mean was 18. The observed mean was lower than the expected mean. In order to determine the prevalence of cheating behavior in grade 9 Maths, a one-sample t-test was employed. As shown in Table 4 below, the test revealed that there was a significant mean difference between the sample mean and the hypothesized population mean with a t-value of -20.433 at 392 degrees of freedom and .01 level of significances. This means that grade 9 students reported lower level of cheating behavior in Maths learning.

Table 4: One sample t-test result for the prevalence of cheating behavior

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. error of the mean</th>
<th>T-value</th>
<th>df</th>
<th>Sig.(2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheating</td>
<td>393</td>
<td>13.620</td>
<td>4.483</td>
<td>.226</td>
<td>-20.433</td>
<td>392</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The final objectives of this research was to determine factors that predict cheating behavior. A zero order correlation, as shown in Table 5 below, among the cheating measure, sex (male coded 1, female coded 2); age, mastery, performance approach and performance avoidance goals were presented below. The test revealed that sex did not relate to cheating behavior significantly even if the trend shows that engagement in cheating increases if the person is male and vice versa.
Meanwhile, age was related significantly to engagement in cheating behavior. As shown on Table 5 below, as age increases, engagement in cheating behavior in Maths also increases and vice versa. For goal measures, it was found that cheating behavior negatively related to mastery goal. Performance approach and performance avoidance goals positively related to cheating behavior in grade 9 Maths.

Table 5: Zero order correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cheating behavior</th>
<th>Sex</th>
<th>Age</th>
<th>Mastery goal</th>
<th>Performance approach goal</th>
<th>Performance avoidance goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheating behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td>.067</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>.184**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mastery goal</td>
<td>-.453**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.027</td>
<td>.202**</td>
<td></td>
</tr>
<tr>
<td>Performance approach goal</td>
<td>.144**</td>
<td></td>
<td>.112*</td>
<td></td>
<td>-.199**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.028</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance avoidance goal</td>
<td>.369**</td>
<td>.026</td>
<td>.133**</td>
<td>-.352**</td>
<td>.313**</td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at 0.01 levels.

* Correlation is significant at 0.05 levels.
The final analysis, however, was done employing regression analysis to determine factors that predict cheating behavior.

First, all the variables entered to determine the model fit. As shown in Table 6 below, the variables fit the model with F-value of 27.743 at 5 and 378 degrees of freedom and 0.01 levels of significance. The model explained that 26.8% of the variance in cheating behavior was accounted for by sex, age, mastery goal, performance approach goal, and performance avoidance goal measures. Out of 26.8% of this variance, the independent contribution of mastery goal, performance avoidance goal, performance approach goal, sex and age were 16.2174, 8.7822, -0.1872, 1.4536, and 0.536 respectively. This means mastery goal and performance approach goal predict cheating behavior more than the other variables even if their trend is dissimilar.

Table 6: Initial model summary

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>2075.278</td>
<td>5</td>
<td>415.056</td>
<td>27.743</td>
<td>.000</td>
<td>.268</td>
</tr>
<tr>
<td>Residual</td>
<td>5655.157</td>
<td>378</td>
<td>14.961</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7730.435</td>
<td>383</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As indicated in Table 7 below, mastery goals negatively predicted cheating behavior with a t-value of -7.482 and 0.01 level of significances. On the other hand, performance
avoidance goal positively predicted cheating behavior with a $t$-value of 4.883 and 0.01 levels of significances. The rest of the variables (sex, age and performance approach goal measure) failed to predict cheating behavior significantly.

Table 7: Coefficients, t-test and significance level for the independent variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>15.605</td>
<td>3.052</td>
<td>5.112</td>
<td>5.112</td>
</tr>
<tr>
<td>Sex</td>
<td>-.722</td>
<td>.396</td>
<td>-.080</td>
<td>-1.825</td>
</tr>
<tr>
<td>Age</td>
<td>.239</td>
<td>.137</td>
<td>.079</td>
<td>1.744</td>
</tr>
<tr>
<td>Mastery goal</td>
<td>-.553</td>
<td>.074</td>
<td>-.358</td>
<td>-7.482</td>
</tr>
<tr>
<td>Performance approach goal</td>
<td>-.003</td>
<td>.109</td>
<td>-.013</td>
<td>-.274</td>
</tr>
<tr>
<td>Performance avoidance goal</td>
<td>.473</td>
<td>.097</td>
<td>.238</td>
<td>4.883</td>
</tr>
</tbody>
</table>

Finally, regression analysis once again was employed to determine the final models taking only significant predictors. The final model summary, shown on Table 8 below, revealed that the model was significant with the $F$-value of 65.410 at 2 and 381 degree of freedom and 0.01 level of significances.
Table 8: Model summary for the final

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1975.892</td>
<td>2</td>
<td>987.946</td>
<td>65.410</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>5754.543</td>
<td>381</td>
<td>15.104</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7730.435</td>
<td>383</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The coefficients, the t-statistics, and the significance levels for the model are depicted in Table 9 below. Mastery measure predicted cheating behavior negatively with a t-value of -7.819 and .01 level of significance. On the other hand, performance avoidance orientation predicted cheating behavior positively with a t-value of 5.058 and .01 level of significance.

Table 9: Coefficients, t-tests, and significance levels for the final models (predictors)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>t</td>
</tr>
<tr>
<td>Constant</td>
<td>18.272</td>
<td>1.689</td>
<td></td>
<td>10.820</td>
</tr>
<tr>
<td>Mastery goal</td>
<td>-0.570</td>
<td>0.073</td>
<td>-0.369</td>
<td>-7.819</td>
</tr>
<tr>
<td>Performance avoidance goal</td>
<td>0.474</td>
<td>0.094</td>
<td>0.239</td>
<td>5.058</td>
</tr>
</tbody>
</table>
The regression equation for the final model in predicting students' cheating behavior in grade 9 Maths learning was given by:

\[ Y_1 = 18.272 - 0.5700 X_1 + 0.474 X_2 \]

where,  

- \( X_1 \) = Scores on mastery goal  
- \( X_2 \) = Scores on performance avoidance goal
CHAPTER FIVE

DISCUSSIONS

One of the objectives of this study was to determine the prevalence of cheating behavior in Maths learning in grade 9 government school students of Addis Ababa. As indicated in the analysis and result part, the one sample t-test result vividly revealed that students appear to report low level of cheating behavior.

Even if it could be inferred from Darge's (2001) study that cheating behavior is a problem in Addis Ababa, it was found that the prevalence of cheating behavior in Maths learning in grade 9 government school students of Addis Ababa is low. The possible explanation for the observed inconsistencies may be that the present study is limited only to Maths subject and cheating behavior may not be as such a serious problem in grade 9th Maths. The nature of cheating behavior in other subjects or other grades may be different from what has been found for Maths in the present context.

The final objective of this study was to investigate the variables that predict cheating behavior in Maths learning in grade 9 government school students of Addis Ababa.
As indicated in the analysis and results section, sex of the students failed to predict cheating behavior significantly. This is, indeed, consistent with the findings of some researchers (for example, Anderman et al., 1998; Haines et al., and Houston cited in Newstead et al., 1996).

Similarly, age of the students did not predict cheating behavior in Maths learning in grade 9 government schools students of Addis Ababa. This finding is consistent with Anderman et al. (1998).

The possible explanation for sex and age not to come out as significant predictors of cheating behavior might be due to the emphases given in a classroom. In a classroom where there are explicit emphasis, structures and cues, the influence of individual difference would be overridden (Mischel et al. cited in Meece, 1988). This idea could explicitly refer to the fact that every student within the classroom (be it male or female; or at any age group) might be influenced by the goals the teachers emphasize and leaving little room for the mentioned demographic variables to influence engagement in cheating behavior. As a result, differences due to sex and age in explaining engagement in cheating behavior might be masked. In line with this finding, Anderman et al. (1998) also found out the importance of classroom variables than demographic variables in determining the likelihood of engagement in cheating behavior.
The mastery goal measure negatively predicted cheating behavior in Maths learning in grade 9 government school students of Addis Ababa. In favor of this idea, Newstead et al. (1996) findings' declare mastery goal orientation as not related to cheating behavior.

In fact, several scholars (for example, Ames, 1992; Ames and Archer, 1988; Midgley et al., 2001) pointed out the positive effects of mastery goal in academic context. Learning new skill, love of challenge and curiosity, primarily motivates students who adopt mastery orientation. As a result, they do not take cheating as an alternative to achieve good grades in Maths tests, exercises and exams even if they come across tasks that are challenging to master. Rather than engaging in activities like cheating that documents their ability, they prefer to exhibit a tremendous effort so as to master the task.

Another significant variable involved in the study, performance avoidance goal measure, positively predicted cheating behavior in Maths learning in grade 9 government students of Addis Ababa.

What has been found here is also consistent with Fontana (1995:245-246). He indicated that students' fear of consequences if they do badly in the work concerned may lead them to cheat. This fear may simply be fears of the teacher's anger or punishment. Fontana (1995:245) also added that teachers may have been humiliating children who receive low marks by reading these mark to the class or getting the children to read them out themselves. This by itself may lead students to cheating on exam or course work so as to escape from the teacher's unpleasant stimulus and its consequence.
Various scholars (for example, Arvilommi et al., 2000; Pintrich, 1999) also indicated the negative effects of performance avoidance goal in academic context. Students with this orientation love an easy task so as to hide their incompetency. They do not want to invest effort to work out the task they are required to. At times, avoidance oriented students may face reasonably challenging tasks and feel that these results in having a sense of being perceived by others as having low ability. As a result, they are motivated to avoid such unpleasant moment by any means. One means, as it is found in this research, may be cheating. Martin et al. (2001) also indicated that when students learn in academic context that results in being seen by others as having low ability, some students tend to protect their sense of ability by different mechanisms. That mechanism may be cheating in a subject so as to get a good result and influence their teachers’, peers’ or their parents’ evaluation of their ability.
CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The objectives of this study were to determine the prevalence of cheating behavior in Maths learning among grade 9 students of government schools in Addis Ababa; and also to identify the role of sex, age, mastery goal, performance avoidance goal and performance approach goal in predicting cheating behavior.

This research has got some limitations, however. Firstly, students might not have truly reported their cheating behavior as cheating is a sensitive issue. Secondly, the findings of this study may not be generalized to other subjects and grade levels since this study was delimited to grade 9 Maths learning.

6.1. Summary and Conclusions

An attempt was made to investigate the prevalence of cheating behavior in Maths learning in grade 9 students of government schools of Addis Ababa. The study also tried to investigate the role of sex, age, mastery goal, performance approach goal and performance avoidance goal in predicting student’s engagement in cheating behavior in grade 9 Maths learning.
In the light of the findings, the following conclusions were made.

- Regarding the prevalence of cheating behavior in Maths learning, grade 9 students of government schools in Addis Ababa reported lower level of cheating behavior.
- Regarding predictors of cheating behavior in Maths learning in grade 9 government school students of Addis Ababa, mastery orientation negatively predicted cheating behavior. On the other hand, performance avoidance goal orientation positively predicted cheating behavior.
- Sex, age and performance approach goal did not predict cheating behavior significantly in the present study.

6.2. Recommendations

An attempt was made to determine the prevalence of cheating behavior in grade 9 Maths learning. Besides, the role of age, sex, mastery goal, performance approach goal and performance avoidance goal in predicting students’ cheating behavior in grade 9 Maths was also investigated. Based on the findings, the following recommendations were made.
- The concerned body should create awareness as to how students value effort so as to create mastery orientation among students.

- The concerned body should inculcate in the minds of students the importance of love of challenge and avoid fear of making mistakes in Maths learning so as to decrease performance avoidance orientation in Maths learning.

- There may be other factors that may predict cheating behavior in grade 9 Maths. Therefore, it is recommended to test these factors in future research.

- Further research should be conducted in other subjects and grade levels so as to generalize the findings of this study.

- A comparative study between government and private school students should be conducted to see that there is a difference in prevalence of cheating behavior; and also to investigate whether government and private schools students cheat for the same reason or not.
REFERENCES


DECLARATION

I, THE UNDERSIGNED, DECLARE THAT THIS THESIS IS MY ORIGINAL WORK AND HAS NOT BEEN PRESENTED FOR A DEGREE IN ANY OTHER UNIVERSITY AND THAT ALL SOURCES OF MATERIALS USED FOR THE THESIS HAVE BEEN DULY ACKNOWLEDGED.

NAME: KINDE GETACHEW

SIGNATURE: __________________

PLACE: ADDIS ABABA UNIVERSITY SCHOOL OF GRADUATE STUDIES.

DATE OF SUBMISSION: ______________

THIS THESIS HAS BEEN SUBMITTED FOR EXAMINATION WITH MY APPROVAL AS A UNIVERSITY ADVISOR.

NAME: BELAY TEFERA (PH.D.)

DATE OF APPROVAL: __________________

SIGNATURE: ____________________
Objectives: The objectives of this study are to investigate why some 9 grade students do motivate to cheat on Maths class and examination. This study also suggests possible solutions that enable to minimize students' cheating. As a result, your cooperation in filling the following questionnaire is appreciated and needed so as to get the necessary information. If you fill any discomfort to be included as subject of this study, you have a full right to quit filling the questionnaires at any time. Thank you for your cooperation.

Note: Writing your name is not necessary.

Part I: General Information
Direction: This part contains items which refer to general information. Read each item and fill your reply or check your answer off on the space provided.

Sex Male ___ Female ___
Age __________________
Name of the School __________________________

Part II: This section contains three parts. Each part contains items which probe why students learn Maths and how students feel when they learn Maths. Read carefully the items and check your goal off on the box provided which describes you best.

1. The main reason I learn Maths is not because I like the subject rather to get high score. True of me ___ Some what ___ Not true of me ___
2. Although I make a lot of mistakes in Maths work, I like the subject as I will learn from those mistakes. True of me ___ Some what ___ Not true of me ___
3. I prefer to learn few concepts in Maths class. True of me ___ Some what ___ Not true of me ___
4. In Maths class I prefer easy exercise though I could learn more from the challenging ones. True of me ___ Some what ___ Not true of me ___
<table>
<thead>
<tr>
<th></th>
<th>True of me</th>
<th>Some what true of me</th>
<th>Not true of me</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. My main goal in Maths works and examinations is to <strong>gate</strong> good result rather than understanding the lessons.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. At present it's important to me to learn Maths.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. In Maths class I prefer the exercises and the lessons to <strong>be</strong> easy in stead of being challenging.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>True of me</th>
<th>Some what true of me</th>
<th>Not true of me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In Maths class, I feel successful when only few students including me answer the questions presented.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. My main goal in Maths class is to get more score than other students in stead of understanding the lessons.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. In Maths class, I strive to show my Maths ability to my teachers and friends.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. My main objective in Maths class is to get good result in stead of understanding the lesson.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. As my general objective in learning is to get good result in all subjects, I have to get good result, in Maths, too.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>True of me</th>
<th>Some what true of me</th>
<th>Not true of me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My main reason to learn Maths is that I want the teacher not to think/perceive me as less knowledgeable of the subject than other students</td>
<td></td>
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<tr>
<td>2. My main objective in Maths class is not to be perceived as less competent in stead of striving to understand the lessons.</td>
<td></td>
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<tr>
<td>3. In Maths class, I do worry if I'd perform less than other students.</td>
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<tr>
<td>4. I like Maths more whenever the exercises and the tests appear easy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. In Maths class, I prefer to work less.</td>
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</tbody>
</table>
Part III: This section contains items that are intended to gate students' engagement in cheating behavior in grade 9 Maths learning. Read carefully again, and check your behavior off on the box provided which describes you best.

<p>| | | | |</p>
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<tr>
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<tbody>
<tr>
<td>1. In Maths class work, I looked at other students work.</td>
<td>True of me</td>
<td>Some what true of me</td>
<td>Not true of me</td>
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<tr>
<td>2. During Maths examination I used sheets paper so as to get answers from other students.</td>
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<tr>
<td>3. During Maths class exercise I got answers from other students.</td>
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<tr>
<td>4. I let the Maths home work be done by someone else.</td>
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<tr>
<td>5. I copied answers from other students while doing my home work.</td>
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<tr>
<td>6. During Maths examination, I looked at formulas using crib-sheets I took in to the exam hall.</td>
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<tr>
<td>7. During Maths examination I got answers by talking to other students.</td>
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<tr>
<td>8. I let other individual to take my own Maths exam</td>
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<tr>
<td>9. During Maths examination, I looked at answer from students sat opposite to or beside me.</td>
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<td></td>
</tr>
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አን🧧ወ ከእር ከፋክታ
የማህści ከምእ
የአገራት ማህści ከምእ

አልባት ከሆን የአጠቃላይ ከወረ ghế ከወንወስ ከእር ከፋክታ ማህści ከምእ ማህści ከምእ የአጠቃላይ ከወንወስ ከወንወስ ከእር ከፋክታ

ማህści ከውን ከወንወስ ከወንወስ ከእር ከፋክታ ማህści ከምእ ማህści ከምእ የአጠቃላይ ከወንወስ ከወንወስ ከእር ከፋክታ

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ማአር : ከወንወስ/ወንወስ ውስጥ ማሳት

ሔል A : እምባን መን Niger

ማህści ከውን ከወንወስ ከወንወስ ከእር ከፋክታ ማህści ከምእ ማህści ከምእ የአጠቃላይ ከወንወስ ከወንወስ ከእር ከፋክታ

ማአር : ከወንወስ/ወንወስ ውስጥ ማሳት

ሔል I : እምባን መን Niger

ማአር : ከወንወስ/ወንወስ ውስጥ ማሳት

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ማአር : ከወንወስ/ወንወስ ውስጥ ማሳት

ሔል II : እን ከወንወስ ከወንወስ ከእር ከፋክታ ማህści ከምእ ማህści ከምእ የአጠቃላይ ከወንወስ ከወንወስ ከእር ከፋክታ

ማአር : ከወንወስ/ወንወስ ውስጥ ማሳት

ሔል III : እን ከወንወስ ከወንወስ ከእር ከፋክታ ማህści ከምእ ማህści ከምእ የአጠቃላይ ከወንወስ ከወንወስ ከእር ከፋክታ

ማአር : ከወንወስ/ወንወስ ውስጥ ማሳት
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2. Наша планка вниз   | ☐         | ☐         | ☐         |
3. Наша планка вниз   | ☐         | ☐         | ☐         |
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