Goal Orientations, Learning Outcomes, and Interest in English and Mathematics Of Grade 9 Students

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This explanatory mixed methods study investigated which achievement goal drives students' learning processes and outcomes as well as the relationship between students' goal orientations and learning outcomes, between their goal orientations and interest, and between their learning outcomes and interest in English and Mathematics. The participants in this study were 398 Grade 9 students from four secondary schools in Antipolo City. The findings of the research indicate that students are driven more by mastery goals. No significant difference is found between students' goal orientations in English and Mathematics and between goal orientations of students from public and private schools. Mastery goals are significantly related with students' learning outcomes and interest while learning outcomes are significantly related with interest. Several internal and contextual factors that influence students' goal orientations, learning outcomes, and interest were identified. The results in this study may encourage readers develop latest instructional interventions and innovations, design projects, and reform the curricula in consideration of goal orientation and motivation. Instilling among the students the intrinsic value of learning in any subject is recommended.

Keywords: *English, goal orientations, interest, learning outcomes, Mathematics, motivation, type of school*

Introduction

One of the most dynamic areas of motivation research over the last 30 years has been research on achievement goal orientations. Goal orientations refer to the patterns of behavior that students display for pursuing a specific goal. They are the reasons and purposes of students for engaging in achievement tasks (Pintrich, 2003) or for striving to achieve academically (Hernandez, Schultz, Estrada, Woodcok, & Chance, 2013).

Early proponents of goal orientations identified two general orientations to achievement (Ames & Archer, 1988; Dweck, 1986; Nicholls, 1984). Each proponent labeled these two goal orientations differently: mastery and performance goals (Ames & Archer, 1988); learning and performance goals (Dweck, 1986); and task-involved and ego-involved goals (Nicholls, 1984). Mastery, learning, or task-involved goals suggest that students are inherently driven to improve their skills, master the lesson, and learn new concepts. Performance or ego-involved goals, on the other hand, suggest that students are driven by favorable evaluations, avoid negative evaluations of their ability, compare their performance, and attempt to surpass others. It is important to note that although various researchers studying about achievement goals labeled constructs differently, and despite some salient differences, their findings shared similarities: that mastery goals produced positive or adaptive patterns of motivated behavior such as persistence, patterns of help-seeking, risk-taking, enjoyment, and learning outcomes; performance goals, on the other hand, have been associated with the opposite outcomes (Ames & Archer, 1988; Dweck, 1986; Nicholls, 1984; Pintrich, 2003).

While the association of adaptive outcomes with mastery goals remained consistent, goal orientation research on performance goals revealed that it may also result in adaptive behavior, not only maladaptive ones. The inconsistencies of the findings with performance goals led researchers to split performance goal into approach and avoidance components. Specifically, students who pursue performance-approach goal aim to demonstrate competence and to outperform peers, while students who pursue performance-avoidance goal aim to avoid looking incompetent (Elliot & Harackiewicz, 1996). There is empirical basis from causal and correlational studies that performance-approach goals can result in improvement in actual achievement and performance (Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002). However, this finding is not broadly supported in the literature (Kaplan & Middleton, 2002) and warrants further research on achievement goals characterization.

Hence, there are three kinds of students who enter in the classrooms. First are the students who do their school work because they want to improve their skills and to learn about the lesson genuinely. Second are the students who do the assignment and prepare for the test to demonstrate competence or be better than others by getting higher grades or to be recognized. Third are the students who come to school and do their work just to avoid failing and looking bad in comparison with or in the sight of others. In terms of goal orientations, these three kinds of students display the characteristics of mastery goal, performance-approach goal, and performance-avoidance goal, respectively.

In addition, students' adoption of a particular goal may be related to their cognitive or learning outcomes (Maehr & Zusho, 2009), such as overall performance in a particular class or subject. A number of studies abroad have reported that only mastery goal, performance-approach goal, or both were positively related with learning outcomes (Brophy, 2005; Chan & Lai, 2008; Mattern, 2005; Senko, Durik, & Harackiewicz, 2008). However, in the local setting, there is a paucity of research relating goal orientations with learning outcomes. Espino (2010) reported that only mastery goal of elementary students were related with their learning outcomes in Mathematics while Ramos (2005) stated that goal orientations were not related with learning outcomes of college intern students. According to multiple goal perspective, students who have mastery goal may have lower learning outcomes but higher interest, students

with performance-approach may have higher learning outcomes but lower interest, and students with performance-avoidance goal may have lower learning outcomes and lower interest. These limited and conflicting findings, thus, need further examination.

Some researches suggest that goal orientations are linked with students' affective outcomes, such as interest (Hulleman & Senko, 2010). Interest is a student's relatively enduring disposition to be attracted and attentive to, to enjoy, or to like to be engaged in a particular activity or topic (Pintrich & Schunk, 2002). Research has shown that higher level of interest motivates students to learning and achievement. A key direction for research is not proving that interest matters, but rather trying to find out the relations between goal orientations and this construct.

Although positive learning outcomes and higher levels of interest are potential consequences of students' goal orientations, there is no information that links both to goal orientations. A few studies were conducted that reported relations existed between learning outcomes and interest (Apat, 2006; Faustino, 2003; Sarigumba, 2011). However, these studies focused on the effect of a teaching strategy to learning outcomes and interest in Mathematics and not goal orientations. This gap in the literature is important to examine to help researchers understand how motivational constructs relate to various cognitive and affective processes.

In a meta-analytic review on goal orientation studies of Hulleman, Schrager, Bodmann, and Harackiewicz (2010), of the 243 studies with 91,087 participants, most were college students (64%), 24% of which were taking Introductory Course in Psychology; 26% belonged to elementary and middle schools; and only 10 % belonged to high school. On the other hand, most of the studies done about Filipino youths in particular, explored the goal orientations of elementary (e.g., Cabigas, 2008; Espino, 2010) and college students (e.g., Ramos, 2005). These trends show that few local and foreign studies on goal orientations, learning outcomes, and interest have focused on high school students (e.g. Joaquin, 2007). If motivational theorists posit that schools become performance-oriented when students reach adolescence (Omrod, 2006), then a look into the interplay of these three concepts among Filipino secondary school students is warranted.

Students enter the classrooms and learn in different subject areas. Subjects that students take are different from one another, particularly in terms of levels of difficulty and required skills. Alitagtag (2011) noted that English and Mathematics can be distinguished with regard to the types of students' intelligences that they primarily tap or develop—linguistic and mathematical intelligence—for English and Mathematics, respectively. To the researchers' informed knowledge, no studies have investigated on the difference in students' goal orientations between these two distinct subjects. Students may adopt different goal orientations in different subject areas due to the nature of each field. Examining if students have the same or different goal orientations in two different subjects in high school, such as English and Mathematics subjects, may enlighten educators whether goal orientations are transient or remain constant from one subject to another.

Local studies that focused on similar subjects include those of Cabigas (2008), Espino (2010), and Joaquin (2007) for Mathematics and that of Banzuelo (2012) for Science and English. Findings reported goal orientations of students are related with learning outcomes, teachers' goal orientations, and student approach to learning (SAL). However, there is scant research probing differences in students' goal orientations between subject areas. One of the few studies was done by Bong (2001), which found a relationship among goal orientations (mastery, performance-approach, and performance-avoidance) and Korean students' four academic subjects (Korean, English, Mathematics, and Science).

Meanwhile, it would be interesting to find out if the students' learning environment, such as

types of school or classroom contexts, has a bearing on the kind of goals that drive their learning. To date, the researchers found only one local study, that of Cabigas (2008), that looked into relations between goal orientations and school type. However, the schools involved in her study were elementary schools and had a smaller sample size. Determining if difference in goal orientations between types of school exists may set an impetus for future researches that would focus on the role of different types of classroom contexts on students' motivation to engage in certain learning tasks.

This study aimed to address the gap in research particularly the inter-relations of students' goal orientations, learning outcomes, and interest in Mathematics and English. Specifically, this sought to answer to the following:

1. What is the dominant goal orientation of students in English and in Mathematics?
2. Is there a difference between the goal orientations of the students in:
   a.English and Mathematics
   b.Public and private schools?
3. Is there a relationship between:
   a.students' goal orientations and their learning outcomes in:
      a.1. English
      a.2. Mathematics?
   b.students' goal orientations and their interest in:
      b.1. English
      b.2. Mathematics?
   c.students' learning outcomes and their interest in:
      c.1. English
      c.2. Mathematics?
4. What are the factors affecting students' goal orientations, learning outcomes, and interest?

Methodology

Research Design

This research used explanatory mixed methods design. Mixed methods research involves the use of both quantitative and qualitative methods in a single study. This type of design provides "a more complete understanding of research problems than does the use of either approach alone" (Fraenkel, Wallen, & Hyun, 2012, p.557). In explanatory design, the researcher first carried out a quantitative data gathering followed by qualitative data gathering to distill the quantitative data (Fraenkel et al., 2012). Punch (2009) asserted that explanatory design is used when there is a need to explain significant or surprising results from quantitative data. Explanatory mixed methods was employed to understand the constructs more distinctively.

Sample

The participants of the study were 398 Grade 9 students from ten heterogeneous classes in two public and two private schools in Antipolo City. Grade 9 students ranging from 14 to 17 years old were purposively selected for their adolescent's goal orientations.

Normally, the number of students that comprise each Grade 9 section is more or less 60 in public schools in the said research locale while private schools have 25 and above students per section. In all, there were ten sections that participated in the study (i.e., five sections from each type of school). The school heads selected the sections who participated in the study. To ensure heterogeneity in the sample, classes that belonged to advanced level of ability were not included.

Twelve teachers from the participating public and private schools were also observed and interviewed.

Research Instruments

Instruments that were used in this study were questionnaires, students' grades, focus group discussion (FGD) guide, classroom observation guide, and interview schedule.

To gather quantitative data, two questionnaires were adapted: Student Goal Orientation (SGO) Scale and Interest in Class Scale. SGO Scales of Espino (2010) and Midgley, Maehr, Hruda, Anderman, Freeman, and Gleen (2000) were adapted to determine the goal orientations of students in English and Mathematics. It consisted of 14 items (five items each for mastery and performance-approach goals and four items for performance-avoidance goals). On the other hand, Interest in Class Scale of Tomback (2007) was adapted to determine the interest of students in English and Mathematics. It consisted of 10 items wherein half of the statements were negatively stated. To score both scales, the following point values may be given to each statement: Not very true = 1, not true = 2, undecided = 3, true = 4, andvery true =5.

The number of students who gave the highest score for a goal orientation (mastery, performance-approach, or performance-avoidance) determines the dominant goal of the students; if students gave highest scores in both, they were identified as mixed goal (Espino, 2010). The SGO scales do not assign a student to a particular goal orientation; instead, it only measures the level of students' preference for each goal orientation. On the other hand, the mean scores of students in each goal orientation were computed to determine their relationship with learning outcomes and interest. The interest is expected to be high when students value, engage in, and persist in their school work (Wentzel, 1998). In this study, interest was treated as the amount of effort and attention that students exert in their respective subjects – English and Mathematics. Hence, the mean scores of students' interest were computed.

Both SGO and Interest Scales were written in English and Filipino and underwent validity, reliability, and usability evaluation. Content and face validation of instruments were done by experts who were composed of two Filipino teachers, who were practitioners and enrolled in graduate studies in Language Education, and educational psychology professors.

Tables 1 and 2 indicate the highly strong internal consistency results of both scales.

Table 1
Summary of Internal Consistency of SGO Scale

	Mastery	Performance Approach	Performance Avoidance
English	.75	.87	.87
Math	.74	.89	.83

Table 2
Summary of Internal Consistency of Interest in Class Scale

	Internal Consistency
English	.82
Math	.87

Learning outcomes are measured through grades that are reflected in students' report cards. In Philippine setting, grades are computed by getting the weighted average of written work, performance assessment, and quarterly exam (Corpuz, 2014). Hence, learning outcomes of students, which were measured through their First Grading grade, were used since the research was only conducted during the first two grading periods.

To gather qualitative data, a researcher-made FGD guide, an observation guide, and an interview schedule were utilized. The FGD guide contains questions that aimed to get the perceptions of students on their subjects, know their perceptions about their goals and effort in their classes, identify the factors that affect their goal orientations and note perceptions about the participants' goal orientations after an explanation of each goal orientation to the them.

The observation guide categorizes the areas for

observation such as lesson; objective; teaching strategy; perceived dominant goal orientation of the students, the teacher, and the learning environment; classroom climate; students' behavior; and other observations.

The interview schedule contains questions that asked teachers about their common beliefs in English and Mathematics teaching, as well as their goal orientations. Specifically, the questions were phrased to get the teachers' perceptions about students' reasons for their students' motivation and performance in their subjects; their goal orientations; and the influences of goal orientations, NAT, school policies, and performance bonus in their classroom practices. In determining the teachers' goal orientations, the researcher explained the characteristics of each goal orientation to the teachers. Then, teachers were asked to identify their goal orientations based on their understanding of the explanation and their experience in dealing with their students. Follow-up questions were asked to clarify the things that transpired in the observations.

Data Collection Procedure

Permission was sought from participating schools. To collect quantitative data, the primary researcher administered SGO and Interest in Class Scales and the survey form on student demographics. Two days were allotted per school, one day per subject. In addition, the first quarter grades of the students were obtained from their teachers.

To gather qualitative data, FGDs, classroom observations, and interviews were conducted. For FGD, nine students per class were randomly selected based on the students' dominant or least goal orientation. Questions were asked to students regarding their goal orientations. Four FGDs were conducted; permission was sought for these sessions to be audio recorded. In addition, 14 non-participant classroom observations were done using a researcher-made classroom observation guide to examine the actual teaching-learning process. Each observation lasted for one hour. Moreover, the researcher interviewed English and Mathematics teachers to solicit teachers' beliefs on students' motivation. Observations and answers of teachers were transcribed and analyzed.

Data Analysis Procedure

The quantitative data were analyzed using descriptive and inferential statistics. Descriptive statistics included the mean scores and standard deviation of the students' goal orientations in the two subjects. For inferential statistics, paired samples t-test was used to determine if there was significant difference in students' goal orientations between English and Mathematics. Independent samples t-test was used to determine if there was significant difference in students' goal orientations between public and private schools. Pearson product-moment correlation (level of significance = .05) determined the relationship between students' goal orientations and learning outcomes, between their goal orientations and interest, and between their learning outcomes and interest.

On the other hand, the transcript of FGDs and the notes from the interviews and classroom observations were organized thematically. These were coded to pull out themes and patterns that were deemed vital in this study.

Results and Discussion

This study intended to identify the dominant goal orientation of Grade 9 students particularly in English and Mathematics; test the differences in students' goal orientations between subjects and between types of school; determine the relationship between students' goal orientations and learning outcomes, between their goal orientations and interest, and between their learning outcomes and interest; and distinguish the factors affecting students' goal orientations, learning outcomes, and interest.

Dominant Goal Orientation

Out of 398 students, 370 or 94.39% gave highest scores to mastery goal; 5 or 1.26%,

performance-approach goal; 14 or 3.52%, performance-avoidance goal; and 9 or 2.26%, mixed goals in the English subject. In addition, the mean scores of students were 4.45 for mastery goal, 2.85 for performance-approach goal, and 3.34 for performance-avoidance goal.

Aside from highest scores, the mean scores of SGO in English were also computed. Results show that the mean scores of students in both public and private schools are 4.45 (very true) for mastery goal, 2.85 (not true) for performance-approach goal, and 3.34 (true) for performance-avoidance goal.

The dominant goal orientation of students in Mathematics was also mastery goal. Specifically, 361 or 90.70% gave highest scores to mastery goal; 7 or 1.76%, performance-approach goal; 24 or 6.30%, performance-avoidance goal; and 6 or 1.51%, mixed goals. Meanwhile, the mean scores of SGO in Mathematics were 4.48 for mastery goal, 2.82 for performance-approach goal, and 3.31 for performance-avoidance goal.

Meanwhile, the mean scores of SGO in Mathematics were also computed. The mean scores of students in Mathematics are 4.48 (very true) for mastery goal, 2.82 (not true) for performance-approach goal, and 3.31 (true) for performance-avoidance goal.

The findings suggest that among all the goal orientations, students lean toward mastery goal. Majority of the students hinted that they study English and Mathematics because they want to know more and understand deeply the content and were more interested to learn new concepts than to outperform others or to avoid getting low grades. These results are consistent with findings of other local studies (e.g., Espino, 2010, Joaquin, 2007, Nyoni, 2015, and Ramos, 2005), which reported that the dominant goal orientation of Filipino students was mastery goal.

Most Filipino students find English and Mathematics subjects challenging. This perception might have had an effect on why they are more oriented toward mastery goal. These subjects somehow require students to be intrinsically motivated to learn more about and hurdle the difficulties they encounter in these (Aunola et al., 2006 as cited in Espino, 2010). When students are intrinsically motivated, they value learning more about the subject than pursuing tangible rewards or pleasing others. Additionally, Woolfolk (2007) posits that when students pursue mastery goal, they may be too busy accomplishing this goal orientation and may not think about outperforming others anymore.

Moreover, classroom goal structures and teachers' goal orientations influence students' personal goal orientations (Ames, 1992). Ames (1992) and Cabigas (2008) explained that there is a relationship between students' goal orientations and teachers' perceived goal orientations. It is important to note that during the classroom observations in English and Mathematics classes, teachers predominantly endorsed mastery goal. They tend to value students mastering the material than telling them to be better than other students or to fear failing. Figures 1a to 1d illustrate the written explanations of students who gave high scores for mastery goal as disclosed by the students during the last activity in the FGDs.

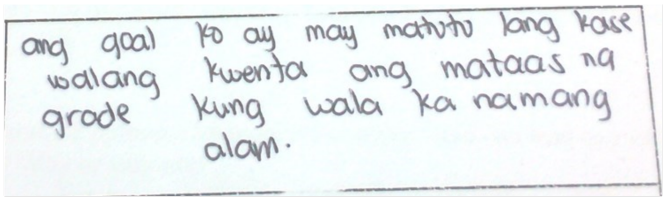

Figure 1a. Student 1. Mastery goal score in English = 4.4 and Performance-avoidance in English = 4.5 and Mastery goal score in Mathematics = 5. (My only goal is to learn because having a high grade is useless if you know nothing.)

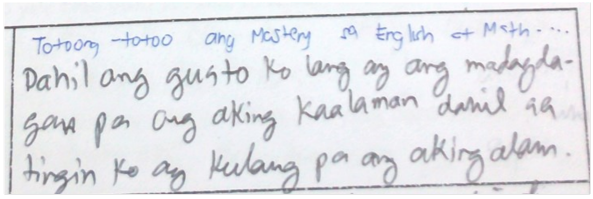

Figure 1b. Student 2. Mastery goal scores in both English and Mathematics = 5. (My mastery goal is very true in English and Math because I only want to increase my knowledge because I think my knowledge is not enough.)

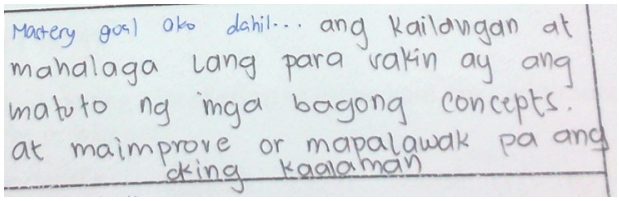

Figure 1c. Student 3. Mastery goal scores in English = 4.8 and in Mathematics = 4.6. (I have mastery goal because learning new concepts and enriching my knowledge is important to me.)

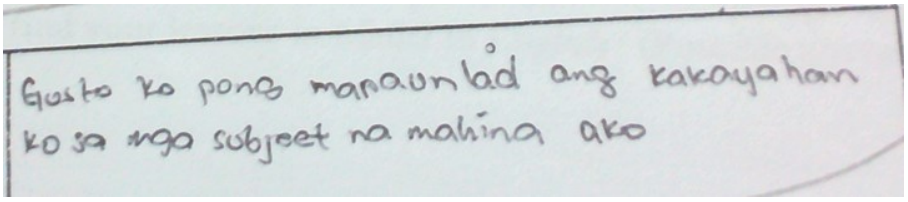

Figure 1d. Student 4. Mastery goal scores in both English and Mathematics = 4.6. (I want to enrich my competence in the subjects that I am not good at.)

These findings revealed that most students approach learning for learning's sake. It appears that high school students believe that mastery goal is more important than performance-approach and performance-avoidance goals. Hence, this points to the important role of teachers in finding ways on how to spark students' intrinsic motivation.

Difference in SGO between English and Mathematics and between Public and Private schools

English and Mathematics. Table 3 indicates that there is no significant difference in students' goal orientations between English and Mathematics. These findings show that goal orientations of students may not vary across subjects. Although English and Mathematics are two different subjects, teachers of both subjects conducted their lesson in almost the same manner and leaned toward a mastery goal orientation as revealed during the classroom observations.

Furthermore, it can be surmised that students' goal orientation in one subject may be related to their goal orientation in another subject. These results are similar to the findings of Bong (2001) that goal orientations are related across four subject areas that include English and Mathematics. The results in the present study may correspond to the assumption of Bong (2001) that relationship patterns among

Table 3
Difference among Goal Orientations Based on Mean Scores

Pairs	English Mean	Mathematics Mean	p-value
Mastery goals	4.45	4.48	.329
Performance-approach goals	2.85	2.82	.217
Performance-avoidance goals	3.34	3.31	.234

motivation constructs may be found in one subject area and may or may not be present in another subject area. In the present study, significant positive correlation was found in students' goal orientations between English and Mathematics (English and Mathematics mastery goals, r=.46; English and Mathematics performance-approach goals, r =.67; and Mathematics performance-avoidance goals, r=.61).

Public and private schools. Table 4 reveals that no significant difference is found between the goal orientations of students in public and private schools.

Table 4
Difference of Students' Goal Orientations between Public and Private Schools

Goal Orientation	Mean	Mean	p-value
	Public	Private	
Public and Private (English-Mastery)	4.46	4.45	.930
Public and Private (English-Performance-Approach)	2.81	2.93	.111
Public and Private (English-Performance-Avoidance)	3.37	3.31	.444
Public and Private (Math-Mastery)	4.52	4.42	.077
Public and Private (Math-Performance-Approach)	2.82	2.82	.993
Public and Private (Math-Performance-Avoidance)	3.26	3.39	.096

* $p < 0.05$

The results differ from the findings of Cabigas (2008) that reported that difference existed between public and private schools. While her study showed that the students in the all-female private school had predominantly mastery goal orientations, the results of the current study show that students in both public and private schools gave higher scores in mastery goal than performance-approach and performance-avoidance goals. It should be noted that in the current study, there was an equal ratio of public and private schools compared to that of Cabigas that included only one public school and four different types of private schools.

The results indicate that different types of school contexts may not affect the goal orientations that students have in their English and Mathematics subjects. Perhaps, the teachers themselves in both school types are the major factors that account for similarities of students in terms of the goals they pursue. Results of the FGDs with teachers as well as classroom observations indicated that teachers had mastery goal leanings which translated to how they delivered their lessons and in how they managed their classes.

It was apparent that majority of the English and Mathematics teachers from both school types engaged students in classroom discourse that focused on mastery, learning, and understanding lesson content.

Relationships between Goal Orientations and Learning Outcomes, between Goal Orientations and Interest, and between Learning Outcomes and Interest

Goal orientations and learning outcomes. Table 5 reveals that: (1) There is a significant low positive correlation between students' mastery goal scores and their learning outcomes in English, r = .20; (2) There is a significant low negative correlation between students' performance-approach goal scores and their learning outcomes in English, r = -.10; and (3) There is no significant correlation between students' performance-avoidance goal scores and their learning outcomes in English.

Table 5
Correlation between SGO and Learning Outcomes in English

Pairs	Correlation	Sig.
Mastery Goal and Grade	0.20	.000
Performance-Approach Goal and Grade	-0.10	.043
Performance-Avoidance Goal and Grade	-0.09	.083

Table 6 shows that: (1) There is a significant low positive correlation between students' mastery goal scores and their learning outcomes in Mathematics, r = .26 and (2) There is no significant correlation between students' performance-approach goal scores and their learning outcomes and between performance-avoidance goal scores and their learning outcomes in Mathematics.

Table 6
Correlation between SGO and Learning Outcomes in Mathematics

Pairs	Correlation	Sig.
Mastery Goal and Grade	0.26	.000
Performance-Approach Goal and Grade	-0.01	.092
Performance-Avoidance Goal and Grade	-0.02	.658

Relationships between learning outcomes and goal orientations are similar in both English and Mathematics. The findings are akin to Espino's work (2010) wherein only mastery goal had significant relationship with grades (r = .35) among elementary students. Moreover, results are also similar with other researches that reported that mastery goal had relationship with grades (Harrackiewicz & Linnenbrink, 2005; Mattern, 2005). Hence, having a mastery goal orientation is deemed beneficial to students. If students have mastered important skills, it would be easy for them to achieve more because they may possess the skills necessary for future testing.

Based on the interviews, teachers were mostly mastery goal oriented. Since teachers lean toward mastery goal, they probably provide learning experiences and evaluative practices that support mastery goal oriented classrooms. The teachers give tests in relation to their aims in teaching the students. These are consistent with the findings of Church, Ellilot, and Gable (2001) that students' mastery goal was linked to their achievement because teachers promoted mastery goal during that school year.

During the classroom observations, it was noted that cooperative classroom environments rather than competitive classroom environments were dominant in English and Mathematics classes in both public and private schools. Ames (1992) notes that cooperative classrooms are often associated with mastery goal oriented classroom since competitive classes often emphasize being better than others. This implies that the kind of classroom environment, which includes its mastery goal orientation leaning, created by the teacher of a particular subject, such as in English and Mathematics subjects in this current study, is associated with the learning outcomes of students.

Maehr and Zusho (2009) mentioned that "learning strategies that heighten social

comparison inevitably result in a kind of motivational hierarchy that only benefits a select few" (p.86). There were studies that took into account the relationship between learning outcomes and performance-approach goals, but these relationships were common only among college student samples. In college, students may be more independent and self-directed due to level of maturity compared to high school students who still need guidance and structure. Performance-approach goal may work with students who are already self-directed. Not all students in high school have that maturity to be self-directed. Thus, the impact of performance-approach goal to both groups may not be similar.

Goal orientations and interest. Table 7 shows that: (1) There is a significant moderate positive correlation between students' mastery goal scores and their interest scores in English, r = .42; (2) There is a significant low negative correlation between students' performance-approach goal scores and interest scores in English, r = -.12; and (3) There is no significant correlation between performance-avoidance goal scores and their interest scores in English.

Table 7
Correlation between SGO and Interest in English

Pairs	Correlation	Sig.
Mastery Goal and Interest	0.42	.000
Performance-Approach Goal and Interest	-0.12	.020
Performance-Avoidance Goal and Interest	-0.06	.216

Table 8 indicates that: (1) There is a significant moderate positive correlation between students' mastery goal scores and their interest scores in Mathematics, r = .40 and (2) There is no significant correlation between students' performance-approach goal scores and their interest scores and between their performance-avoidance scores and their interest in Mathematics.

Table 8
Correlation between SGO and Interest in Mathematics

Pairs	Correlation	Sig.
Mastery Goal and Interest	0.40	.000
Performance-Approach Goal and Interest	0.07	.140
Performance-Avoidance Goal and Interest	0.05	.365

In both English and Mathematics, relationship exists between students' goal orientations and interest. Similar to learning outcomes, only mastery goal in English and Mathematics and performance-approach goal in English are significantly related to interest.

According to Omrod (2006), students can increase interest in a subject if teachers will present content that students find important and if teachers explain that successful learning entails persistence and anticipation of mistakes. Senko et al. (2008) enumerated the characteristics of students with high interest and students who endorse mastery goal. It was evident that the characteristics of the two groups overlap. In the present study, students in both English and Mathematics classes were observed to be attentive. Students actively participated in the discussions, enthusiastically explained their work, and asked interesting questions. During one of the observations, the class of Teacher A shows that students demonstrate mastery goal and high interest. In Teacher A's class, students participated in the exercise and the discussion even if there was no grade or popularity involved. Students talked about the assignments for the day before the first period started. Exercises were flashed on the board. The students were on task while doing the exercise. Teacher A roamed around and looked at each individual as they answered. All were busy doing the seatwork. The class was focused in doing the activity. When Teacher A went out, the class remained in order and continued doing the task. Senko et al. (2008) argued that these characteristics are the same traits that learners with mastery goal demonstrate. Omrod (2006) mentioned that students with high interest tend to

be more focused, are cognitively engaged, and are concerned about improving themselves. These traits are similar to those of students endorsing mastery goal—they invest greater effort and exhibit more persistence and determination. Therefore, it is safe to claim that students who endorse mastery goal may have high interest in doing their tasks in a particular subject.

The findings in the current study are also somewhat consistent with those of Tanaka and Murayama's (2014) that indicated mastery goal as a significant predictor of interest, but not for performance-approach and performance-avoidance goals. Students driven by mastery goals maintain high interest when task is difficult. They aim to increase their competence, improve their skills, and internalize new concepts better. The students in the present study hinted that while they find their lessons in English and Mathematics difficult, they persist in working on the tasks. This implies that the motivation of mastery goal students is intrinsic. Deci and Ryan (1985) noted that intrinsic motivation is autotelic since the activity is done for the inherent satisfaction of being immersed or involved in the task. Performance-approach and performance-avoidance goals may just make students more anxious or may experience intellectual paralysis (Tan & Nie, 2015, p. 24) as they encounter challenging tasks.

Learning outcomes and interest. Table 9 reveals that there is a significant low positive correlation between students' learning outcomes and their interest scores in English, r = .19 while Table 10 indicates that there is a positive significant low correlation between students' learning outcomes and their interest scores in Math, r = .25.

Table 9
Correlation between SGO and Interest in English

Pairs	Correlation	Sig.
Mastery Goal and Interest	0.42	.000
Performance-Approach Goal and Interest	-0.12	.020
Performance-Avoidance Goal and Interest	-0.06	.216

Table 10
Correlation between SGO and Interest in Mathematics

Pairs	Correlation	Sig.
Mastery Goal and Interest	0.40	.000
Performance-Approach Goal and Interest	0.07	.140
Performance-Avoidance Goal and Interest	0.05	.365

These results are consistent with findings from other studies (Apat, 2006; Faustino, 2003; Sarigumba, 2011) that having high interest in a subject relates to better cognitive processing and activation of background knowledge, thus better learning outcomes.

When students are knowledgeable about the lesson, it would be easier for them to study and internalize concepts. Moreover, having high levels of interest enables students to perform their academic tasks. If students are interested in a particular subject, they immerse themselves in the tasks. The relationship may be explained by the components of interest by Senko et al. (2008), which includes attention, involvement, and personal valuation. For instance, when students have heightened attention in a class such as English or Mathematics, they are more inclined to internalize the grammar rules or the steps in solving problems in Mathematics. Similarly, when students are involved in and value the tasks and activities provided in their classes, they might be more determined to improve their skills.

Factors Affecting Students' Goal Orientations, Learning Outcomes, and Interest in English and Mathematics

Table 11 indicates qualitative findings. The findings in the interviews, FGDs, and classroom observations reveal that students' goal orientations, learning outcomes, and interest are affected by contextual factors such teachers' instructional practices, instructional beliefs, and classroom environment; and factors internal to students such as their learning behaviors and dispositions.

Teachers' classroom practices contribute to students' goal orientations and interest. The qualitative data confirm that mastery goals and higher interest levels influence teachers' practices and students' behavior. During the classroom observations, teachers who adopt mastery goal promoted a caring personal relationship in the learning environment in that they help students enhance their skills, direct them to be on-tasks, provide a lot of drills, and give them a lot of examples. In order to promote interest, teachers were observed showing passion for teaching, utilizing novelty, injecting humor occasionally, and projecting effective teacher rapport and authority.

Table 11
Summary of Factors Affecting Students' Goal Orientations, Learning Outcomes, and Interest in English and Mathematics

Contextual Factors	
Teachers' instructional practices	Teachers' instructional beliefs
Practices that highlight mastery goal	Teaching goals
Enhancing skills	Reflection on one's teaching methods
Directing students to engage in tasks	Perceptions about students' behavior
Providing a lot of drills	Perceived reasons why learners try to do well in class
Giving several examples	
Practices that promote interest	Strategies in motivating students
Showing passion for teaching	Evaluation practices
Utilizing novelty	Teachers' knowledge about goal orientations
Injecting humor occasionally	Other personal beliefs
Projecting effective teacher rapport and authority	
Classroom Environment: cues/prompts displayed on the board or walls	

Student Factors	
Students' learning behavior	Students' learning dispositions
Intrinsic vs. extrinsic motivation	Reasons for goal orientations
Teacher's agenda vs. learners' agenda	Students' descriptions of their English and Mathematics classes
Self-referential vs. norm-referential standards	Students' perceptions about their lessons
Maladaptive behaviors	
Task avoidance	
Cheating	
Avoidance from looking bad in class	
Effort	
Attendance	
Language	

The qualitative findings also reveal that instructional beliefs of teachers affect students' goal orientations, learning outcomes, and interest. These beliefs include aim of teaching, teacher agenda, reflection of one's teaching methods, perceptions on students' behavior, perceived reasons why learners try to do well in class, strategies in motivating students, evaluation practices, teachers' knowledge about goal orientations, and other personal beliefs. Out of 11 teachers interviewed, seven teachers endorsed mastery goal. Each of the remaining four either endorsed performance-approach, performance avoidance, mastery and performance-approach, and mastery and performance-avoidance.

Aside from relevant information from teachers, cues displayed in the classrooms may influence goal orientations, interest, and learning outcomes. There were prompts or cues on the walls in every classroom. During the data collection, the researcher noticed several quotations on the board that may have inspired students' learning dispositions. Most of the quotations may have had an impact on the thoughts and ideas of students which somewhat endorsed mastery goal. That is, the cues promoted improving oneself by self-referential standards (Senko et al., 2008). Posters such as "Education is our passport to the future, for tomorrow belongs to the people who prepare for it today" and "Action is the fundamental key to success" were noted.

Another factor that might have influenced goal orientation leanings of students are their behaviors. These behaviors involve intrinsic and extrinsic motivation, self-referential standards, maladaptive behaviors, effort, attendance, and language. Like teachers' beliefs, students' learning dispositions are also important factors affecting the variables in this research. These dispositions include reasons for goal orientations, students' description of their classes, and students' perceptions of their lessons.

Conclusion

In light of the findings, the following conclusions are made:

1. The dominant goal orientation of students was mastery goal.
2. There was no significant difference in students' goal orientations between:
   (a) English and Mathematics and
   (b) Public school and private schools.
3. There was a significant relationship between:
   (a) Mastery goal and learning outcomes;
   (b) Mastery goal and interest; and
   (c) Learning outcomes and interest.
4. Several factors affecting students' goal orientations, learning outcomes, and interest were accounted. The following factors were found: teachers' instructional practices, teachers' instructional beliefs, students' learning behavior, students' learning dispositions, and classroom environments.

This research on achievement goal orientations may help in the development of new instructional interventions and innovations, designing of projects, and reforming the curricula. Educational psychologists play an important role in informing educational stakeholders what goal orientations are and their vital contribution to students' ongoing motivation and attainment of positive learning outcomes.

Public and private schools teachers should instill among their students the intrinsic value of learning in any subject. While grading and performance assessment are important features of one's school life, intrinsic reinforcement should be the goal of teachers whereby students participate for the inherent satisfaction of being involved in the tasks. Teachers also need to understand the importance of affect and the danger of high anxiety levels in the classroom. Therefore, learning tasks must be well thought out and challenging enough to heighten student's interest; not too difficult that students experience intellectual paralysis; and not to easy that students would consider going off-task. As the study has shown, students exhibit more

adaptive reactions to difficulties and challenges, their interest in a subject is boosted, and learning outcomes improve when there is a caring personal relationship in the learning environment. Hence, students may also be informed how motivation works and be mindful on how to increase their motivation for learning. Also, education stakeholders could explore how to motivate students and policymakers may check the motivation status of Philippine schools.

It should be noted that research on goal orientations in the local context is seemingly in its initial stage. While the results have pointed to the adaptive outcomes related to mastery goals, more studies on Filipino learners and goal orientations need to be done by using the framework of more recent models of achievement goals, apart from the trichotomous model used in this study. More meaningful learning is likely to happen when students adopt multiple goal orientations depending on the type of tasks they are involved in, and this supposition needs further investigation.

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