Goal Modification, Global-Analytical Learning Styles, and Achievement in Technical Writing

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Abstract

This study examined the possibility of developing different goals, mastery or competitive, on students and consequently affecting their learning styles. In the 3-week experiment period, a pretest-posttest design was used to the two intact college English classes. The outcomes revealed that the goals of the students could be modified in different manners. But the styles of learning did not determine the effects of the goal modifications. The research also examined which goal is the indicator of the achievement in English. The result proved that the competitive goal modification determines the English achievement; while the analytic learners' mastery and competitive goal modification predict their achievement in English. The mastery goal modification of the global learners does not predict the English achievement but the competitive goal modification does. It is recommended that more investigations on the characteristics of the global learners be undertaken to find the real reasons of what made it non-predictor of the English achievement. Furthermore, more goal modifications have to be explored.

Keywords: goals, goal modification, learning styles, achievement

1. Introduction

Studies on motivation show the possibility of modifying student goals by doing certain adjustments in the classroom. Mastery goals are actually believed to be most benefiting among student goals. Educators are advised to make the necessary classroom arrangements that would lead to the formation of mastery goals and to the eventual dominance over the other types of goals. However, the suggestions modifying the competitive goals among students may not be a problem at all. Though the role of competitive goals in learning has not been fully explored and used to be considered adversative to student performance, some theorists acknowledged their positive effects on students. In addition, the association of student goals, student learning styles, and remedial English program achievement has yet to be explored. Middleton and Spanias (1999) noted that "a primary goal for future researchers should be the testing and refinement of motivational theories so that their range of applicability can be delineated and exploited".

Teachers have individual teaching styles in the same way that each has a unique learning style. Every style meets the needs of some students better than others. By inclination, most teachers tend to be analytic, whereas most students are global. Good teachers are fully aware of individual differences between students, and between themselves and individual learners. Thoughtful teachers recognize the strengths and limitations of their own instruction preferences.

Mastery goals have been considered beneficial to the students. However, latest studies concentrate on the positive potential of competitive goals in terms of various student outcomes. This research examined which of the mastery and competitive goals could be adopted by students, and consequently affecting their learning styles. This study further sought to find which of the goals predict the achievement in English.

General Objectives: This research aimed to examine the goals that could be adopted by students and control their effects on the achievement and learning styles of the students.

Specific Objectives

Specifically, the study attempted to:

1. Determine the goal modification results in the pretest and posttest of the English class students, in terms of:
1.1. mastery goal modification
1.2. competitive-goal modification
2. Identify the learning styles of the two English class students, in terms of:
2.1. Global
2.1. Analytical
3. Assess the academic achievement of the two English class students.
4. Assess the significant difference between mastery and competitive goal modification results of the English class students in the pretest and posttest?
5. Assess the significant difference between the learning styles and the goal modification results of the English class students?

6. Assess the significant relationship between the students' goal modification results and the English academic achievement?

Importance of the Study
This study explores the goal modification, global-analytical learning styles and achievement of students taking Technical writing. The goal modification is focused on the mastery and competitive goals of students.
The technical writing students' mastery goals once developed will be the most beneficial among their goals. On the other hand, the competitive goals, though not all students perform well, could be playing important role in achieving their goals. The learning styles of the said students will be significant predictors of the students' goal modifications.

The classroom teachers can use the findings in trying new approaches to facilitate the learning process of students leading to the achievement of their goals. They could redirect from forms to the underlying functions and intentions learners are attempting to achieve.

The findings can provide them with more precise guidelines for handling the students in their performance and classroom activities. Consequently a developmentally-oriented syllabus can be designed, sequencing inputs in accordance with the order of learning followed by materials development which considers the needs of the learner in terms of goal modification and learning styles.

The investigation of the two goals – mastery and competitive goal modifications and the possible moderating effects of student learning style on student goals predicts achievement in English. This experimental study determines that student goals can be modified by adapting certain classroom conditions. Students can be made to exhibit higher levels of mastery and competitive goals by exposing them to classes that focus on mastery and competitive goal modifications, respectively. The findings of this study would benefit all those involved in the education of the youth.

2. Research Methods
Research Design
This study employed the pretest–posttest research design. Two intact classes of AMA International University were randomly assigned to either mastery goal and competitive-goal modification. The same lessons were given to the two groups by the same teacher who was actually the researcher in this study. All sessions were held one hour daily in the afternoon for three weeks.

Population and Sample
The respondents of this study were 59 male and female undergraduate business students of AMAIUB. These students belong to two separate intact classes in Technical Writing.
The mastery-goal modification class composed of 30 students and the competitive-goal modification class composed of 29 students. The group assignment was selected through a toss coin. Both groups were scheduled to meet three times a week which is equivalent to 3 hours a week. The researcher handled the two groups of respondents during the experiment proper.

Table 1: Categorized group of respondents

Respondents	Total Enumeration
Mastery-goal Modification Class	30
Competitive-goal Modification Class	29
Total	**59**

Research Instrument
The instruments used in the study were a learning style checklist and an English achievement test. The learning style checklist classifies the students into analytic or global learners. It asks the students to check which among the 43 statements regarding how they study are true of them. The English achievement test determines how much the students learned during the experiment. The test covers topics on oral presentation, Methods of presentation and visual aids.

All instruments were researcher-made and were subjected to validity and reliability analyses. Necessary revisions on the instruments were done to ensure that they were valid and reliable. All instruments were administered as pretest and posttest (except for the learning style checklist, which was given only at the start) to the two groups of students.

Gathering Procedure
The researcher gathered the data through the result of the posttest and academic achievement after conducting the experiment. In the mastery-goal modification group, daily activities in the form of seatwork exercises and oral presentation using a chosen visual aid were given as individual tasks with focus on mastering the concepts

and obtaining high scores. These activities were usually given after the discussion of the lessons unless they were used to introduce the lessons. The same activities were given to the competitive-goal modification group but these were always to be accomplished in terms of group or individual competitions/contests where winners were acknowledged. In the mastery group, students were encouraged to improve their scores on seatwork and oral presentation based on their own previous scores, while those in the competitive group were asked to beat the scores of their peers or opponents in the games.

The researcher utilized books, syllabus, magazines and internets as the main source of subject matters.

Before the start of the experiment a test was administered to both groups to measure the ability of the students about the topic. Finally, the retrieved data were processed, tabulated, presented, analyzed and interpreted to arrive at specific findings, conclusions and recommendations.

Validity of the Instrument

The researcher adopted the Abiator's Online Thinking Styles Inventory Test: Global or Analytical. Therefore, the validity of the instrument was already established.

Statistical Treatment of Data

The researcher used the following statistical treatments/methods in order to validate the data gathered:

Mean was used to determine the goal modification results and academic achievement in the pretest and posttest of the English Class Students.

Frequency was used to classify the learning styles of the two English Class Students. The t-test mean was used to determine the difference between the difference between the students' goal modification results of the English classes in the pretest and posttest result; and the difference between the students' goal modification results and learning styles, and academic achievement of the English classes. t-test was also used to determine if observed differences between the averages of two groups would be statistically significant at 5% significant level. Pearson –r correlation analysis was used to test the relationship between the students' goal modification results and academic achievement of the two English Classes.

3. Results And Discussion

Table 2: Mastery goal modification results in the pretest and posttest of the English class students

Mastery Goal Modification	N	Mean	Std. Deviation
Pretest	30	67.48	4.82
Posttest	30	80.65	5.49

Table 2 presents the mastery goal modification results in the pretest and posttest of the English class students. It can be clearly seen from the given table above that the mastery goal modification class showed a low result in the pretest with only 67.47 mean score but have excelled in the posttest with 80.65 mean score. This implies that the mastery goal modification class had improved a lot in the classroom activities including the oral presentation.

Table 3: Competitive-goal modification results in the pretest and posttest of the English class students

Competitive - Goal Modification	N	Mean	Std. Deviation
Pretest	29	67.49	5.27
Posttest	29	79.32	7.29

Table 3 presents the competitive goal modification results in the pretest and posttest of the English class students. From the given table above, it is clear that the table reveals that the competitive goal modification class only got 67.48 mean score in the pretest and an improved result or mean score of 79.31 in the posttest. It would only mean that the competitive goal modification class had shown better performance in the classroom activities, games and contests in particular.

Table 4: Learning styles of the mastery goal modification of the English class students

Mastery -Goal Modification	N	Percent (%)
Analytical Learners	17	56.67
Global Learners	13	43.33
Total	30	100

Table 4 presents the learning styles of the mastery goal modification of the English class students.
It can be drawn from the above table that of the thirty (30) students of mastery goal modification class, seventeen

(17) were found to be analytical learners and thirteen (13) global learners. This would only mean that there were more students who could only study in silence and in a quiet room than students who could study with noise and with some other things done at the same time while studying.

Table 5: Learning styles of the competitive-goal modification of the English class students

Competitive - Goal Modification	N	Percent (%)
Analytical Learners	18	62.07
Global Learners	11	37.93
Total	29	100

Table 5 presents the learning styles of the mastery goal modification of the English class students.
From the given table above, it can be observed that out of 29 students of the competitive goal modification class, eighteen (18) were analytical learners and only eleven (11) global learners. This means that the silent and quiet students in the class outnumbered students who could work and study in a noisy environment.

Table 6: Academic achievement of the two English class Students

Academic Achievement	N	Mean	Std. Deviation
Mastery Goal Modification Class	30	80.86	5.68
Competitive – Goal Modification Class	29	77.92	7.58

Table 6 presents the academic achievement of the two English class students.
It can be gleaned from the given table above that the students of the mastery goal modification class showed better academic performance as shown in the 80.8568 mean score. On the other hand, the students of the competitive goal modification class only got 77.9161 as their mean score. This could imply that the silent and quiet students are more serious in their studies than the students who could study with noise and have other things done at the same time.

Table 7: Difference between the students' goal modification results of the English class students in the pretest and posttest result

Mastery Goal Modification Class		N	Mean	Mean Difference	Sig.(2-tailed)	Interpretation	Decision
Analytical Learners	Pretest	17	66.42	13.58	.000	There is significant difference	Reject Ho
	Posttest	17	80.00				
Global Learners	Pretest	13	68.87	12.64	.000	There is significant difference	Reject Ho
	Posttest	13	81.51				
Competitive – Goal Modification Class		N	Mean	Mean Difference	Sig.(2-tailed)	Interpretation	Decision
Analytical Learners	Pretest	18	66.52	11.88	.000	There is significant difference	Reject Ho
	Posttest	18	78.40				
Global Learners	Pretest	11	69.08	11.73	.000	There is significant difference	Reject Ho
	Posttest	11	80.81				

Table 7 presents the difference between the students' goal modification results of the English class students in the pretest an posttest result.

It could be observed from the above table that there is significant difference between the pretest and posttest results of both the analytical and global learners of the mastery goal modification class. Likewise, there is significant difference between the pretest and posttest result of the analytical and global learners of the competitive goal modification class. This would only indicate that the null hypotheses of both the mastery and competitive goal modifications of the English class students were rejected.

The existence of the difference could have been due to the little knowledge or absence of knowledge of the students on the topics when they took the pretest prior to the experiment proper and the time they took the posttest after the experiment proper.

Table 8: Difference between the students' goal modification results and learning styles and academic achievement of the English class students

Mastery Goal Modification Class		N	Mean	Mean Difference	Sig.(2-tailed)	Interpretation	Decision
Posttest	Analytical Learners	17	80.96	0.55	.812	No significant difference	Accept Ho
	Global Learners	13	81.51				
Achievement Test	Analytical Learners	17	81.56	0.53	.849	No significant difference	Accept Ho
	Global Learners	13	81.03				
Competitive – Goal Modification Class		**N**	**Mean**	**Mean Difference**	**Sig.(2-tailed)**	**Interpretation**	**Decision**
Posttest	Analytical Learners	18	80.98	0.17	.941	No significant difference	Accept Ho
	Global Learners	11	80.81				
Achievement Test	Analytical Learners	18	79.57	2.19	.320	No is significant difference	Accept Ho
	Global Learners	11	77.38				

Table 8 presents the difference between the students' goal modification results and learning styles and academic achievement of the English class students.

From the given table above, it could be seen that there is no significant difference between the posttest of both the analytical and global learners of the mastery goal modification class. The same thing is true to the achievement tests of both the analytical and global learners. This implies that the posttests of the analytical and the global learners are not significantly different from each other. In similar sense, the achievement test of both the analytical and global learners of the mastery goal modification class are not significantly different from each other.

From the same given table it can also be noticed that the posttests of the analytical and global learners of the competitive goal modification class show no significant difference. In the same manner there is no significant difference between the achievement tests of the analytical and global learners of the competitive goal modification class.

The results reveal that the null hypothesis, there is no significant difference between the posttests and achievement tests of both the analytical and global learners of the mastery goal modification class, is accepted. On the other hand, the null hypothesis, there is no significant difference between the posttests and achievement tests of both the analytical and global learners of the competitive goal modification class, is also accepted.

Table 9: Relationship between the students' goal modification results and academic achievement of the two English class students

Paired Samples		Mastery Goal Modification Class	Competitive – Goal Modification Class
Analytical Learners Posttest – Achievement test	Pearson Correlation	.739**	.720**
	Sig. (2-tailed)	.000	.000
	N	30	29
	Interpretation	High or strong positive significant relationship	High or strong positive significant relationship
	Decision	Reject Ho	Reject Ho
Global Learners Posttest – Achievement test	Pearson Correlation	.459	.811**
	Sig. (2-tailed)	.115	.002
	N	30	29
	Interpretation	No significant relationship	High or strong positive significant relationship
	Decision	Accept Ho	Reject Ho

**. Correlation is significant at the 0.01 level (2-tailed).

Table 9 presents the relationship between the students' goal modification results and academic achievement of the two English class students.

The table above shows that there is high or strong positive significant relationship between the

analytical learners' mastery goal modification result and their achievement test. This is similar with the relationship of the analytical learners' competitive goal modification result and their achievement test, there is significance relationship. This simply implies that the analytical learners' mastery goal modification results and competitive goal modification results are predictors of the students' achievement tests.

It is observable on the other hand, that there is no significant relationship exists between global learners' mastery goal modification result and their achievement test. While there is high or strong positive significant relationship between the global learners' competitive goal modification result and their achievement test. This would only mean that the null hypothesis, there is no significant relationship between the global learners' mastery goal modification result and their achievement test is accepted; while that of the global learners' competitive goal modification result is rejected. It further means that the global learners' mastery goal modification result is not a determining factor of their achievement in the class.

4. Conclusions

Regardless of the type, the learners of both the mastery and competitive goal modifications had improved a lot and had shown better performance in the classroom activities after the experimental period. Analytical learners dominated both the mastery and competitive goal modification classes. Learners in the mastery goal modification class were more serious in their studies than those of the competitive goal modification class.

There is significant difference in the results of the pretest and posttest of both the learners in both the mastery and competitive goal modification classes. While no significant relationship exists between the posttest results of both the analytical and global learners of both the mastery and competitive goal modification classes and the achievement tests of both the analytical and global learners of both the mastery and competitive goal modification classes.

On the other hand, there is high or strong positive significant relationship between the posttest and the achievement test of the analytical learners of both the mastery and competitive goal modification classes. The posttest predicts the achievement test of the analytical learners of both the mastery and competitive goal modification classes. Likewise, high or strong positive relationship exists between the posttest and the achievement test of the global learners of the competitive goal modification class. For the global learners of the competitive goal modification class, the posttest is a strong determiner of their achievement test.

Finally, there is no significant relationship between the posttest and the achievement test of the global learners of the mastery goal modification class. The posttest is not a significant factor that would determine the achievement of the learner.

Recommendations

Teachers of the English class should be aware of their personal goals and the learning outcomes before the first encounter with the students in the classroom to achieve the desired performance from the students. Students should be classified according to their own goals, strengths and weaknesses to be able for the teachers to prepare the necessary tools, techniques and strategies to attain the intended result. A careful and balanced exercises and examinations should be made and done considering that the class is a heterogeneous type of grouping. Determine the students' goals of modification and the predictors of the students' performance in the academics to expect dired result at the end of every term of the trimester.

Further studies have to be made on goal modifications and learning styles until the needed and expected outcomes are achieved.

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