ACHIEVEMENT GOALS, APPROACHES TO LEARNING AND ACHIEVEMENT OF GRADE 1 STUDENTS

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Abstract

The primary purpose of this study was to investigate achievement goals, approaches to learning and achievement of Grade 9 students. Then, this study was to explore the mediating effects of approaches to learning between achievement goals and achievement of Grade 9 students. Descriptive survey method and quantitative data analysis were applied in this study. A total of 600 Grade 9 students (288 males and 322 females) were selected form Yangon Region and Nay Pyi Taw Council Area. Student achievement goals were examined by achievement goals inventory (AGI) and student approaches to learning were examined by approaches to study skills inventory for students (ASSIST). Results showed that Grade 9 students oriented both mastery goal and performance goal for their learning tasks. Concerning with the learning approaches of Grade 9 students, results revealed that Grade 9 students endorsed deep approach and strategic approach more than surface approach for their learning tasks. Next, results of t test revealed that there were significant gender differences in achievement goals (mastery goal and performance goal) and also in the strategic approach. Lastly, hierarchical multiple regression analysis was conducted to examine the mediator effects of the three approaches to learning. The results revealed that approaches to learning (strategic approach and surface approach) have a mediating effect between achievement goals and achievement. In addition, the findings of bivariate and partial correlations also indicated that strategic and surface approaches are mediators due to sizeable decrease in the partial correlations as compared to the bivariate correlations.

Keywords: Achievement Goals, Mastery Goal, Performance Goal, Approaches to Learning.

Introduction

Academic achievement is one of the most important indicators of learning and understanding in Basic Education sector in Myanmar. School context and perceived academic ability become the determinants of students" success in Myanmar. Thus, students and teachers have put much emphasis on academic studies, grades and test scores. Achievement of students does not depend on only the quality of schools and teachers. Nevertheless, teachers and educators have, so far, rarely noticed the factors affecting students" academic outcomes.

Actually, achievement is undoubtedly an important research in the heart of educational psychologists. In their attempt to investigate what determine academic outcomes of learners, researchers have come with more questions than answers. In recent time, literature has shown that learning outcomes, academic achievement and academic performance could be determined by such variables as: family, school, society, and motivation (Aremu & Oluwole, 2001).

Achievement goals have become an important motivational construct in organizational research providing an explanation for the approaches, responses, and reasons that individuals use to engage in achievement activities (Ames, 1992). It is also undeniable that achievement goals influence critical school-related outcomes, including attention, effort, goals, performance, behavior, well-being, test scores, grades and school completion. There are two main categories of goals – mastery (learning) and performance (Dweck & Legget, 1988). Students hold mastery goal when their goal is to truly understand or master the task at hand; students who are mastery-oriented are interested in self-improvement and tend to compare their current level achievement to their own prior achievement. Performance oriented learners determine their ability by outperforming others in competitions or surpassing others in achievement or grades, and are eager to receive public recognition for their superior performance (Ames, 1992; Pintrich, 2000a).

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Two goal orientations are associated with very different approaches to learning. Orientation toward a goal is presumed to be a function of individual differences or to be included by situational constraints, as it influences the approach students take to learn and the strategies they use in learning. In order to construct learning area effectively, students" individual differences should be taken into consideration in schools. Approaches to learning, which is one of the important individual differences that should be considered, are related with students" motivation and using their appropriate strategies for learning.

The quality of learning is dependent on the approaches taken because what students learn is closely associated with how they go about learning it. Approaches to learning refer to the learners" different ways of relating to the learning task- „how" and „why" a learner learns. The "how" are the strategies devised by the learner to solve the problems defined by their motives (the why of learning). This combination of motive and strategy is called "an approach to learning" (Shelly, 2014).

To summarize, achievement goals and learning approaches adopted by the students are either to the benefit or to the detriment of achievement. An understanding of how learning approaches of students relate to achievement goals and achievement of Grade 9 students may help teachers and curriculum developers to review their instructional methods and curriculum in order to foster future education. Additionally, identifying factors affecting students' performance in the present study can be critically important in helping students to improve academic achievement.

Purposes of the Study

1. To explore the achievement goals of Grade 9 students

2. To study the learning approaches of Grade 9 students

3. To study the differences of achievement goals of Grade 9 students by gender

4. To investigate the differences of learning approaches of Grade 9 students by gender

5. To study how approaches to learning affect between the achievement goals and achievement of Grade 9 students

Definitions of Key Terms

Achievement goals.   Achievement goals are defined as competence-relevant aims that individuals strive for in achievement settings (Pekrun, Elliot, & Maier, 2009).

Mastery goal. Mastery goal orients the student towards learning and understanding, developing new skills, and a focus on self-improvement using self-referenced standards (Pintrich, 2000a).

Performance goal. Performance goal represents a concern with demonstrating ability, obtaining recognition of high ability, protecting self-worth and a focus on comparative standards relative to others and attempting to surpass others (Pintrich, 2000a).

Approaches to learning. Approaches to learning can be defined as the intentions and motives a student has in undertaking a learning task, as well as the corresponding strategies by which these intentions and motives are accomplished (Diseth, 2007, cited in Gurlen, Turan, & Senemoglu, 2013).

Deep approach. Deep approach to learning indicates that students are motivated by an inherent interest in a certain subject and employed strategies such as reading widely, seeking in-depth meanings, and integrating new knowledge with past experiences (Biggs, 1987). Surface approach. Surface approach to learning denotes that the student's motive is to meet the minimum

requirement of the course or simply to pass tests, with only a limited personal interest in the subject (Biggs, 1987).

Strategic approach. Strategic approach to learning is described as an achieving orientation, characterized by the intrinsic motivation to achieve academic success and adoption of both deep and surface learning strategies depending on the task requirements (Entwistle & Ramsden, 1983).

Related Literature Review

Achievement Goals

Achievement goal theory describes general goal orientations that concern the reasons or purposes students are pursuing when approaching and engaging in a task. This theory originally stressed two general orientations to achievement: mastery and performance goals (Ames 1992; Dweck and Leggett, 1988). Mastery goal orients the student towards learning and understanding, developing new skills, and a focus on self-improvement using self- referenced standards. Performance goal represents a concern with demonstrating ability, obtaining recognition of high ability, protecting self-worth and a focus on comparative standards relative to others and attempting to surpass others (Pintrich, 2000a).

The dominant theoretical approach to goal orientation in academic settings is one that distinguishes between mastery and performance orientations. The simple distinction between these goal orientations contends that students who set mastery goals focus on learning the material and mastering the tasks at hand. Students who set performance goals are concerned with demonstrating their ability and performance as measured by their relative standing to other‟s achievements. The distinction between these two different goal orientations has been a major focus in previous research regarding achievement motivation (Ames, 1992; Ames & Archer, 1988; Harackiewicz & Elliot, 1993; Nicholls, 1983; Maehr, 1984; as cited in Was, C, 2006).

Approaches to Learning

Students may be likely to adopt one learning approach more often than the other, however, their selection of learning approaches may be influenced by learning circumstances (Biggs & Moore, 1993; Entwistle & Ramsden, 1983; Marton, Hounsell, & Entwistle, 1997; Marton & Saljo, 1997; Prosser & Trigwell, 1999, as cited in Huang, 2008). The approaches taken by students are suggested to be dependent on a range of variables, including their motivation to learn, (Biggs, 1987); teaching quality (Entwistle & Ramsden, 1983); and their perceptions of the learning situation (Prosser & Trigwell, 1999, as cited in Huang, 2008). Importantly, these theories propose that the adoption of particular learning approaches is believed to be associated with different learning outcomes (Huang, 2008).

Method

Sampling

A total of 600 Grade 9 students (288 males and 312 females) from Yangon Region and Nay Pyi Taw Council Area participated by using random sampling technique.

Table 1. Number of Students from Each Selected School

School	Region	No. of male Students	No. of female Students	Total
School (1)	Yangon	23	36	59
School (2)	Yangon	27	35	62
School (3)	Yangon	31	31	62
School (4)	Yangon	30	30	60

School	Region	No. of male Students	No. of female Students	Total
School (5)	Yangon	30	27	57
School (6)	Nay Pyi Taw	50	49	99
School (7)	Nay Pyi Taw	49	61	110
School (8)	Nay Pyi Taw	48	43	91
Total		**288**	**312**	**600**

Research Method

In this study, descriptive survey design and quantitative approach were used.

Measures

The total marks of all six subjects from the first semester examination were used for achievement of Grade 9 students.

Achievement Goals Inventory (AGI)

To assess Grade 9 students'-oriented achievement goals, Achievement Goals Inventory (Conducted by Roedel, Schraw & Plake (1994) was used. Achievement Goals Inventory comprises 12 items for assessing mastery goal and 5items for assessing performance goal. The selected students have to answer five-point Likert scale (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5 = strongly agree). The alpha score of AGI was 0.72.

Approaches to Study Skills Inventory for Students (ASSIST)

To assess Grade 9 students' adopted approaches to learning, Approaches to Study Skills Inventory for Students developed by Entwistle, Tait & McCune (1998) was used. ASSIST consists of 16 items for assessing deep approach, 20 items for assessing strategic approach and 16 items for assessing surface approach. The target participants have to answer five-point Likert scales (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree). The alpha score of ASSIST was 0.67.

Data Analysis and Research Findings

Achievement Goals of Grade 9 Students

Descriptive statistics related to the Grade 9 students" achievement goals were carried out. According to the results of table 2, the mean percentage for students' mastery goal and that of students' performance goal were not so different. It can be interpreted that Grade 9 students adopted both mastery goal and performance goal for their learning tasks. It is possible that students adopting both mastery and performance goals may work hard with expectations of understanding the learning content as well as performing better than his\her classmates.

Table 2. Means and Standard Deviations for Achievement Goals

Subscales of Achievement Goals Inventory	Mean	Mean %	*SD*
Mastery Goal	47.53	79.22	8.147
Performance Goal	20.03	80.13	13.338
Total (AGI)	67.57	79.49	7.728

Comparison for Achievement Goals by Gender

To find out the differences between the achievement goals by gender, descriptive analysis was made. The means and standard deviations of achievement goals for both boys and girls

were reported in table 3. The results showed that the mean score of female students was slightly higher than that of male students in mastery goal. Also, the mean score of female students was higher than that of male students in performance goal.

Table 3. Means and Standard Deviations for Achievement Goals by Gender

Subscales of Achievement Goals Inventory	Gender	N	Mean	Mean%	*SD*
Mastery Goal	Male	288	46.99	78.32	8.718
	Female	312	48.04	80.06	7.498
Performance Goal	Male	288	19.27	77.07	13.642
	Female	312	20.74	82.95	12.420
Total (AGI)	Male	288	66.26	77.95	8.152
	Female	312	68.77	80.91	7.034

To make more detailed investigation on the gender difference of Grade 9 students'-oriented achievement goals, independent sample *t* test was conducted (see table 4). The results of *t* test stated that there was gender difference for achievement goals at the 0.001 level. There was gender difference in mastery goal at the 0.01 level. This finding is congruent with the findings of earlier studies conducted by Anderman & Young in 1994 with regard to gender. Their findings showed that girls are reported to adopt more mastery goal than boys.

In contrast with the findings of previous research studies conducted by Meece & Holt in 1993, Roeser, Midgley & Urdan in 1995, Markku in 1997, females were significantly different from males on performance goal at the 0.001 level. Based on the results, it can be interpreted that Grade 9 female students are significantly better than Grade 9 male students on achievement goals, mastery goal and performance goal. Female students are likely to orient mastery goal and performance goal because they may both want to enhance their level of competence and want to demonstrate their competence and attempt to surpass others in the classroom.

Table 4. Results of Independent Sample *t*-test for Achievement Goals by Gender

Achievement Goals	*t*	*df*	Sig(2-tailed)	Mean Difference
Mastery Goal	-2.631	598	.009	**-1.743****
Performance Goal	-5.526	598	.000	**-5.879*****
AGI (Total)	-4.771	598	.000	**-2.959*****

Note: ** mean difference is significant at the 0.01 level.
       *** mean difference is significant at the 0.001 level.

Approaches to Learning of Grade 9 Students

To explore the approaches to learning of Grade 9 students, descriptive analysis was conducted (see table 5). Descriptive analysis revealed that the mean percentages of deep approach and strategic approach were higher than that of surface approach. It can be interpreted that Grade 9 students used deep approach and strategic approach more than surface approach for their academic activities. Grade 9 students may have both the intention to understand the studied material thoroughly and the intention to achieve the highest possible grade.

Table 5. Means and Standard Deviations for Approaches to Learning

Subscales of Approaches to Learning	Mean%	*SD*
Deep Approach	75.31	9.454
Strategic Approach	75.80	8.182
Surface Approach	60.68	10.006

Comparison for Approaches to Learning by Gender

To find out the differences between the approaches to learning by gender, descriptive analysis was made. The means and standard deviations of approaches to learning for both boys and girls were reported in table 6. It was observed that the mean scores for deep approach and surface approach were almost the same by gender. The mean score of female students was slightly higher than that of male students for strategic approach.

Table 6. Means and Standard Deviations for Approaches to Learning by Gender

Subscales of Approaches to Learning	Gender	N	Mean	Mean%	*SD*
Deep Approach	Male	288	60.10	75.13	9.574
	Female	312	60.39	75.48	9.355
Strategic Approach	Male	288	74.87	74.87	8.426
	Female	312	76.66	76.66	7.867
Surface Approach	Male	288	48.09	60.11	9.861
	Female	312	48.97	61.21	10.125

To obtain more detailed information on the gender difference of Grade 9 students' adopted approaches to learning, independent sample *t* test was conducted (see Table 7). The results of *t* test stated that significant gender difference was found for the strategic approach at 0.01 level. It can be interpreted that female students are more inclined towards using strategic approach than male students. It may be because female students choose their learning strategy to maximize their academic success; they seem to be cue conscious and very aware of assessment practices.

Table 7. Results of Independent Sample *t*-test for Approaches to Learning by Gender

Subscales of Approaches to Learning	*t*	*df*	Sig (2-tailed)	Mean Difference
Strategic Approach	-2.689	598	.007	**-1.789****

Note: ** mean difference is significant at the 0.01 level.

Relationships of the Achievement Goals and Approaches to Learning Variables to Achievement of Grade 9 Students

Pearson product-moment correlations were calculated to examine the relationships between the variables, the criterion $p < 0.05$ was used to determine statistically significant correlations. The results of bivariate correlations showed that two achievement goals correlate positively and significantly with achievement. As expected, all three approaches to learning correlate significantly with achievement: deep and strategic approaches correlate positively with achievement whereas surface approach correlate negatively with achievement. The deep

approach and the strategic approaches correlate positively with each other whereas the deep approach correlates negatively with the surface approach.

In order to test the mediator effects of the three approaches to learning, partial correlations were computed between achievement goals variables and achievement of Grade 9 students, statistically controlling for the effects of the three approaches to learning. If there was a significant decrease or the disappearance in the partial correlations as compared to the bivariate correlations, this would indicate that deep approach, strategic approach and surface approach are mediators of achievement. The results of partial correlations pointed out that the mastery goal and performance goal were not significantly correlated with achievement after controlling for the effects of three approaches to learning. These results indicate that approaches to learning have a mediator effect on the relationship between achievement goals and achievement. The results of bivariate correlations and partial correlations were displayed in table 8.

Table 8. Correlations Between the Achievement Goals and Approaches to Learning to Achievement of Grade 9 Students

	Bivariate Correlations						Partial Correlation
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(6)**^{a}
Achievement Goals (1) Mastery Goal	1	.250**	.552**	.565**	-.179**	.137**	.011
(2) Performance Goal		1	.127**	.318**	.185**	.138**	.109
Approaches to learning (3) Deep Approach			1	.569**	-.129**	.103*	_
(4) Strategic Approach				1	-.046	.208**	_
(5) Surface Approach					1	-.144**	_
(6) **Achievement**						1	_

Note: * Correlation is significant at the 0.05 level, ** Correlation is significant at the 0.01

level, *** Correlation is significant at the 0.001 level

^{a}Controlling for the deep approach, the strategic approach and the surface approach.

Mediator Effects of Approaches to Learning on Achievement

To examine the mediator effects of approaches to learning on achievement, a hierarchical multiple regression analysis was conducted (see table 9). In other words, the outcome variable (achievement) is regressed on both the mediators and the predictors.

More specifically, a two steps hierarchical multiple regression was used to examine the possible unique contribution of each achievement goal on achievement when the effects of the deep approach, the strategic approach and the surface approach were statistically controlled for. Thus, the deep approach, the strategic approach and the surface approach were entered first and the set of achievement goals was entered last.

In the first step, achievement was the dependent variable and the deep approach, the strategic approach and the surface approach were the independent variables. In the second step, achievement goals were entered. Before the hierarchical multiple regression analysis was conducted, the independent variables were examined for collinearity. Results revealed that

collinearity tolerance (all greater than 0.551) suggested that the estimated βs are well- established in the following regression model.

Based on the results, the adjusted change increased from .058 to .066 with the addition of achievement goals variables. It showed that the addition of achievement goals variables significantly improved on the prediction by the approaches to learning, explaining about 1.1% additional variance. This finding revealed that approaches to learning have a mediating effect between achievement goals and achievement of Grade 9 students.

Table 9. Hierarchical Multiple Regression Analysis of Achievement Goals and Approaches to Learning on Achievement

Predictors	Achievement (Model 1)	Achievement (Model 2)
	β	β
Approaches to Learning Deep Approach	-.044	-.036
Strategic Approach	**.226*****	**.188*****
Surface Approach	**-.139****	**-.162*****
Achievement Goals Mastery Goal	n.a	-.007
Performance Goal	n.a	.115
F	**F(3,596)= 13.222*****	**F(2,594)= 3.564***
	0.062	**0.074**
	0.058	**0.066**
Change	**0.062*****	**.011***

Note: *p < 0.05, **p < 0.01, ***p < 0.001

Conclusion

In Myanmar, teachers and principals have expressed concern over the high expectations of academic skills for the education of their students. However, teachers and educators have, so far, rarely noticed the factors affecting students" academic outcomes. Findings from my research may support teachers and educators in instructing students on how to adopt achievement goals and how to apply effective learning approaches. In this study, Grade 9 students endorsed both mastery goal and performance goal for their various achievement activities. Previous quantitative studies have not supported the view that students who adopted multiple goal patterns report higher academic results than those who endorsed mastery goal only (Ironsmit et al., 2003, Pintrich, 2000a; Wolters, 2004, as cited in Harackiewicz, et al, 1998). This result therefore suggests students' mastery goal orientation is likely to be a more important factor influencing their achievement. Therefore, teachers need to find out ways to reduce performance goal inclination among the students and motivate students to inculcate the habit of adopting mastery goal. Moreover, there existed gender difference in achievement goals, mastery goal and performance goal. The present study indicates that Grade 9 female students are significantly better than Grade 9 male students on achievement goals, mastery goal and performance goal.

Also, Grade 9 female students are more inclined towards using strategic approach than male students. In examining the mediating effects of approaches to learning between achievement goals and achievement, the results pointed out that strategic and surface approaches are the bridge between achievement goals and achievement, which implies that achievement goals either has indirect effects through approaches on achievement, or that learning approaches mediate the effects of achievement goals on learning.

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