

Middle School Students Academic Motivation: A Missing Element in a General Education Quality Improvement Program in Ethiopia

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Abstract. This research was conducted to show policy makers and quality improvement personnel how the classroom and personal goals related to academic effort and intrinsic motivation employing the revised goal theory of motivation. 809 middle school students were taken from different schools by stratified and systematic sampling techniques from Jimma zone, Ethiopia. The study found out mastery classroom goal was high (Mean =2.49, S=.42) relative to performance-approach classroom goal (Mean =2.48, S=.42) and performance-avoidance classroom goal (Mean =2.28, S=.57); and also mastery goal was high (Mean =2.89, S=.24) as compared to performance avoidance goal (Mean =2.52, S=.49) and performance approach goal (Mean =2.38, S=.57). A test of one-way ANOVA revealed a statistically significant mean differences in students' mastery goal between grade 6 and 7 students and between grade 6 and 8 students, $F(2,647) = 6.085, p=.002$. 7% of the variance in students' intrinsic motivation in the academic task was explained for by the linear combination of the independent variables. Similarly, 11% of the variance in students' effort in the academic task was explained for by the linear combination of the independent variables. Moreover, the study found out mastery goals and performance goals had positive and negative outcomes, respectively. The study implies the General Education Quality Improvement Programs (GEQIP) in Ethiopia should be revisited in a way that addresses explicitly the motivation of middle school students at a classroom level.

Key Words: Classroom Goal Perception; Personal Goal Orientations; Revised Goal Theory of Motivation

Background

A number of research works affirmed poor quality of education characterized by low academic achievement and low level of students' motivation in Ethiopia.

Prominent among these were Students National Learning Assessments (NLA) (2011, 2007) which found out low student's motivation for learning; and academic achievements of grade four and eight students in different subjects (English, Mathematics and other subjects) were far less than the minimum expected standard (50%) of the Federal Democratic Republic of Ethiopian Education and Training Policy (1995).

In response to this, the government of Ethiopia introduced and implemented a General Educational Quality Improvement Program (GEQIP) in schools. The GEQIP addressed the following components since its inception:

Curriculum, Textbooks and Assessment and Inspection; (ii) Teacher Development Program (TDP), including English Language Quality Improvement Program (ELQIP); (iii) School Improvement Program (SIP), including school grants; (iv) Management and Administration Program (MAP), including EMIS; and (v) Program Coordination, including Monitoring and Evaluation Activities. (GEQIP, 2008:3).

However, the average academic achievements of students in grades 4 and 8 have not improved. For example, the fourth National Learning Assessment (2011) showed the average scores of students' in various subjects were below the expected standard. Similarly, the Education Sector Development Program reported:

Notwithstanding major investments in improving the numbers and the qualifications of teachers and the availability of equipment, student achievements have not sufficiently improved. The gains in access are of little meaning if they are not accompanied by improved student learning. If students do not acquire significant knowledge and skills, Ethiopia will not be able to compete within a global economy. (ESDP IV, 2010: 10).

Different explanation could be forwarded as to why the quality improvement program failed to bring the intended target in relation to students' academic achievements. One of the explanations could revolve around students' motivation. Though the third NLA (2007) found out students lacked the potent psychological factors such as motivation which could be cultivated in the classroom, the quality improvement program did not address explicitly what should be done at the classroom level to enhance students' motivation. Moreover, the School Improvement Program Guidelines (2010), one sub-components of GEQIP, and the GEQIP II (2013) did not address adequately the components of motivation and how to promote students motivation at a classroom level. However, various scholars advocate the importance of motivation in influencing students' academic achievements (Areepattamannil, Freeman, & Klinger, 2011b).

Thus, this research was conducted to show policy makers and quality improvement personnel how middle school students perceived a classroom goal structures; and how these variables and students' personal goals related to academic effort and intrinsic motivation employing the revised goal theory of motivation. By doing so, the policy makers and others concerned bodies working on ensuring quality of education in middle school students of Ethiopia could get invaluable insight and may consider students motivation explicitly for their future intervention. Therefore, the study deals with:

- To what extent do classroom goal and students' goal orientation related?
- What are the magnitudes of these variables?
- Are there significant mean differences among these variables by grade level?
- How did these variables predict academic effort and intrinsic motivation?

Theoretical framework

Even though researchers have used diverse motivational approaches, achievement goal theory of motivation is the prominent theory which explains students' academic motivation and engagements in relation to classroom practices (Meece, Anderman & Anderman, 2000). The theory assumes that motivation and behaviors are explained by the reasons students forwarded for engaging in academic work (Ames, 1992; Dweck & Legget, 1988). Achievement goal theory of motivation has attested the importance of classroom goal structure as an important determinant of student learning goals, and academic outcomes (Ames, 1992). Moreover, motivation and achievement are influenced by the classroom goals which include practices and policies as dictated by the classroom teacher (Ames & Archer, 1988). These goals, according to the revised goal theory of motivation are mastery, performance approach and performance avoidance goals (Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002).

In a classroom in which students perceive the importance of the task at hand and expectations of success are high, the tendency to adopt mastery goal would be maximized (Midgley Kaplan & Middleton, 2001). On the other hand, in a classroom in which students perceive that teachers emphasize ability grouping and performance evaluation, the tendency to adopt performance-approach goal would be high (Cauley et al., 2005). Similarly, in a classroom in which students perceive that failure is not considered as an opportunity for learning/teaching or failure is considered as a lack of ability, adoption of performance avoidance orientation is more likely (Svinicki, 2005).

The different goals students adopt resulted in different educational outcomes. Mastery goal related to a number of positive behavior (Dweck & Leggett, 1988 ; Midgley et al. , 2001 ; Pintrich , 1999) and on the contrary, performance approach goal oriented students for excelling others and documented their ability while

performance avoidance goal oriented students to conceal their inability or avoid difficult task (Pintrich, 1999).

Methods and Materials

The populations of this study were 8,090 middle school students (grade 6, 7.and 8) located at Jimma zone, District town, Ethiopia. 10 % (809) of students from the population were taken from different schools by stratified and systematic sampling techniques. Data for the achievement goals, effort and intrinsic motivation were secured by means of scales adopted from Midgley et al. (2000) and Motivation Inventory website (<http://selfdeterminationtheory.org>). Students rated the various items on a three point scale (1=Not at all true, 2= somewhat true, 3= very true). The personal goal scale contains 14 items. 5 items measure mastery and performance approach goal whereas the performance goal scale contains 4 items. The classroom goal scale contains 14 items. The mastery goal scale contains 6 items, the performance approach goal scale contains 3 items and the remaining 5 items assessed performance avoidance goal structure. The effort and the intrinsic motivation scales contained 5 and 7 items, respectively. Pilot test was carried out on 50 middle school students with the aim of checking the reliability coefficient of the various scales. Moreover, professionals from psychology department checked the contextual relevance of the various items. The internal reliability estimates of the various scales were acceptable, ranging from .62 to .86 and also some items were modified based on the comments of expert analysis.

Result

Socio demographic characteristics of the respondents

671 (83%) students filled out the questionnaire correctly. The rest 138 (17%) of participants did not complete the questionnaire correctly and thus avoided from the final analysis. 314 (46.8%) of the respondents were males and 357 (53.2 %) were females. 131 (19.5%), 214 (31.9%) and 326 (48.6%) students were taken from grade eight, seven and six respectively. The mean age of respondents was 14.02 with a standard deviation of 1.63.

Relationship of classroom goal and personal goal

There were significant relationship between students' mastery goal and mastery classroom goal ($r = .135, p < .01$), performance approach goal and performance approach classroom goal ($r = .440, 21p < .01$) and performance avoidance goal and performance avoidance classroom goal ($r = .416, p < .01$). The regression analysis also indicated that almost 2% of the variance in students' mastery goal was explained by mastery classroom goal. Mastery classroom goal significantly

predicted students mastery goal ($b=.076, t=3.357, p = .001$). Similarly, the proportion of variance in performance approach and performance avoidance goals explained for by performance approach and performance avoidance classroom goals were 19.4% and 17.2% respectively. Performance approach classroom and performance avoidance classroom goals significantly predicted students' performance approach and performance avoidance goals ($b=.611, t=12.01, p = .000$; $b =.358, t=11.39, p = .000$).

Magnitude of perceived classroom goal and personal goal

As indicated in the table below, the mean score of the three types of classroom and personal goals were above the scale mean (2.00). Students perceived the middle classroom goal as more of mastery support (Mean =2.49, S=.42) and performance approach support (Mean =2.48, S=.42) while the mean score on performance avoidance classroom support (Mean =2.28, S=.57) was relatively low as compared to the mastery and performance approach classroom structures.

Table 1: Mean score of students' perception of the classroom goal and personal goal

Variables	Mean	Std. Dev.
Mastery classroom goal	2.49	.42
Performance approach classroom goal	2.48	.42
Performance avoidance classroom goal	2.28	.57
Mastery goal	2.89	.24
Performance approach goal	2.38	.57
Performance avoidance goal	2.52	.49

Similarly, the mean score on mastery goal (Mean =2.89, S=.24) was higher than both performance approach and performance avoidance goals. The mean score on performance avoidance goal (Mean =2.52, S=.49) was greater than the average score on performance approach goal (Mean=2.38, S=.57).

Students' personal goal by grade level

As indicated in the table below, the mean scores of grade 6 students on mastery goal was higher than grade 7 and 8 students while the mean score on mastery goal for grade 7 students was higher than grade eight students. A test of one way ANOVA indicated statistically significant differences on mastery goal at least in a pair of grade levels, $F(2, 647) = 6.085, p=.002, \eta^2 = .018$. The post hoc comparison test indicated that there was statistically significant mean differences on mastery goal between grade 6 and 7 students (MD=.003); and between grade 6 and 8 students (MD=.008). The rest was not statistically significant.

Table 2: Mean score of students personal goal orientations by grade levels

	Mean	Std. Dev.
Grade level	Mastery goal	
8	2.83	.32
7	2.91	.23
6	2.91	.19
	Performance approach goal	
8	2.40	.53
7	2.42	.59
6	2.36	.57
	Performance avoidance goal	
8	2.55	.45
7	2.52	.49
6	2.52	.51

Though there were not statistically significant mean differences on performance approach and performance avoidance goals by grade level , the mean scores of grade 6 students on performance approach goal was lower than grade 7 and 8 students; the performance approach goal for grade 7 students was higher than grade 8 students ; the performance avoidance goal for grade 6 students was lower than grade 7 and 8 students and the performance avoidance goal for grade 7 students was lower than grade 8 students.

Perceived classroom goal structures analysis by grade levels

Though there was not statistically significant mean differences on the various types of classroom goals by grade levels , the mean score of grade 8 students on mastery classroom goal was higher than grade 6 and 8 students; the mastery classroom goal for grade 6 students was higher than grade 7 students ; the performance approach classroom goals for grade 8 and 7 students were higher than grade 6 students; the performance avoidance classroom goal for grade 8 students was higher than grade 6 and 7 students; and the performance avoidance classroom goal for grade 6 students was higher than grade 7 students.

Table 3: Mean score on perceived classroom goal structures by grade levels

	Mean	Std. Dev.
Grade level	Mastery classroom goal	
8	2.55	.44
7	2.46	.42
6	2.50	.41

Performance approach classroom goal		
8	2.50	.41
7	2.50	.45
6	2.47	.40
Performance avoidance classroom goal		
8	2.38	.56
7	2.25	.56
6	2.26	.57

The final analysis was to find out the how well socio-demographic variables, students' personal and classroom goals predicted students' effort and intrinsic motivation. 7% of the variance in students' intrinsic motivation in academic task was explained for by the linear combination of performance avoidance and mastery classroom goal, mastery and performance approach goals. The performance avoidance classroom and performance approach goals negatively predicted students' academic intrinsic motivation ($b = -.089$, $t = -3.704$, $p = .000$), ($b = -.072$, $t = -2.747$, $p = .006$), respectively. Students mastery and mastery classroom goals positively predicted students' academic intrinsic motivation ($b = .177$, $t = 3.164$, $p = .002$), ($b = .076$, $t = 2.181$, $p = .030$), respectively. The socio-demographic, the rest of the classroom and personal goals variables were not statistically significant predictors of academic intrinsic motivation in middle school students.

Table 4: Predictors of academic intrinsic motivation

	Beta coefficients	t test	Sig.
Constant	2.12	12.79	.000
Performance avoidance classroom goal	-.90	-3.70	.000
Mastery goal	.18	3.16	.002
Performance approach goal	-.07	-2.75	.006
Mastery classroom goal	.08	2.18	.030

With respect to effort, 11 % of the variance in students' effort in academic task was explained for by the linear combination of performance avoidance, performance approach, mastery and performance avoidance classroom goals. The performance avoidance, performance avoidance classroom and performance approach goals negatively predicted students' academic effort ($b = -.088$, $t = -2.565$, $p = .011$), ($b = -.075$, $t = -3.031$, $p = .003$), ($b = -.066$, $t = -2.276$, $p = .023$), respectively. Students mastery goal positively predicted students' academic effort ($b = .224$, $t = 3.831$, $p = .000$).

Table 5: Predictors of academic effort

	Beta coefficients	t test	Sig.
Constant	2.37	14.45	.000
Performance avoidance goal	-.09	-2.57	.011
Mastery goal	.22	3.83	.000
Performance avoidance classroom	-.075	-3.03	.003
Performance approach goal	-.066	-2.28	.023

Discussions and implications

The study found out middle school students perceived classroom goal as more of mastery support, followed by performance approach and performance avoidance. It seems that middle school classrooms in the study setting emphasize multiple goal messages which were consistent with the finding of Ames (1992). According to Ames, the tendency to adopt multiple goals would be high in a classroom that emphasize multiple goals structures. Accordingly, scholars indicated that the multiple goal messages resulted in adoption of various goals. Pintrich, Conley & Kempler (2003) propound that varieties of instructional strategies in classrooms containing different messages and signal could resulted in the adoption of multiple goals. Thus, it is not surprising to find out that middle school students at Jimma Zone had a high level of mastery, performance approach and performance avoidance in line with the multiple messages of the classroom goal. Several researches also indicated the existence of multiple goal orientations based on the reality of the classroom goal structures (Pintrich, 2000; Pintrich & Garcia, 1991 as cited in Pintrich et al, 2003).

The study also indicated that the mean score of grade 6 students on mastery orientation was found to be higher than grade 7 and 8 students and in turn grade 7 students mean score on mastery orientation was found to be higher than grade eight students. Research in other contexts also confirmed the deterioration of middle school students' motivation as they go higher (Bong, 2001) due to various factors including characteristics of the learning environment. However, there were no statistically significant differences on classroom goals across the three grade levels as it seems teachers in these grade use similar strategies.

Dozens of researches have also evidenced the influence of mastery and performance goals on students' academic outcomes. In this study it was discovered that performance avoidance and performance approach classroom goals negatively predicted students' intrinsic motivation; performance avoidance, performance avoidance classroom and performance approach goals negatively predicted students' effort consistent with the findings of other researches (Ames, 1992; Dweck & Leggett, 1988; Pintrich, 1999). Similarly, students' mastery and mastery classroom goals positively predicted students' intrinsic motivation; mastery goal positively predicted students' academic effort consistent with the findings of other studies.

Various studies also indicated the positive side of mastery goal such as high level of intrinsic motivation and effort (Ames, 1992; Midgley et al., 2001; Pintrich, 1999).

The study came up with important implications for the policy makers, Ministry of Education of Ethiopia, the District Education offices, School Director, and middle schools teachers. As various scholars advocated and the present findings showed classroom practices and policies should get attention in the realm of promoting students academic learning. Specifically, the concerned bodies should work on promoting mastery goal as it is related to a number of positive outcomes. In this regard, it is imperative to create middle school classroom practice and policies characterised by interesting, challenging tasks, autonomy support and evaluation processes that emphasize effort rather than ability. On the other hand, classroom practices and policies characterised by competition, performance and ability demonstration should be discouraged as such type of classroom resulted in a number of negative educational outcomes. Moreover, minimizing a classroom policies and practices in which failure is not considered as an opportunity for learning/teaching or failure is considered as a lack of ability should be high on the agenda of promoting middle school students academic motivation and academic achievements in Ethiopia. Thus, the General Education Quality Improvement Packages (GEQIP) in Ethiopia should be revisited in a way that addresses explicitly the motivation of the middle school students at a classroom level as scholars expound the benefit of such interventions in bringing about high-quality educational reform with a minimum cost (Cohen, Garcia, Purdie- Vaughns, Apfel, & Brzustoski, 2009).

Limitation

The study employed a cross-sectional design which resulted in a limitation of establishing causal relationship between variables. Similarly, the study used a self reported questionnaire which is characterised by inherent biases in which the researcher could not establish whether the participants truly respond to items presented. Lastly, though the study came up with important findings to the policy makers with limited sample and coverage, further study should be conducted taking larger samples in other areas to generalize the findings of the present study.

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