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#### The effect of gender and different levels of education on the relationship between students' achievement goal and their academic achievement

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### Abstract

With the development of research on educational psychology and foreign language teaching and learning, one of the most controversial concepts in educational psychology might be the issues related to the students' achievement goal orientations. Regarding the goals that students adopt which might influence their academic success and failure, this study was undertaken to determine whether gender and different years of education affected the relationship between students' achievement goal and their academic achievement. To achieve such goals, achievement goal orientation questionnaires were distributed among 182 male and female B.A. students, majoring in English Literature at Shiraz University. The obtained data were analyzed through multiple regression coefficient. The results showed that only in the case of females, gender affected the relationship between students with performance approach and performance avoidant goal orientation and their academic achievement. In addition, in the case of freshmen and juniors, only performance approach was the significant predictor of the students' academic achievement. Regarding sophomore students, adopting such a goal did not have significant effects on their academic achievement. Likewise, in the case of seniors, both performance approach and performance avoidant had significant effects on the students' academic achievement.

**Keywords**: Goal orientation; Educational psychology; Academic achievement; Gender; Level of education.

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### Introduction

Learner factors and individual differences in language learning and educational settings have become one of the important concerns in educational psychology and of great interests to psychologists. These individual differences could emerge out of the concept of motivation which is considered as one of the complicated variables in describing such differences in language learning (Vaezi, 2008). Moreover, learning motivation is considered to be one of the factors that affect learners' learning processes and one of the main research topics over the past few decades. Covington (2000) believes that motivation is very important in any educational activities. He has cited a quotation from Maehr and Meyer (1997, p.372) that Terrel Bell, former Secretary of Education, mentioned the point emphatically: "there are three things to remember about education. The first is motivation. The second one is motivation. The third one is motivation" (p.171). Pintrich and Schunk (2002) define motivation from the cognitive point of view in which goals play very important roles in leading individuals toward or against an action.

Actually, in Educational psychology research, motivation is regarded as an internal state that students bring to a task along with the goals they held which leads to their success or failure. In fact, what is of great importance for the success of students in the education context is to understand the origin of students' motivation. According to Ames (1990), students' motivation as commonly cited by teachers, has been described as one of the most significant problems in education. Accordingly, goal theorists have declared that motivation is supposed to be conceptualized as goal-directed behaviors that are shown by learners in an achievement environment (Ames, 1992). Likewise, "motivational goals guide the student toward or away from achievement" (Carpenter, 2007, p.7); and the type of goal students adopt in education context has been considered to be a function of individual differences.

In addition, some researchers (e.g., Ames, 1992; Dweck, 1986; Elliot, 2005; Maehr, 1984; Meece et al., 2006; Nicholls, 1984; Pintrich & Schunk, 2002) identified a concept that is "goal orientation

theory" which has been emerged as an important theoretical perspective on students' motivation in educational settings. In line with this statement, Pintrich and Schunk (2002) have mentioned that

Goal orientation theories were developed specifically to explain achievement behavior. They were created by developmental, motivational, and educational psychologists to explain children's learning and performance on academic tasks and in school settings. As such, they are the most relevant and applicable goal theory for understanding and improving learning and instruction (p.213).

On the other hand, literature has considered achievement goal orientation as an essential determinant of students' motivation and achievement behavior (Kwok-wai et al., 2002). Accordingly, achievement goal theorists (e.g., Ames, 1992; Dweck, 1986; Nicholls, 1984) believed that the achievement goals (i.e., the purposes, intentions, and reasons) students set for engaging in an academic task are important antecedents to their achievement-related processes and outcomes.

Based on the issues mentioned, it can be concluded that one of the most important concepts of research on students' motivational beliefs has been the investigation of achievement goal orientations over the past few years. Therefore, goal orientation theory has been considered as an appropriate theoretical framework for the present study to predict the students' behavior and performance in academic settings.

In addition, literature reveals that over the years, various researchers and goal theorists have examined students' goal orientations in different educational levels and discussed different achievement goals students adopt which determine their success and failure. Moreover, the rave review of literature on the achievement goal theory shows that most of the studies conducted on achievement goal orientation to the present have concentrated on students at preuniversity level but scant research has been conducted at university level. More specifically, studies on the relationship between variables such as achievement goal orientation, gender, and different levels of education and the students' academic achievement have failed to be considered particularly in the Iranian context.

#### The purpose of the study

The present study attempts to find out if gender and levels of education at university level affect the relations between the type of goals students set and their academic achievement.

### **Research Questions**

Concerning the objectives of the current study, the following research questions have been made:

1. Does gender affect the relationship between students' achievement goal and their academic achievement?

2. Does the level of education (freshman, sophomore, junior, and senior) have any effect on the relationship between students' achievement goal and their academic achievement?

#### **Literature Review**

Many researchers have considered achievement goal orientation as one of the factors that has the highest impact on the students' academic affairs (Ames & Archer, 1988; Dweck & Leggett, 1988 cited in Zakeri, 2009). Thus, various researchers have conducted different studies to examine the impacts of different variables on the students' goal adoption and as a result on their academic achievement. For example, the following section reviews the effects of gender on the type of goals that students adopt.

#### Achievement goal orientation and gender

Different researchers have investigated the relationship between students' achievement goal orientations and their gender. For instance, Kenny-Benson, Pomerantz, Ryan, and Patrick (2006) conducted a study to investigate the gender differences in goal orientations held by middle school students. They examined students when they were first in their fifth and then seventh grade to see if students' goal orientations or their approaches with regards to their school work change over time. The results of the study suggested that boys' and girls' approaches differed towards their academic tasks with reference to the type of goal orientations they adopted. Girls were more concerned with learning goals than boys, whereas boys

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tended to adopt ability or performance goals more and to be viewed as smart by others. Moreover, both social and biological factors also influenced the type of goal orientations boys and girls adopted.

Similarly, Meece and Holt (1993) found that most girls had more tendencies toward mastery goals but boys showed low mastery and high performance goals. In the same way, Pajares and Valiante (2001) came to the conclusion that mastery goals were associated with girls while performance approach goals were associated with boys. Moreover, in their study, they did not find any significant differences across gender regarding performance avoidance goals. However, Hinkley, McInerney and Marsh (2001) reported that males' scores were higher than females regarding both their performance approach and performance avoidance goals, but no significant differences were found regarding their mastery goals. Additionally, the results of the studies done by Brdar, Rijavec, and Loncaric (2006) and Meece, Glienke, and Burg (2006) indicated that females were more learning goal oriented than males, while males were more performance avoidant goal oriented. It is interesting to note that other studies by Thorkildsen and Nicholls (1998), Rijavec and Brdar (2002), and Brdar et al. (2006) have shown that work avoidance goals were also more usual and related to males than females. In contrast, a research has also been carried out by Kwok-wai, Po-yin, Man-tak, and Phillip (2002) on achievement goal orientations among 473 pre-service student teachers of the Hong Kong Institute of Education. Through completing a questionnaire two types of goals were identified; learning goals and performance goals. The results indicated that females were more performance goal oriented than males.

Throughout the history of the goal orientation theory, some other empirical research related to the students' achievement goal orientation and their gender has been carried out in conjunction with different variables. For instance, Chan et al. (2004) examined the relationship among achievement goals, study strategies and achievement of Hong Kong students along with gender differences. The results of the study showed that female students showed more tendency toward performance goal orientation than males. On the contrary, Byme's (2011) study indicated that males were more performance approach goal oriented than females. Regarding their perception of the classroom goal orientations, males showed to be more performance-approach or performance avoidance oriented than girls. Moreover, a small positive relationship was found between students' achievement goals and their perceptions of the classroom goal orientations. In The results also showed that different subjects such as English, math, social studies, and science the students studied had an influence on their perception of classroom orientations. Those who followed math and social studies were more mastery oriented than those who studied English and science. Similarly, Middleton and Midgley (1997) in their study found that boys were more performance approach oriented than girls.

Furthermore, Tercanlioglu's (2004) research showed that no significant differences were found on the effect of gender on both task and ego orientations. However, female students had more tendency to adopt task orientation, whereas male students tended to adopt more work avoidant goals than females. The results also indicated that females reported more self-enhancing ego orientation as well as self-defeating ego orientation than males. In the same way, Pajares et al. (2000) found that girls were more task goals oriented than boys.

Although in some studies regarding gender differences in goal orientations, males showed greater performance goal orientation than females (e.g., Middleton & Midgley, 1997; Patrick, Ryan, & Pintrich, 1999; Ryan, Hicks, & Midgley, 1997), other studies have identified no difference between males and females in performance goal orientation (Meece & Holt, 1993; Niemivirta, 1996). In the same way, although the literature suggests that boys put more emphasize on performance goal orientations while girls put more emphasize on higher effort and mastery goal orientation or vice versa, Pintrich and Schunk (2002) showed no significant differences across gender groups.

Over the years, many researchers have examined students' goal orientations in a variety of different classroom settings. The results show that students' goal orientations change at different levels of education in the way that more learning goals are adopted by elementary school students, whereas middle school students tended to adopt performance goals. Anderman and Midgley (1997) hypothesized that students were more mastery goal oriented during the late elementary school years, whereas they were more performance goal oriented when they entered middle school. The reason was that when they moved to middle school, their teachers stressed ability (performance goals) over mastery goals. Moreover, the results also showed that such a transition had negatively influenced the quality of learning for the students.

According to Shim, Ryan, and Anderson's (2008) study the students' achievement goals were declined regarding their-mastery goals and experience a decline in mastery goals but increased regarding their performance goals during the transition to middle school. Other researchers have found contradictory results. Shim et al. (2008) reported that performance-approach goals were harmful to students' academic achievement in upper elementary grades and became unrelated to their academic achievement when they moved to middle school.

Different empirical research has also been conducted related to the students' achievement goal orientations with different majors across other levels of education, and sometimes in company with various variables. Roedel and Schraw (1995) found out that students who tended to adopt learning goal orientation strongly were more successful in their introductory science course than students who adopted relatively weak learning goal orientation. In the same way, some other correlational studies have reported positive relationships between mastery goals orientation and classroom achievement (Brookhart et al., 2006; Kaplan & Maehr, 1999). However, another study which was conducted in college settings did not show such relationships (Harackiewicz et al., 1997). Similarly, Harackiewicz et al. (2002) in their study supported the positive effect of performance approach goals rather than learning goals on the college students' outcomes.

Elliot and Church (1997), Wolters (2004) and Elliot, McGregor, and Gable (1999) reported that performance avoidance goals were negative predictors of students' exam performance.

Martin, Marsh, Debus, and Malmberg (2008) assessed performance and mastery goal orientation among high school and university students from a Rasch perspective. The results showed that both school and university students were high in mastery goal orientation in comparison with performance orientation. Nevertheless, fewer school-university differences were found on performance goal orientation than mastery goal orientation. In addition, in both school and university students, mastery orientation items did not differentiate high mastery oriented students from low mastery oriented ones. Finally, a hierarchical structure to performance and mastery goals orientation was found to be existed for both school and university students from the Rasch perspective. Similarly, Harackiewicz et al. (1997) examined predictors and consequences of achievement goals in the college psychology classroom. The results indicated two types of achievement motivation as predictors of the students' goals; namely, work-mastery and competitive orientations. Accordingly, work-mastery oriented students tended more to adopt mastery goals, whereas competitive oriented students tended to adopt performance and work avoidant goals. On the other hand, mastery oriented students were more interested in the class, while performance goal oriented students were more successful in their academic performance.

Gehlbach (2006) examined if changes in students' goal orientations related to outcomes in social studies. The results indicated increases in mastery goal orientation were positively related to outcomes in social studies, whereas increases in performance goal orientation were not. Likewise, Meece and Holt (1993) found three clusters of students with different achievement profiles in science. Mastery goal oriented students showed the most positive achievement profile. However, students with high mastery and ego goal orientations did not perform well academically. On the other hand, students with low mastery and ego goal orientations indicated the most negative achievement profile.

In 2004, Middleton, Kaplan, and Midgley conducted a longitudinal study to examine the change of middle school students' achievement goal orientations in sixth and seventh grade mathematics classrooms as they moved from sixth to seventh grade. The results showed that all students' goal orientations were somewhat constant over time. Moreover, task goals in sixth grade were regarded as

positive predictors of the students' academic efficacy in seventh grade and performance approach goals in sixth grade were considered as positive predictors of the students' performance avoidance goals in seventh grade. Multiple regression and multi-sample analyses showed a significant path from performance approach goals to performance avoidance goals among students who reported high academic efficacy before their transition from sixth to seventh grade. The results also revealed that students who felt successful in math while adopting a performance approach goal orientation might adopt maladaptive performance avoidance goals over time and with change in situations. Lindstrom and Sharma (2010) maintained that since the 1990s, a review of literature on the achievement goal theory indicated that most of the studies in achievement goal theory have been done in the domain of schools but very few have been carried out in universities. Similarly, Magi, Haidkind, and Kikas (2010) also stated that more recent researchers put more emphasis; especially at the beginning of school, with older children, and those in the middle school age, on their motivational goals and achievement behaviors and their relations to educational outcomes besides their cognitive skills while analyzing the predictors of the students' academic achievement (Aunola et al., 2002; Aunola & Nurmi, 2004; Boon, 2007; Martin et al., 2003; McClelland et al., 2006; McClelland et al., 2007; Sud & Sujata, 2006; Urdan, 2004).

The literature on the relationship between variables such as gender, different levels of education, and the students' academic achievement the paucity of the study in the Iranian context. Accordingly, an investigation needs to be carried out in the Iranian context to find out which types of goals students set in order to understand individual differences and help them in their learning processes to become better learners. Likewise, such an investigation should be done across gender groups and different levels of education.

# Method Participants

182 male and female B.A. students, majoring in English Literature, at different years of education at Shiraz University (freshmen, sophomores, juniors, and seniors) were participated in the present study.

### Instruments

The only instrument used in the present study was a questionnaire taken from Was (2006) which was in the form of 6-point Likert Scale measuring different goal orientations (i.e., mastery, performance approach, performance avoidant, and work avoidant). The reliability index of the questionnaire has been estimated using Cronbach's Alpha. Based on the results, the reliability coefficients for mastery, performance approach, performance avoidant and work avoidant goals were 0.85, 0.71, 0.74, and 0.68, respectively. The construct validity of this questionnaire has also been checked through confirmatory factor analysis using Amos 5 Software by Was (2006).

### Data collection and analysis procedure

In order to obtain the students' academic achievement data, the researcher collected the GPAs of the students' obtained scores in all of their specialized courses at different years of education at the university including all freshmen, sophomores, juniors, and seniors. Moreover, their achievement goal orientations were obtained by the achievement goal orientation questionnaires distributed among them. To analyze the obtained data, the researcher transformed the average of the students' academic scores into standardized normal scores through nonlinear transformation. In addition, to determine whether gender and different years of education affected the relationship between students' goal orientation and their academic achievement, a multiple regression of academic achievement on different years of education separately.

## **Results and Discussion**

# The students' achievement goal, their gender and academic achievement

To see whether gender affects the relationship between students' goal orientation and their academic achievement, a multiple regression of academic achievement on different types of goal orientations was run in males and females separately. The results are summarized in Tables 1 and 2 for males and females, respectively.

Table 1. Regression of academic achievement on males' goal orientations

Predictor variables	В	Beta	t	Sig.	R	R Square
Mastery	00	01	.06	.94	.29	.08
Performance approach	.04	.30	1.67	.10		
Performance avoidant	03	25	1.41	.16		
Work avoidant	01	05	.30	.76		

Table 2. Regression of academic achievement on females' goal orientations

Predictor variables	В	Beta	t	Sig.	R	R Square
Mastery	.01	.15	1.75	.08		
Performance approach	.07	.45	4.72	.00	.46	.21
Performance avoidant	03	22	2.18	.03		
Work avoidant	01	04	.39	.69		

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Based on the results shown in Table 1, in the case of males, since all the significant values obtained are above .05 level, gender does not affect the relationship between students' achievement goal and their academic achievement. That is to say, there is no relationship between males' adoption of different types of goals and their academic achievement. However, as shown in Table 2, in the case of females, performance approach is the positive significant predictor of the students' academic achievement ( $\beta$ = .45 P< 0.001) and performance avoidant is the negative significant predictor of the students achievement ( $\beta$ = .22 P< 0.05). That is, gender affects the relationship between students with performance approach and performance avoidant goal orientation and their academic achievement.

Since the number of males was fewer than the number of females, the adoption of different types of goals by males was not significant predictors of their academic achievement. So, it is worth mentioning that in such a case, the Beta coefficients were considered rather than the significant values to interpret the results. Accordingly, the prediction profile was the same in both males and females; that is, performance approach was the positive significant predictor of the students' academic achievement and performance avoidant was the negative significant predictor of the students' academic achievement.

The results of this part of the study are similar to different studies on the effects of gender on the type of goal orientations students adopt (e.g., Brdar et al., 2006; Byme, 2011; Chan et al., 2004; Hinkley, McInerney & Marsh, 2001; Kenney-Benson et al., 2006; Kwok-wai et al., 2002; Meece et al., 2006; Meece & Holt, 1993; Middleton & Midgley, 1997; Niemivirta, 1996; Pajares et al., 2000; Pajares & Valiante, 2001; Patrick et al., 1999; Rijavec & Brdar, 2002; Ryan et al., 1997; Thorkildsen & Nicholls, 1998). On the contrary, Pintrich and Schunk (2002) and Tercanlioglu (2004) reported no significant differences across gender groups.

Furthermore, regarding the adoption of performance goal orientation among female students, the result of this study can also be supported by other studies such as Chan et al. (2004) and Kwokwai et al. (2002).

# The students' achievement goal, their education levels and academic achievement

To see whether different years of education affect the relationship between students' goal orientation and their academic achievement, a multiple regression of academic achievement on different types of goal orientations was run in different years of education separately. The results obtained for each year of education are presented in Tables 3, 4, 5, and 6, respectively.

Predictor variables	В	Beta	t	Sig.	R	R Square
Mastery	.01	.23	1.20	.23	.59	.35
Performance approach	.06	.56	3.33	.00		
Performance avoidant	01	08	.48	.63		
Work avoidant	.04	.19	1.01	.31		

Table 3. Regression of academic achievement on freshman

 Table 4. Regression of academic achievement on sophomore

Predictor variables	В	Beta	t	Sig.	R	R Square
Mastery	.00	.05	.39	.69		
Performance approach	.03	.29	1.85	.06	.31	.09
Performance avoidant	03	25	1.54	.12		
Work avoidant	01	07	.42	.67		

Predictor variables	В	Beta	t	Sig.	R	R Square
Mastery	.01	.12	.70	.48	.43	.19
Performance approach	.08	.33	2.04	.04	.43	.17
Performance avoidant	00	01	.06	.94		
Work avoidant	07	31	1.57	.12		

**Table 5.** Regression of academic achievement on junior

**Table 6.** Regression of academic achievement on senior

Predictor variables	В	Beta	t	Sig.	R	R Square
Mastery	.00	.00	.04	.96		
Performance approach	.10	.68	3.61	.00	.66	.44
Performance avoidant	12	78	3.62	.00		
Work avoidant	.07	.32	1.60	.11		

According to Table 3, in the case of freshman, only performance approach is significant predictor of the students' academic achievement ( $\beta$ = .56 P< .001). As indicated in Table 4, in the case of sophomore, none of the goals were reported to be better predictors of the students' academic achievement. However, as shown in Table 5, in the case of junior, performance approach is significant predictor of the students' academic achievement ( $\beta$ = .33 P< .05); that is, it has a significant effect on their academic achievement. Finally, based on Table 6, in the case of senior, performance approach is positive significant predictor of the students' academic achievement ( $\beta$ = .68 P< 0.001). Then, performance avoidant is negative significant predictor of the students' academic achievement ( $\beta$ = .78 P< 0.001). In this way both performance approach and performance avoidant have significant effect on the students' academic achievement.

Accordingly, the results indicated that in the case of freshmen, the adoption of performance approach goal by the students showed significant effect on their academic achievement. This means that freshman students are more interested in showing their abilities to their classmates from the time of their arrival to the university in order to show that they are superior to others. That is can be a reason why they have more successful academic achievement. However, regarding sophomores, none of the goals adopted were found to be better predictors of the students' academic achievement. The results suggest that other variables might have impacts on the students' academic achievement rather than adopting such goals and in fact, identifying such variables is out of the scope of the present research. Concerning junior, performance approach had also significant effect on the students' academic achievement. And finally, in the case of senior, both performance approach as the positive and performance avoidant as the negative significant predictors indicated significant effect on the students' academic achievement. According to Dweck (1986), performance approach goal oriented students try to gain favorable judgments of their competence; hence, they tend to demonstrate their skills and do better than others (Meece & Holt, 1993; Pintrich, 2000a). Performance avoidant goal oriented students also try to avoid negative judgments of their competence; so, they try to avoid the appearance of academic failure (Wolters, 2004). That is may be a reason why in both cases, they are academically successful.

Furthermore, based on the findings, the Beta coefficients in performance approach were higher in freshman and senior students than those in sophomore and junior ones. Moreover, in the case of performance avoidant, the Beta coefficient was negatively higher only for senior students than for other levels of education. That is to say, performance avoidant was the negative significant predictor of the students' academic achievement for the senior students. In other words, in the last year, the relationship between the students' fear of failure and their academic achievement was negative.

In addition, it can be implied that some types of goals are stable within different educational levels such as performance approach goals in the present study. Actually, the results showed that some of the students' goal orientations were somewhat constant over time which is in line with Middleton et al.'s (2004) study. The results also showed that students at different levels of education still put more emphasis on the adoption of performance approach goals. That is to say, the relationship between performance approach goals and academic achievement remains strong at all levels of education. This is in line with Anderman and Midgley's (1997) and Shim and his colleagues' (2008) studies in which when students went to the upper level of education, they were more performance goal oriented. Similarly, Harackiewicz et al. (2002) in their study supported the positive effect of performance approach goals on the college students' outcomes.

The results of this part of the study support studies such as Middleton et al. (2004) that revealed that students who were more successful in math were those who adopted both performance approach goal orientation and performance avoidance goals over time. In a similar way, Harackiewicz et al. (1997) examined predictors and consequences of achievement goals in the college psychology classroom and reported that performance goal oriented students were more successful in their academic performance. On the contrary, Elliot and Church (1997) reported that performance avoidance goal oriented students showed a strong fear of academic failure which affected their intrinsic motivation and graded performance harmfully. Equally, Elliot et al. (1999) reported that performance avoidance goals were negative predictors of students' exam performance. In other words, goals which focus on performance avoidance lead to high-school students' lower exam grades among. Wolters (2004) has also supported these findings in his study.

Finally, although the results indicated that the adoption of performance approach goal by the students at different levels of education had significant effect on their academic achievement, other researchers found contradictory results. Shim et al. (2008) reported that the students' academic achievement was not related to their adoption of performance approach goals in upper levels. Similarly, Gehlbach (2006) reported that students' adoption of performance goal orientations were not related to outcomes in social studies. Likewise, Meece and Holt (1993) indicated that students with high performance goal orientations did not perform well academically.

#### **Concluding Remarks**

Being aware of how students adopt and develop their goals, how their goals change or are affected by different factors, and how their goals have an impact on their academic outcomes are vital to whoever involved in shaping and improving the academic teaching and learning environment. Therefore, the findings of the present study may have theoretical implications for different groups of people in the educational system in general and language teaching and learning in particular. For instance, since the ultimate goal in any educational settings is to foster lifelong learning, the findings of this study can help decision-makers in any educational system to develop the course materials based on the students' goal orientations.

Accordingly, in the present study the researcher tried to notice if gender affects the relations between students' achievement goal and their academic achievement, and also, to examine if there is any difference in the type of goal orientations held by students at different years of education at the university. Based on the results obtained no significant relationship was found between males' achievement goals and their academic achievement but there was a significant relationship between females' achievement goals and their academic achievement. Moreover, the results of the effect of different levels of education on the relationship between students' achievement goal and their academic achievement showed that only performance approach was the significant predictor of the students' academic achievement in freshman students. In the case of sophomore students, none of the goals showed significant effect on their success. Regarding junior students, performance approach was also the significant predictor of their academic success. In addition, both performance approach and performance avoidant had the significant effect on the senior students' academic achievement.

As a final point, it is worth mentioning that it might be through achievement goal theory and through the application of research findings including the present one in different academic settings that researchers are able to explain the differences in the classroom learning styles. For instance, They can explain why some students are unmotivated during their academic years or why some of them are interested in achieving higher grades; whereas, others desire more to focus on the learning processes and the like.

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