ORIGINAL CONTRIBUTION

Impact of University Student's Academic Self-Efficacy and Achievement Goals on their Academic Achievement

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Abstract— The present research study was conducted to find out the Impact of university students' academic self-efficacy and achievement goals on their academic achievement. The objective of the study were to find out the impact of self-efficacy and achievement goals on the academic achievement of university students. The present study was a descriptive survey in nature. In this study researcher collected data in a quantitative form in numerical, attitude, or opinion. For these purposes two different questionnaires were used to collect students' perceptions, responses, and opinions and to find their impacts on academic achievement. Researcher collected the final scores of the student in the exam. The population of this study consisted of 3 universities of the Hazara division i.e., University of Haripur, Hazara University, and Abbottabad University of Science and Technology. The sample of the study was 400 students from these universities and stratified random sampling technique was used for the selection of these students. Questionnaires were used as a tool in the present study and Responses to each item were collected by a Likert scale ranging from (strongly disagree) to (strongly agree) in all questionnaires. Before collecting the desired data, researcher conducted a pilot study to note the inquiries and to limit the likely hood of difficulties with data recording issues. This study was conducted on 50 students of the University of Haripur other than the sample. The research study concluded that academic self-efficacy has a significantly positive effect on the academic achievement of university students as students can face challenges and able to manage the unwanted situation. They have a good academic record and achieve their goals easily, and those students who set their goals first then do hard work to achieve their targeted goals also have the best academic results. Implications of the study have been discussed as well.

Index Terms— Academic self-efficacy, Achievement goals, Academic achievement, University students

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Introduction

A common measure of the students' academic achievement is the grade point average (GPA) that is reflects the academic achievement as well as the pedagogical goals. In a review of the 55% of the peer reviewed it was found that the indicator of academic achievement was the GPA (York, Gibson, & Rankin, 2015). Educational attainment has always remained one of the concerns of the students and educational psychologists (Ye et al., 2022). Many factors affect the academic achievement of the students such as students' motivational constructs,

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self-concept, and self-efficacy (Lasagabaster, 2016). Extant research is indicative of the significant relationship of self- efficacy and self-concept (Parker et al. 2014) with the academic performance of the students (Chao, McInerney, and Bai 2019). During the learning process, the students' actions are based on their expectations of their performance and perceptions which they have about their competence (Dau-miller, et al., 2021). It means that self-efficacy beliefs have significant effect on the academic achievement of the students. It indicates to achieve outcomes based on task focused perceptions of the capacity of the students (Bandura, 1997). So along with general mental ability, self-efficacy is the critical factor which affect the academic achievement of the students in educational settings (Alhadabi, & Karpinski, (2020).

Since higher education is different from school education, where students live their lives independently, learn how to manage their time as well as money along with adopting effective learning strategies. New academic goals and interests are also developed by them during their study at university. Many studies have been exploring the relationship between achievement goals and academic achievement in different settings over the past three decades (Elliot and McGregor, 2001; Jam, Singh, Ng, & Aziz, 2018; Senko et al., 2011). Most researches have been conducted at primary or secondary school level (Scherrer et al., 2020) but the current study focused on exploring the effect of self-efficacy and achievement goals on academic achievement of the students at university level.

Objectives of the study

The objectives of the present study were:
- To identify the Perception of student's achievement goals, academic self-efficacy, as well as academic success.
- To find the influence of self-efficacy on achievement of students in academics.
- To find the impact of achievement goals on achievement of students in academics.

Hypotheses of the study

- **Ho:** Academic self-efficacy has significant positive effect on academic achievement of students.
- **Ho:** Achievement goals have significant positive effect on academic achievement of students

Review of Related Literature

Academic self-efficacy and academic achievement

One of the important factors affecting the academic achievement is the academic self-efficacy (Hsieh et al., 2007). To support this claim, social cognitive theory has been used extensively. This theory suggests that people are active representatives instead of passive players (Bandura, 2006a). many studies have found significant relationship of academic self- efficacy with academic achievement (Otero et al., 2021). One of the ways of increasing the self- efficacy is the high parental expectations which in turn affects the academic achievement of their children (You et al., 2016). High parental expectations are based on their confidence in their children which help in promoting the self-efficacy of their children (Rodríguez et al., 2017).

Self-efficacy is one of the important trait of academic achievement of university students (Chang, Hwang, & Gau, 2022). It focuses on the perceived capacity of the students to perform in academic sphere (Sevari, & Farzadi, 2021). The students will learn the skills of academic self-efficacy for the enhancement of academic achievement (Taghani, & Razavi, 2021). This concept was introduced in 1980s. Originally this concept was originated by Carol Dweck and John Nicholls. The concept of learning-performance was given Dweck (1984) along with her colleagues like Dweck & Elliot, (1983), and Dweck & Leggett (1988). Nicholls (1984, 1989) along with his colleagues (Nicholls et al., 1989) proposed Task/ego involvement goals. In the same way, Ames (1992) proposed mastery-performance model which is now widely used in the achievement goals research.

Theorists have been discussing the nature of achievement goals for many years. Contradictory and inconsistent results have been found between academic achievement and achievement goals (Harackiewicz et al., 2002a, b; Huang, 2012; Jam, Donia, Raja, & Ling, 2017; Van Yperen et al., 2014). Depending upon the operationalization of achievement goals, achievement goals can predict the achievement of the students (Wirthwein and Steinmayr, 2020). Predominantly effect of achievement goals upon academic achievement have been examined in many research studies (Elliot, 2005; Murayama and Elliot, 2012). In these and other studies conducted recently have emerged to conducted reciprocal relationship between achievement goals and academic performance (Niepel et al., 2014; Rubie-Davis & Peterson, 2016; Waheed & Jam, 2010). In these studies, a positive relationship has been found while the others have found negative relationship between academic achievement and achievement goals (Paulick et al., 2013). Similarly, a positive predictor of mastery as well as performance approach goals of academic achievement have been found by Senac et al. (2014). On the other hand, a non- significant relation between academic achievement and achievement goals have also been found in many studies (Khan, Akbar, Jam, & Saeed, 2016; Paulick

et al. 2013; Seaton et al., 2013). In some studies, a reciprocal relation of performance approach goals with academic achievement was reported by Scherrer et al. (2020).

Research Methodology

Mouton (2001), explains that research methodology considers the research process and the type of tool and methodology.

Population and sample

The study population has consisted of 3 universities in the Hazara division (University of Haripur, Hazara University, Abbottabad University of Science and Technology. The sample of the study was 400 students from these universities. 140, 130, 130 of the University of Haripur, Hazara University, and Abbottabad University of science and technology respectively. Stratified random sampling technique was used in the process of data collection.

Data collection tool

Questionnaires were used as a tool in the present study one of them was an adopted / standardized tool developed by Elliot & Murayama, (2008) and one was self-developed. These questionnaires consist of demographic information (Name, class/ department, Gender, University, CGPA). The academic self-efficacy questionnaire containing 14 questions was developed by reviewing the related literature. An achievement goal questionnaire was adopted by the researcher for collecting responses from the students in this study. This questionnaire was developed by (Elliot & Murayama, 2008) to measure achievement goal construct it has four subscales based on mastery-avoidance subscale, mastery-approach subscale, performance-avoidance subscale, and performance–approach subscale.

Data collection

Data were collected through the above-mentioned instrument. The researcher personally visits the sample universities and administered them to the sample students. Ethical considerations were also taken into account.

Results and Discussion

The collected information through questionnaire using likert scale was analyzed according to the objectives of the study. Over all analysis of these variables is presented in underlying tables.

Table I
Descriptive statistics of the variables

	N	Minimum	Maximum	Mean	Std. Deviation
Self-efficacy	400	1.36	4.14	3.0923	.50184
Mastery Approach Goal	400	1.00	4.00	3.0758	.55303
Performance Approach Goal	400	1.00	4.00	2.9267	.60552
Mastery Avoidance Goal	400	1.00	4.00	2.8533	.64210
Performance Avoidance Goal	400	1.00	4.00	2.6667	.81033
Valid N (list wise)	400				

Table I illustrate that the mean value of the self-efficacy is 3.0923 and standard deviation is .50184, the mean value of the mastery approach goal is 3.0758 and standard deviation is .55303 while the mean of the Performance approach goal is 2.9267 and standard deviation is .60552. Mastery avoidance goal shows the mean value 2.8533 and standard deviation is .64210. It was found that performance avoidance goal having the mean value 2.6667 and standard deviation .81033. So Table I indicates that perception of students; self-efficacy is greater among all other variables.

Table II

Influence of academic self-efficacy upon academic achievement

Model	Unstandardized Coefficients	Standardized Coefficients			
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.497	.152		9.821	.000
Self-efficacy	.510	.049	.465	10.490	.000
	$R = 0.465^a$	R^2 .217	Adj R^2 .215	$F = 110.05$	Sig. = 0.000

Dependent Variable: Academic Achievement

Table II indicate that the value of $R = 0.465$ shows a positive relation among self-efficacy and academic accomplishment .The value of adjusted R2 is 0.215 which indicate that 1 unit increase in academic self-efficacy brings 21.5 percent variation in academic achievement This table indicates that fitness of the model as reflected by the value of $F = 110.05$ (0.000). The value of Beta is 0.510 which indicates the self-efficacy in academic takes significant positive impact at academic achievement as reflected by the value of t as 10.490 with Alpha 0.000

Table III

Effect of achievement goals on academic achievement

Model	Unstandardized Coefficients	Standardized Coefficients			
	B	Std. Error	Beta	t	Sig.
1 (Constant)	2.013	.211		9.533	.000
Mastery Approach Goal	.004	.047	.004	.085	.933
Performance Approach Goal	.303	.049	.333	6.215	.000
Mastery Avoidance Goal	.068	.045	.080	1.526	.128
Performance Avoidance Goal	-.012	.034	-.018	-.358	.721
	$R = 0.368^a$	R^2 .136	Adj R^2 .127	$F = 15.5$	Sig. = 0.000

Dependent Variable: Academic Achievement

A positive relation between Mastery approach goal and academic achievement shows by the value of $R = 0.368$ in Table III. Here value of adjusted R^2 is 0.136 which indicates that 1 unit increase in Mastery Approach Goal brings 12.7 percent variation in academic achievement. The value of Beta for mastery approach goal is .004 which indicates that mastery approach goal has insignificant positive effect on academic achievement as reflected by the value of t as 0.085 with Alpha 0.933.

The value of Beta for Performance Approach Goal is 0.303 which indicates that performance approach goal has significant positive effect on academic achievement as reflected by the value of t as 6.215 with Alpha 0.000.

The value of Beta for Mastery Avoidance goal is 0.068 which indicates that mastery avoidance goal has insignificant negative effect on academic achievement as reflected by the value of t as 1.526 with Alpha 0.128.

The value of Beta for Performance Avoidance goal is -0.012 which indicates that performance avoidance has insignificant negative effect on academic achievement as reflected by the value of t as -0.358 with Alpha 0.721.

Table IV

Effect of academic self-efficacy and achievement goals on academic achievement

Model	Unstandardized Coefficients	Standardized Coefficients			
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.409	.215		6.553	.000
Mastery Approach Goal	-.012	.044	-.012	-.281	.779
Performance Approach Goal	.165	.049	.182	3.339	.001
Mastery Avoidance Goal	-.020	.044	-.024	-.463	.644
Performance Avoidance Goal	-.015	.032	-.022	-.461	.645
Self-Efficacy	.426	.058	.389	7.314	.000
	$R = .489$	R^2 0.239	Adj R^2 0.229	$F = 24.8$	Sig. = 0.000

Dependent Variable: Academic Achievement

Table IV illustrates that the Self-efficacy has significant positive influence on academic achievement as value of beta is 0.389 reflected by the t value 7.314 with alpha 0.000. while mastery approach goal has negative insignificant effect on academic achievement as the value of beta is -0.012 and reflected by t value -0.281 with alpha 0.779 and Performance approach goal has significant positive effect on academic achievement as the value of beta is 0.165 and reflected by t value 3.339 with alpha 0.001. Table IV also illustrates the mastery avoidance goal has insignificant negative effect on academic achievement as the value of beta is -.024 reflected by the t value -0.463 with

alpha 0.644, while the performance avoidance goal have insignificant negative effect on academic achievement as the value of beta is -.015 reflected by the *t* value -0.461 with alpha 0.645.

Discussion

Academic self-efficacy leaves significant positive impact on academic achievement, It supported by the study of Hill. (2002). Self-efficacy, believing individual's capabilities and influences aimed at knowledge also presentation, be there as the important attribute to educational achievement of scholars of universities. This was founded in the study of De Wit, & Altbach, (2021) that effort toward achieve its mission of satisfying a break in these areas, Competes that scholars through superior self-efficacy could accomplish at a upper level because they can manage other efficiently through reasoning burdens, an explanation to it as component of mastery goal coordination might be additional. Present study further concluded that mastery approach goal students has a positive significant effect about academic achievement of students as most of the students set their goal to fully and deeply understand the content taught in class and try to achieve their goal. The results about the academic achievement and achievement goals are not consistent. For example, Seaton et al., (2013) found a positive relationship of academic achievement with mastery goals while other studies have found insignificant relationship of academic achievement with mastery goals (Sullivan et al., 2006).

Similarly the present study conclude that performance approach goal have significant positive effect on the university students' academic achievement. The other relevant studies reported no or occasionally a negative correlation with performance of the students (Shim et al., 2008). It indicates that such students may experience mixed motivation, feelings of doubt, and ambiguous goals. These feelings of doubt and uncertainty may be the reason of non- significant relationship of achievement goals and academic achievement.

Conclusion

The research study concluded that the perception of student's self-efficacy is greatest as compare to achievement goal. The majority of the students have greater self-efficacy. They confident about their self-efficacy it indicated that they are able to face the difficult situation, to take decision with the risk to fail, to discuss an unjust evaluation, to understand the reason of failure, to able to avoid facing a conflict and manage to solve difficult problems.

Study further concluded that mastery approach goal students have the positive significant effect about academic achievement of students as most of the students set their goal to fully and deeply understand the content taught in class and try to achieve their goal. Similarly this study tells that performance approach goal have significant positive effect on the university students and want to determine to do well when compared to other students. Their goal is to behave well when compared to other students and to produce a better work than other students. The overall conclusion of the present study was that academic self-efficacy has profound influence on academic achievement of university students as students are able to face challenges and able to manage the unwanted situation they have good academic record and achieve their goals easily. And those students who set their goals first then do hard work to achieve their targeted goals are also having the best academic results.

Recommendations

- As study indicate academic achievement is positively and significantly affected by academic self-efficacy so for raising the level of academic achievement
- Student should practice challenging tasks.
- Teacher should teach through specific learning strategies.
- Teachers should focus on students' interests.
- Teachers and parents as well allow students to make their own choices.
- Encourage students to try again and again for achieving goal.
- Encourage accurate attributions.

As present study indicated that achievement goal has positive significant effect on academic achievement of university students so:
- Students should identify their goals first
- They should visualize their results.
- They should plan with a SMART goal setting plan.
- Teachers should motivate the students for goal setting.
- Students should overcome obstacles by goal setting.
- Avoid Procrastination by Increasing Accountability.
- They should Plan for the Future

Limitations and Suggestions for Further Research

This study has certain limitations. Due to time and resources, this study has the limitations of using only questionnaires for data collection. Further studies may be conducted to include other data tools like interview. Furthermore, this study was conducted at university level, therefore, it is recommended that other studies may be conducted at primary and secondary school level.

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