

## **GENERAL SELF-EFFICACY OF PROSPECTIVE TEACHERS: AN INVESTIGATION INTO THE RELATIONSHIP WITH ACADEMIC ACHIEVEMENT**

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### **Abstract**

*The aim of this current study was to explore the self-efficacy level of prospective teacher and its effect on their academic achievement. This study would be valuable for prospective teachers and that they will be aware of their self-efficacy level which influences on their academic achievement. The study method was quantitative and correlational research was conducted. Five hundred forty-six prospective teachers were selected from education departments of three universities by using convenience sampling technique. Data were collected by using general self-efficacy scale developed by Sherer et al., (1982). It was consisted of 17 items and reliability was 0.798. Pearson coefficient of correlation Coefficient, t-test and one-way (ANOVA) was calculated to test the study hypothesis. Findings showed that the self-efficacy level was moderate to high of prospective teachers. A significant positive strong relationship existed between self-efficacy and their academic achievement.*

*Further differences between the self-efficacy and academic achievement with the demographic data were explored as well. A significant difference exists between female and male and marital status but no significant difference was found with the academic achievement. There was a significant difference of locale with academic achievement but not found significant difference with self-efficacy. It was concluded that high self-efficacy leads to high academic achievement of prospective teachers.*

**Keywords:** *Prospective Teachers, Self-efficacy, Initiative, Persistence, Effort.*

## **INTRODUCTION**

*Prospective teachers join teacher training institutes after graduation. Before graduation, they have certain future plans to join different discipline of higher education but majority of students join prospective teacher program in case of not getting admission in their desired professions. Most of the students join prospective teacher education program due to low merit in prospective teacher's education programs (Broadbent, 2017). In prospective teacher education programs, there is a lot of diversity with respect to subjects. This diversity also affects their self-efficacy. General self-efficacy is good predictor of academic achievement; there is a need to assess prospective teachers' general self-efficacy. Taking into account this body of research, as critical factors influencing teacher practices, these emotional concepts need to be examined in a holistic manner. Therefore, the purpose of this study was to study the relationship between the overall self-efficacy of future teachers and their academic success. More definitely, the current research study discourses the following research questions:*

- 1. What is the level of prospective teacher general self-efficacy?*
- 2. Does the prospective teachers' self-efficacy correlate with their achievement?*
- 3. Is there any difference of prospective teachers' self-efficacy and their achievement in terms of demographic variables (gender, marital status, location and universities)?*

*Research in self-efficacy is significant as an intelligent variable, which can be a critical element in success and failure, particularly at the goal. Although Pakistan has significant international issues on this problem, these studies are not conducted at the university level. Considering its importance, it is essential to design a study that recognizes self-stress, self-efficacy and student-controlled trials of students in the Pakistani educational system*

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(Khan, 2013).

### SELF-EFFICACY

Bandura (1994) defined self-efficacy as “one’s belief in their capability to produce designated levels of performance for events that affect their lives, which determines how people feel, think, motivate themselves, and behave (p. 1)” So, a person’s decision about themselves relate with self-efficacy and confidence about being able to perform a specific or particular activity. High level of self-efficacy associated with high levels of positivity, subjective well-being, and life fulfilment. Low level of self-efficacy, in turn, is interrelated to more indications of nervousness, distress, and despair. Self-efficacy effects on the selection of the activities, effort and persistence as well as how a person thinks, motivate and behave (Pintrich & Schunk, 2002). There are various research has been conducted on the self-efficacy concept related to academic settings. Hence, it is unexpected that many studies have shown the effect of self-efficacy on student learning, academic achievement and their education (Pajras, 1996, Mohiuddin, Ilias, Cheong, Muhadd, Nourdin and Abdullah, 2006). In the theoretical framework of social cognitive theory, Bandhu (1997) describes self-efficacy that means that the credit of man achievement depends on behavior, personal reason and interaction between environmental conditions.

Self-efficacy is a capability and the performance of person in specific fields and has relationship with their judgment about their capability in that field as well as self-efficacy is a cognitive process through that we develop many social behaviours and personal characteristics. Self-efficacy is considered a good predictor of learning approaches, perseverance in the face of difficulties and academic performance (Lindstroma & Sharma, 2011). Self-efficacy is a positive conflict resource that is part of the cognitive process and is essential for stress management. Its meaning is manifested in different situations. In addition, it acts as an intermediary for the relationship between complex life events and depressive statements (Maciejewski, Prigerson, & Marzure, 2000). Although, Mahyuddin, Elias, Loh, Muhammad, Noordin & Abdullah (2006) stated that self-efficacy is considered social cognitive theory in which human behaviour, personal and environment factors are necessary for human

## **RELATIONSHIP OF SELF-EFFICACY WITH ACHIEVEMENT**

*The person who has strong self-efficacy beliefs performed better than weaker self-efficacy beliefs. There are many researches which show that self-efficacy influences on the student academic achievement. Human behaviour is largely dependent on early home experiences. A domestic environment that encourages curiosity contributes to increasing efficacy and showing greater curiosity, and studying activities will contribute to active and positive mutuality. This inspiration improves cognitive and affective personality structures, including their ability to empathize, learn from others, design substitute strategies and adjust their own behaviour, and participate in self-efficacy (Mahyuddin, Elias, Cheong, Muhamad, Noordin, & Abdullah, 2006). The results showed that student performance in the second semester positively anticipated self-efficacy. There was a significant relationship between self-efficacy and achievement, so the effect of past school achievement on self-efficacy was greater than the effect of self-efficacy on academic achievement (Hwang, Choi, Lee, Culver & Hutchison, 2016). Goulao (2014) recognised a significant positive and relationship between self-efficacy and achievement, and established an average self-efficacy level. On the other hand, Staikovic and Luthans (1988), Multon, Brown, and Leni (1991) showed significant relationship between self-efficacy and academic performance in their study, which led to a strong and positive relationship between these two variables. Similarly, numerous studies have presented a positive relationship between self-efficacy and academic achievement and performance (Wigfield, Eccles, Schiefele, Roeser & Kean, 2006, Denissen, Zarrete & Eccles, 2007).*

*Earlier studies argued that self-efficacy is a critical factor in calculating academic objectives and academic achievements. They established that self-efficacy was positively linked with student academic achievements. In studying these positive relationships, self-efficacy, workforce regulation and auxiliary program accounted for about 19 percent of the academic achievement (Bandura et al. 2001; Komarraju & Nadler 2013; Zimmerman & Bandura 1994). Though, it does not take into account that the relationship between variables can vary from age, self-efficacy (eg academic, societal, or self-learning) and academic achievement (eg GPA) and SAT scores. In summary, enormous numbers of studies have confirmed the relationship*

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*between the self-efficacy, the goals and the academic achievement of self-fulfilment (Robbins et al., 2004; Brown et al., 2008).*

*The self-efficacy of the teacher consists of two dimensions: personal self-efficacy of teacher, which relates to the teacher's belief that he / she can have a positive effect on student achievement and overall general efficacy of teacher, due to the teacher's belief in general is bring change in student (Chacon, 2005). Caprara, Barbaranelli, & Malon (2006) observed the association between teachers' self-efficacy, job contentment and achievement of student and result of this study showed teacher efficacy affected their job satisfaction and student academic achievement. Result exposed that those teacher who start their teaching and those have the lowest level of personal efficacy were mostly related with the teaching and the effect they make as educators more than their exceptionally practiced and all the more effective personality colleagues (Mahmoe, & Pirkamali, 2013)*

### **METHODOLOGY**

#### **PARTICIPANTS AND PROCEDURES**

*The study used quantitative method and correlational research. The population of the study was all general universities in the Lahore which provided different degrees as Master/M Phil/ Ph.D. programs. For sampling, only 3 general universities selected, in which faculty of education existed by using convenience sampling technique. The sample was consisted of 546 prospective teachers which selected from the faculty of education, and had received their results*

#### **INSTRUMENT**

*General Self-efficacy scale which developed by Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, and Rogers (1982) was used for assessing General Self-Efficacy level of prospective teachers belong to three different Universities of Lahore. It was consisted of 17 items. The scale consist of four-point Likert scale and range (4 to 1) of response categories from 4=exactly true, 3=moderately true, 2=hardly true, 1=not at all true. The reliability of general self-efficacy scale showed 0.798.*

#### **DATA ANALYSIS**

*The research question was tested by using descriptive and inferential statistics as well as analysing the data. There are some negative statements*

*on self-efficacy scale in the data file which reversed, 1, 2, 3, 12, 14, 15, and 17 items in self-efficacy scale were coded as reversed. Means scores and standard deviations of general self-efficacy were calculated. T-test and one way analysis of variance were applied for determining the mean scores differences in the per-service teacher general self-efficacy having diverse demographic variables. Pearson correlation coefficient was used to explore the relationship/effect between prospective teacher general self-efficacy on students' achievement.*

## **RESULTS**

*Descriptive and inferential statistical analysis techniques will be applied for analyzing the data and tested the research questions. Descriptive statistics was used for calculating mean, standard deviation and frequency and inferential statistics as Pearson Correlation Coefficient, T-test and one way analysis of variance (ANOVA) was applied for drawing conclusions*

**TABLE 1**

*Criteria Used the Self-Efficacy Level*

<i>Levels</i>	<i>Self-Efficacy</i>
<i>Low</i>	<i>&lt;2.5</i>
<i>Moderate</i>	<i>2.6-3.2</i>
<i>High</i>	<i>&gt;3.3</i>

*The criteria for level of self-efficacy determine in the three dimensions which has different score range of self-efficacy with regard to low, moderate and high levels.*

**TABLE 2**

*Status of Self-efficacy of Prospective Teachers*

<i>Levels</i>	<i>Self-efficacy</i>	
	<i>f</i>	<i>%</i>
<i>Low</i>	<i>70</i>	<i>12.8</i>
<i>Moderate</i>	<i>250</i>	<i>45.8</i>
<i>High</i>	<i>226</i>	<i>41.4</i>

*In this table frequency and percentage show that the mostly prospective teachers have moderate to high self-efficacy. The majority of the students have moderate (45.8) and higher (41.4) level of self-efficacy. Few prospective teachers have lowest level of self-efficacy.*

**TABLE 3**

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*Relationship between General Self-Efficacy of Prospective Teachers on Their Achievement*

<i>Self-efficacy</i>	<i>M</i>	<i>SD</i>	<i>1</i>	<i>2</i>
<b>1.Academicachievement</b>	1.99	.645	-	.098(*)
<b>2.General self-efficacy</b>	3.09	.473	-	-

*The relationship between prospective teacher general self-efficacy and their academic achievement was investigated using Pearson Correlation Coefficient. The table 3 showed that there was strong positive and significant association between self-efficacy and academic achievement ( $r = .098, p < .05$ ).*

**TABLE 4**

*Multiple regressions Analysis for Prospective Teachers Academic Achievement Score*

	<i>B</i>	<i>SE(B)</i>	<i>B</i>	<i>t</i>
<b>(Constant)</b>	2.409	.182	-	13.23
<b>Self-efficacy</b>	-.134	.058	-.098	-2.31

*Results of the multiple linear regression indicated that there was a shared significant effect between the general self-efficacy and academic achievement, ( $F(1, 545) = 5.311, p < .05, R^2 = .010$ ). The results also indicated that that self-efficacy ( $t = -2.31, p = .022$ ) was significant predictor in the model.*

**TABLE 5**

*Comparison of Male and Female Prospective Teachers on General self-efficacy and Academic Achievement*

<b>General Self-efficacy Scale</b>	<b>Male (n=108)</b>		<b>Female (n=438)</b>		<b>Independentsamplet-test</b>		
	<i>M</i>	<i>D</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
<b>Acadic achievement</b>	.09	.634	1.97	.646	1.787	166.12	.076
<b>General self-efficacy</b>	2.92	.482	3.13	.462	4.098	158.95	.000

*Table 5 shows comparison of male and female prospective teachers on General self-efficacy and academic achievement. A statistically significant difference not existed between male prospective teachers and female prospective teachers on academic achievement ( $p=.076$ ), and significant*

*difference was found with General self-efficacy scores for male prospective teachers (M=2.92, SD=.482) and female prospective teachers (M=3.13, SD=.462; t(158.9)=4.09, p<.05.*

**TABLE 6**

*Comparison of Three Different Universities of Lahore on General Self-Efficacy and Academic Achievement of Prospective Teachers*

<b>General Selfefficacy Scale</b>	<b>PU(n=29)</b>		<b>U(n=138)</b>		<b>LCWU(n=116)</b>		<b>ANOVA</b>	
	<i>M</i>	<i>D</i>	<i>M</i>	<i>D</i>	<i>M</i>	<i>D</i>	<i>F</i>	<i>p</i>
<b>Academic achievemt</b>	.09	647	.81	730	.97	466	.99	.001
<b>General self- efficacy</b>	.02	481	.14	17	3.14	.417	8.407	<.001

*Table shows comparison of three different Universities of Lahore on General self-efficacy of prospective teachers. One way ANOVA was conducted to see the significant different among three universities of Lahore. There was statistically significant difference among three universities on General self-efficacy  $F(2,497) = 10.18, p < .001$  and its on two subscales: (a) willingness to initiate behavior  $F(2,497) = 13.07, p < .001$  and (b) Persistence in the face of adversity,  $F(2,497) = 8.17, p < .001$ . Post Hoc Tukey test was conducted to see pair wise difference among three universities, results show that General self-efficacy of PU prospective teachers (M=3.01, SD=0.48) is low as compare and UE prospective teachers (M=3.22, SD=0.46) and LCWU prospective teachers (M=3.14, SD=0.40) but there was no significant difference between UE prospective teachers and LCWU prospective teachers ( $p = .071$ ).*

**TABLE 7**

*Comparison of Urban and Rural Prospective Teachers on General Self-Efficacy and Academic Achievement*

<b>General Selfefficay scale</b>	<b>Urban(n=391)</b>		<b>Rural (n=155)</b>		<b>Independentsamples t-test</b>		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
<b>Acamachievent</b>	2.02	.619	1.91	.700	2.08	544	.037
<b>General self-efficacy</b>	3.10	.467	3.07	.488	.606	271.7	.545

*There was a significant difference in academic achievement for Urban*

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*(M=2.02, SD=.619) and rural (M=1.91, SD=.700; t(544)=2.08, p<.05, but found no significant difference in willingness to expend effort as p >.05*

**TABLE 8**

*Comparison of Marital Status on General Self-Efficacy and Academic Achievement of Prospective Teachers*

<b>General Self-efficacy Scale</b>	<b>Unmarrie d (n=152)</b>		<b>Engaged (n=105)</b>		<b>Married (n=68)</b>		<b>ANOVA</b>	
	<i>. D</i>		<i>. D</i>		<i>. D</i>			
<b>Academicachievement</b>	.96	63	.05	65	.15	69	.35	.036
<b>General self-efficacy</b>	.11	46	.96	50	.14	49	3.97	.019
		0		3		3		

*Table 8 shows comparison of marital status on General self-efficacy of prospective teachers. One-way ANOVA was conducted to see the significant difference among single, engaged and married teachers. There was a statically significant difference among marital status on General self-efficacy, F (2,545) =6.22, p<.05. Post Hoc Tukey test was conducted to see pair wise difference among unmarried, engaged and married teachers, results show that General self-efficacy of unmarried prospective teachers (M=3.11, SD=0.46) was significant difference for engaged teachers (M=2.96, SD=0.53). A significant difference existed of marital status with academic achievement (p=.019).*

**CONCLUSIONS**

*The aim of this study was to explore the self-efficacy level of prospective teachers has in a particularly academic session. Our results indicate a higher level of self-efficacy in our sample. Secondly, the other aim of this was to examine the relationship between general self-efficacy and academic achievement of prospective teachers. The results of this research revealed that there is a positive and significant association between Self-Efficacy and Academic Achievement. Higher self-efficacy relates with the higher achievement. This result is supported by the study of Denissen, Zarrete and Eccles, (2007) and Lent, Multon, and Brown (1991). It was determined that high self-efficacy leads to high academic achievement of prospective teachers. In other words, prospective teachers who have high self-efficacy*

also have high achievement.

*This study benefited and helped to improve the teaching efficacy of the prospective teachers. Supplementary, the findings of this study have shown that the self-efficacy is considered the best likelihood aspects of academic achievement. There are little and possible limitations of this study should also be distinguished while inferring the results. Use of self-reported data is another limitation which is considered as the sole basis of information. Generally, the responses of the participants tend to socially required ways, which can cause to create biasness. Lack of time is another limitation of this study for conducting research on all universities and in-services teachers, while it may be valuable to comprise prospective and in-services teachers for comparison the self-efficacy level between them. If lowest self-efficacy level identify then suitable training and measures should be occupied to increase level of self-efficacy as well as possibilities training activities for enhancing self-efficacy level prospective teachers.*

*This study will be more valuable to conduct future study should be carried out in different educational settings and repeated with the qualitative method or mixed method approach because provide a more in-depth understanding of the observed relationships. Future work should explore the programs designed to raise self-efficacy measures.*



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