

A Study of the Association between Self-directed Learning Readiness and Academic Achievement of Student-Teachers in Pakistan

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Abstract

Education at every level is typically future-oriented; it is imperative for the learners to keep pace with the unpredictable and fast changing world. The field of teacher-education is no exception. Student-centered approaches have started gaining popularity in today's day and age. Self-directed learning is becoming one of the most prominent phenomena for the 21st century learners. This study investigated whether any relationship exists between Self-Directed Learning readiness (SDLR) and academic achievement of student-teachers. For this purpose, quantitative approach was adopted and correlation research design was used. The population comprised all the master level students of the Institute of Education and Research, enrolled in the session 2017-2019. The total number was 510. The researchers used multistage sampling to draw a sample. A total of 300 students were included in the research. To determine the SDLR of student-teachers, a modified SDLI questionnaire, developed by Su-Fen Cheng, Chien-Lin Kuo, Kuan-Chia Lin, and Jane Lee-Hsieh in 2009, was used. The analysis of the data concluded that student-teachers' self-directed learning readiness is high. It was determined that a significant difference does not exist among the population on the basis of gender or marital status.

Keywords: Self-directed learning readiness (SDLR), academic achievement, student-teacher

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Introduction

In this world of rapid development, learning opportunities are virtually limitless. A sense of responsibility and a strong initiative is crucial on behalf of the learner to exploit the available resources and compete with the fast progressing world. This is what makes the concept of self-directed learning (SDL) relevant. It enables the students, according to Gibbons (2002), to survive in today's world. Knowles (1975) defined SDL as students' ability to decide what and how they want to learn. He considered it a fundamental aspect of human maturation.

According to Knowles (1975), there is substantial proof that active students who involve themselves in their education, learn better as compared to passive students. As El-Gilany and Abusaad (2013) observe; a student's ability to effectively undertake self-directed learning is called self-directed learning readiness. Education in Pakistan is mainly teacher-centered (Arshad-Ayaz, 2007). However, the rise of distant and online education institutes, noticeably Virtual University (VU) and Allama Iqbal Open University (AIOU), provide freedom to students, essentially creating a self-directed learner.

There is a need to analyze and understand the relation of self-directed learning readiness (SDLR) and academic achievement. This research was undertaken to address this need. A greater understanding of the readiness for self-directed learning among student-teachers may help in developing appropriate teacher-training curriculum, updating educational procedures, and amending educational policies that may promote effective learning among the prospective teachers. SDLR has been a topic of research studies in various disciplines but, to the best of researchers' knowledge, there is no research in the field of teacher-education, specifically in the context of Pakistan.

Review of Related Literature

Self-directed learning is an important manifestation of andragogy, or adult learning. Readiness for self-directed learning is essential for student-teachers to be able to learn in new situations and adapt appropriate strategies. Self-directed learning is not a new concept. According to Amey (2008), it started gaining popularity in the 1970s due to writings of Malcolm Knowles.

A number of definitions for self-directed learning exist, but Candy (1991) suggests that self-directed learning is both a process and an outcome. As a process, it includes the degree of learner control and autodidaxy. As an outcome, it includes self-management and self-determination (Kranzow & Hyland, 2016). On the other hand, self-directed learning readiness is defined as the degree the individual possesses the attitudes, talents and personality features necessary for self-directed learning (Wiley, 1983).

Similarly, El-Gilany and Abusaad (2013) state that students' level of acquired capabilities to effectively engage in self-directed learning is termed as Readiness for self-directed learning. Existing literature establishes a relationship between SDLR and student achievement, defined by Cumulative Grade Point Average (C.G.P.A), as they are the most frequently used gauge of academic success (Merchant, Paulson, & Rothlisberg, 2001).

A number of studies have been conducted in various localities and disciplines. These studies establish the significance of SDLR in academics for lifelong learning. However, the findings of these studies are not consistent. They show incongruent relation between SDLR and academic achievement. Furthermore, the findings of these researches are also in disagreement about the relationship of the demographical variables and SDLR.

Many studies have been conducted in the last three decades. Jaleel and OM (2017), established that SDL and Achievement in Information Technology (IT) have a positive correlation. However, they found that there is no distinction in gender in the SDL level and level of achievement. Kan'an and Osman (2015) also demonstrated that a significant relation exists between SDLR and scores on National Exam science subject. Like Jaleel and OM, Kan'an and Osman observed no significant differences in SDLR on the basis of demographic characteristics.

A statistically positive correlation between SDLR and academic achievement was also found by Hsu and Shiue (2005), Morris (1996), Darmayanti (1993), and Harriman (1990). These studies, however, showed an inconsistent relation between demographical variables and SDLR. Hsu and Shiue found that students' prior C.G.P.A is a strong determinant of SDLR. On the other hand, Morris and Harriman determined that SDLR was significantly associated with age. Darmayanti's findings showed incongruity in level of SDLR on the basis of gender; female students had a higher readiness for self-directed learning.

The correlational study, conducted by Klotz (2010) concluded that a correlation does not exist between SDLR scores and academic achievement (as judged by C.G.P.A). Additionally, no correlation was found in subgroups on the basis of demographic variables.

It is evident from literature review that a relationship exists between SDLR and academic achievement. However, inconsistent research findings and lack of contemporary evidence justify the need for further investigation.

Objectives of the Study

The study aimed:

1. To investigate the level of student-teachers' SDLR.
2. To find out the relationship between student-teachers' SDLR and their academic achievement.

Research Questions

The questions were:

1. What is the level of student-teachers' self-directed learning readiness?
2. Does the level of student-teachers' self-directed learning readiness differ significantly on the basis of gender?
3. Does the level of student-teachers' self-directed learning readiness differ significantly on the basis of marital status?
4. What is the relationship between student-teachers' self-directed learning readiness and their academic achievement?

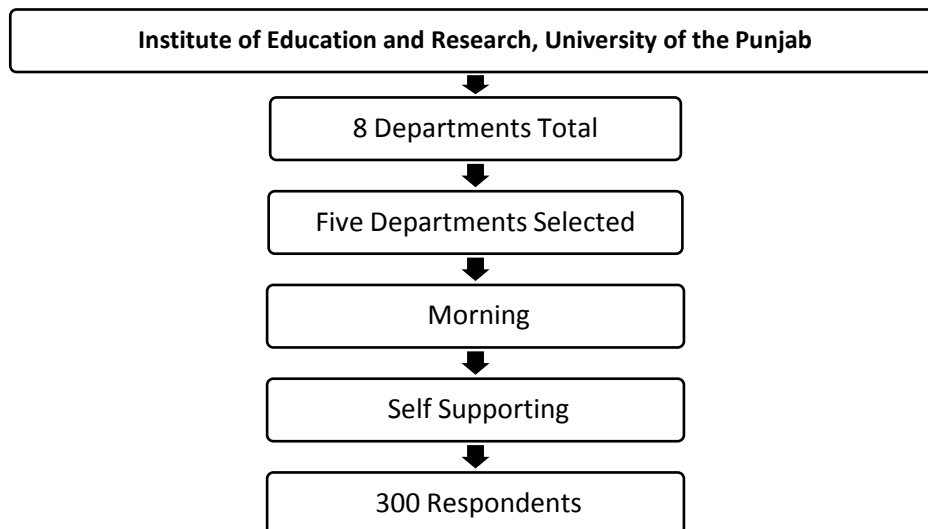
Methodology

Research Design

This study was quantitative in approach. Since, the objective of this study was to determine the relationship between SDLR and academic achievement, correlational design was used.

Population and Sample

The population comprised the master level students of the Institute of Education and Research (IER), University of the Punjab (PU), Lahore, Pakistan. Only the students enrolled in the session 2017-2019 were included in the study. The total number enrolled was 510. A total of 308 of these students were enrolled in the morning program and 202 in the self-supporting program. The researchers used multistage sampling to draw a sample. At the first stage, five out of the eight total departments were selected through random sampling. In the next stage, at least 30 students from each class (morning and self-support) of the selected departments were chosen through convenience sampling. This resulted in the selection of 300 students for the study.



Instrument

Student-teachers' SDLR was measured by self-directed learning instrument (SDLI). It empirically identifies the capacity of a learner to be self-directed" (Kranzow & Hyland, 2016). SDLI was developed by Cheng, Kuo, Lin, and Lee-Hsieh (2010). The instrument was adapted, with the consent of the developer, for use in the Pakistani context. The modified SDLI consists of twenty-five statements, divided into four subscales namely: Learning Motivation, Planning and Implementing, Self-Monitoring, and Interpersonal Communication. It also includes 6 items to gather demographical data. Academic achievement was gauged through the Cumulative Grade Point Average (C.G.P.A) in the previous semester. Experts were consulted for the validation of the instrument. It was pilot tested on 80 respondents. Confirmatory Factor Analysis was applied to confirm the structure and reliability of the instrument by using Smart PLS software. The reliability of the instrument was 0.83.

Data Collection

The researchers visited classes of the selected departments to collect data and the modified SDLI questionnaire was distributed among the students. The level of SDLR was calculated based on the responses. Their academic achievement was judged through their Cumulative Grade Point Average in third semester (fall 2018). Each questionnaire was carefully examined to ensure that is column was duly filled.

Data Analysis

Statistical Package for Social Sciences (SPSS) version 23 was used to analyze data. Mean scores of student-teachers were calculated for the modified SDLI and its sub-scales. *t-test* determined the difference in the SDLR of student-teachers on the basis of gender and marital status. Moreover, bivariate correlation coefficient determined the correlation between SDLR and academic achievement (C.G.P.A).

Results 1. Important findings of the study are as given below:

Table 1
SDLR Level of Student-Teachers

	N	Minimum	Maximum	Mean	S. D
SDLR	300	50.00	123.00	100.79	10.74

The overall mean score of student-teachers' SDLR is 100.79 and the standard deviation is 10.74. The highest level of SDLR is 123.00, and the lowest is 50.00. It was concluded that student-teachers displayed a high readiness for self-directed learning.

Table 2
Difference on the base of Gender

	Gender	Mean	<i>t-value</i>	<i>p</i>
Learning Motivation	Male	28.16	.384	.701
	Female	27.98		
Planning and Implementing	Male	28.33	.260	.795
	Female	28.19		
Self-Monitoring	Male	20.59	.945	.346
	Female	20.22		
Interpersonal Communication	Male	24.44	.455	.649
	Female	24.21		
SDLR	Male	101.52	.613	.541
	Female	100.59		

1. No significant statistical difference exists in the male and female student-teachers' scores for any of the sub scales with respect to gender.
2. There is no gender disparity in overall SDLR scores.

Table 3
Difference on the Basis of Marital Status

	Status	Mean	<i>t-value</i>	<i>p</i>
Learning Motivation	Single	28.09	1.17	.241
	Married	27.36		
Planning and Implementing	Single	28.28	.77	.441
	Married	27.73		
Self-Monitoring	Single	20.35	.89	.370
	Married	19.88		
Interpersonal Communication	Single	24.36	1.39	.163
	Married	23.45		
SDLR	Single	101.08	1.34	.180
	Married	98.42		

1. Analysis reveals no significant difference found based on marital status for the sub scales Learning Motivation, Planning and Implementing, Self-Monitoring, and Interpersonal Communication.
2. Significant difference in self-directed learning readiness for single and married student-teachers does not exist.

Table 4
Relation between SDLR and Academic Achievement

Characteristic	N	<i>p</i>	<i>r</i>
Learning Motivation	300	.820	-.013
Planning and Implementing	300	.263	.065
Self-Monitoring	300	.670	.025
Interpersonal Communication	300	.592	-.031
SDLR	300	.789	.016

1. Pearson correlation coefficient (*r*) shows that no relation between SDLR and academic achievement exists ($r = .016$).
2. Subscales do not show any statistically significant relation with academic achievement (C.G.P.A); Learning Motivation ($r = -.013$), Planning and Implementing ($r = .065$), Self-Monitoring ($r = .025$), and Interpersonal Communication ($r = -.031$).

Discussion

The study revealed no significant correlation between SDLR and academic achievement. These outcomes are, to some extent, unanticipated. The results of the present study parallel the findings of Klotz (2010) but additional research is needed to enhance our understanding.

It must be noted that the examination system may affect the academic achievement. Most of the student assessments in Pakistan are based on out-dated traditional methods; pen-and-paper is especially prevalent. It cannot be denied that these methods mostly lead to rote memorization of information (Ahmad, 2014). Since SDL promotes independent learning, an examination system that does not consider this is very likely to influence the results of the correlation between SDLR and academic achievement. Furthermore, Ganyaupfu (2013) notes lecturer competence, teaching methods and quality of learning materials as key factors that influence learning and achievement. Similarly, Huang (2008) remarked that SDLR is affected by environmental factors like; teacher student relationship, facilitation process, and availability learning resources; and motivational factors such as academic results, interest in the topics and fulfillment of self-expectations

Conclusion

The present study attempted to find the relation between student-teachers' SDLR and academic achievement. It was concluded that the student-teachers exhibit high readiness for SDL. However, no significant relation was found between the variables of this study. Findings also revealed that SDLR does not vary with demographical variables.

Recommendations

Based on the findings of the study, following recommendations are put forward for effective teaching-learning process and future studies.

- Since, the present study was limited to the student-teachers of IER, the researchers recommend further studies in other institutes within the discipline to determine if SDLR varies by region. Additional research may be able to verify or reject the results of this study. The researchers recommend research in this domain to enhance understanding of these phenomena and the factors affecting them.
- Relationship of SDLR and academic achievement of Student-Teachers may also be checked by environmental factors like; teacher student relationship, facilitation process, and availability of learning resources; and motivational factors such as academic results, interest in the topics and fulfillment of self-expectations.
- Student-teacher's level of SDLR may vary significantly over the course of the study, keeping this in view; a longitudinal study might be more insightful.

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