

Relationship Between Academic Self-Concept and Academic Achievement of Distance Learners

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Abstract

The purpose of the study was to find the relationship between academic self-concept and academic achievement of distance learners. The academic self-concept of distance learners was measured by the Liu and Wang (2005) academic self-concept scale which was adapted by the present researcher. The scale comprised of two sub-scales; academic effort and academic confidence. Academic achievement of the distance learners was determined by their last semester result. Total population of M.Ed was 854 and B.Ed (1.5years) was 746 in Rawalpindi region. Convenient sampling technique was used to draw sample i.e. 427 distance learners from M.Ed (1 year) program and 373 distance learners from B.Ed (1.5 year) program of Allama Iqbal Open University. Pearson product moment correlation and independent sample t-test and effect size was calculated for the collected data. The results revealed that there is a strong relationship between academic self-concept and academic achievement of distance learners. It is recommended that there may be proper workshop sessions specifically to enhance the self-concept of students so that they may understand their hidden potentials and use their abilities to achieve better in academics.

Keywords: self-concept, academic self-concept, academic achievement, distance learners.

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Introduction

Researchers of social psychology and personality are and have been very much interested in self-concept of individuals. As individuals are diverse so they feel different about themselves and select their own ways to interpret themselves that what qualities they have; what kind of part they have to perform; what are the capabilities individual think they possess and the way they think people presume them (Bandura, 1997).

Carl Rogers was the first who introduced the term self-concept in late fifties and divided the self into two broad categories i.e. real self and the ideal self. The real self (who am I) is the awareness of the person's own ability to grow and it can be referred to as the actual nature of the individual. Ideal self is what the person wants to become or what one desires to be. The term self-concept is broader in its meaning and usually referred to as perception about one's own self. In other context, it refers to as believing in one's own ability and assessing oneself (Shavelson, Hubner & Stanton, 1976).

The term self-concept is generally defined as the knowledge and view about oneself. It is built on self-awareness and assessment of qualities and characteristics made through involvements in one's situation (Eccles, 2005). As every single individual has his own individuality so, they believe different about themselves. Individuals choose their own ways to understand themselves. They can explore the qualities and capabilities they possess and how can they perform accordingly. These biased words about oneself, once created take part in influential role in individual advance growth and maturity (Bong & Skaalvik, 2003).

Academic self-concept is the students' self-assessment regarding their educational abilities and potentials they possess (Trautwein, Ludtke, Koller & Baumert, 2006). It can also be defined as how an individual feel about himself as learner and play his role in academic settings (Guay, Marsh & Boivin, 2003). Skaalvik & Skaalvik (2002) conceptualized academic self-concept as pupils' awareness and perception about their academic capacities. Jacob, Lanza, Osgood, Eccles & Wigfield (2002) in their research revealed that there are certain influencing variables like academic routine and practices of students, innovations in teaching methods, which are given priority in order to modify the students' self-concept. Its level can determine the degree of performance in educational field. Academic self-concept usually varies from grade to grade. A slight rise in academic self-concept is observed with the increase in academic achievements. Academic self-concept comprises of different aspects which are linked to academic achievement of the pupils (Liu & Wang,

2005). Students are more or less concerned with their results in examination. This achievement of student is much more linked to their knowledge about potentials and talents they possess. Academic achievement has been very interesting area of study for researchers and they define this term differently. Zimmerman (1997) defines academic achievement as student's accomplishments in a given academic field. It refers to how students become successful in achieving their educational goals. Educational institutions usually maintain record of student's academic achievement in order to find out whether their current educational policies and styles are working or not, and to decide what kind of changes are required in order to increase student's academic achievements.

There are two sets of definitions for academic achievement that are used when it is evaluated. The definition given by Coetzee (2011) is that achievement in the field of academics tells about the scoring of student's information in order to evaluate understanding of adjustment regarding their school task and the education system. The second set of definition is quite biased, and proposed that achievement of the student in school is dependent upon his approach towards his potentials and abilities (Khadivi-Zand 1982). On the other hand, academic achievement was defined as the students' self-perception and evaluation regarding academic accomplishment. Achievement is reported in numerical form (Klobal & Musek 2001).

Many theories and models have tried to describe the correlation between academic self-concept and academic achievement but they were not been able to give the proof that better academic self-awareness leads to rise in achievement or better grades in academics effects academic self-concept. Skill development model states that high achievement in academic field influences the development of better self-concept whereas self-enhancement model states that achievement is mainly concerned with students' self-concept regarding their educational settings. (Marsh & Craven, 2002).

It has been discussed that there is a connection between academic self-concept and achievement. Some researchers have focused their attention to study the correlation between academic self-concept and academic achievement but only a few studies have been done to highlight how the relationship varies across gender, programs in which the students are studying in universities (Matuvo, 2012 & Trautwein, et al. 2006). Having said that, it is important to note that all such studies are done in the west and this area is much neglected in Pakistan.

From the extensive literature, it has been seen that academic self-concept affects the academic achievement of the students and different researchers measured academic self-concept on certain parameters like gender, levels of study and different program on which the academic achievement depends. But very few researches have been carried out to study the relationship between academic self-concept and academic achievement of distance learners. The present study aims at investigating “Relationship between academic self-concept and academic achievement of distance learners”. This study may be regarded as an initiative research in the field of distance learning. Many studies have explored relationship between academic self-concept and academic achievement but in actual classroom environment. This study is about the non-formal setting where computer, telephone, and mail are the means of communication. One similar study has been conducted in India by Kumar (2001), he found that there exists a positive correlation among distance learners’ academic self-concept and academic performance

The aim of the present study is to investigate the relationship between academic self-concept and academic achievement among distance learners. The study will analyze how the relationship varies across study level i.e. M.Ed and B.Ed (1.5 years).

Literature Review

Self-Concept

In the field of Psychology and education, there is a comprehensive history of self-concept. It is basically responsible for determining the effect of academic and social functions on emotional welfare of individuals’ life (Vaughan, Elbaum & Boardman, 2001). Self-concept is usually regarded as an important scholastic product. It can be defined as overall view across various aspects of oneself and the perception built on knowledge gained and assessed through experiences as person’s surroundings (Eccles, 2005).

Self-concept is defined as the intellectual attitude of personality. It is commonly referred to the complex, planned and self-motivated system of opinions, outlooks, and thoughts that each human comprehends to be accurate practically regarding his survival. Self-concept and academic achievement are collaborative and mutual. Each one is equally emphasizing to the degree that any change whether positive or negative in one enables the appropriate variation in the other. Academic achievement

has a strong relationship with scholastic self-concept rather than general self-concept (Kumari & Chamundeswari, 2013).

Kumari & Chamundeswari (2013) in her study found that some psychological aspects like self-concept have great impact on the achievement of students and it helps in determining the level of competence among students' potentials. She also concluded that the way students behave in academic settings depends upon self-awareness. Individuals approach regarding his/her talents and hidden potentials strengthen his/her belief in self and the individual get better grades in school. Kumari (2013) conducted a study and found that self-concept creates the inspiration for the change in the behavior of the individual. Adler (1930) said that self-concept give meaning and new ways to life and helped to create the goals as well as fulfilling them. It enhances the idea about one's view regarding the world and constructs the better vision for future. It also enables an individual to know about himself and his competency of work that what he can do and what not. According to the research done by Davis-Kean & Sandler (2001) self-concept is constructed on the gathered opinions of a person throughout the life.

Dynamic Nature of Self-Concept

Self-concept is vibrant and dynamic in nature as it gain maturity with age of the person and this aspect basically play a vital role in determining that it can be modified and changed. It is not constant because as the person become older he/she gets more insight about his/her abilities, capacities and get more knowledge about his/her potentialities and know how to come across different situations in life (Franken, 1994).

Self-concept is the set of views and opinions an individual has about himself, such as qualities, characteristics, lacks, deficiencies, capabilities and capacities, limits and relationships which an individual thinks/describes his individuality (Marsh & Yeung, 1997). Self-concept is the knowledge and approach person has about himself. It is the insight that the individual has about himself and the way how he describes his abilities and potentials. Self-concept has great significance and it contributed a lot in building personality of an individual.

Self-Worth Theory

The idea of the self-concept comes mainly from self-worth theory (Covington, 1992; Eccles & Wigfield, 2002). This theory proposed that all the humans have a capacity to build and keep constructive and optimistic

self-image and sense of pride and self-worth (Covington, 2000). It has been studied that as children devote important part of their lives in acquiring education and remain under school/classroom evaluation process so they come up with the potentials and competencies they hold within (Covington & Dray, 2002). Self-worth theory posited on the fact that in order to develop and conserve the optimistic self-worth. It is important to improve and uphold constructive academic self-concept, in such a way that all the students learn with their own will. The students also show positive attitude towards gaining and acquiring knowledge without having a competitive environment (Covington, 1998). The cooperative learning atmosphere help each and every student in the classroom to avoid failure in academics and hence promote ones' understanding regarding one's own self. (Eccles & Wigfield, 2002).

Shavelson's Hierarchical Model of Self-Concept

The most widely observed empirical model of self-concept was given by Shavelson, Hubner and Stanton (1976) named as Shavelson hierarchical model. In their model, a general facet of the self-concept is placed at the apex and it is further branched out into two facets i.e. academic self-concept and non-academic self-concept. The academic self-concept is branched out into specific subjects like mathematics; English etc. Non-academic self-concept is divided into social (communal), emotional (expressive), and physical aspects of self-concept and furthermore these are branched into particular and definite dimensions and facets. This model gained great appreciation in times, as it became the base for the most important branches of self-concept. The constructs of the self-concept progressively change from top to bottom in the model and all the constructs or aspects of the general self-concept are interlinked and each construct can be studied separately (Byrne, 2002).

Gabriel, Cheboswony, Kodero & Misigo (2009), studied the phenomena of self-concept and found that it is a sign of how one feel about his/her self and what is the importance of one's self-view in determining how he/she learn and perform in academics. The success and failure in academic settings depends upon the belief one has in his or her abilities and the way one feels about the strengths, capabilities and potentials one possesses. It sometimes seems that achievement depends on the capacity of the students and also how strong their self-concept is regarding their potentials and capabilities they possess. Green, Nelson, Martin & Marsh, (2006) supported the idea that higher and strong self-concept in educational settings show many educational outcomes. This includes

selection of courses, academic effort, educational objectives, and academic achievement.

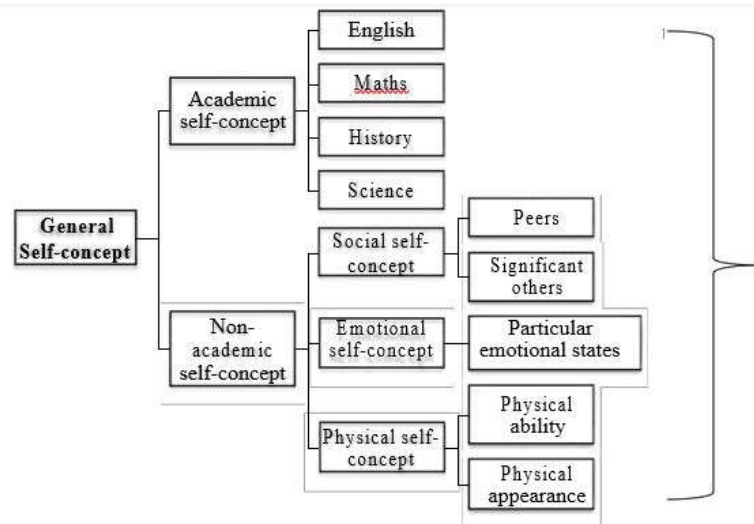


Figure 1: Hierarchical model of Self-Concept (Shavelson, Hubner & Stanton, 1976)

Academic Self-Concept

Reynold (1988) defined academic self-concept as perceptions of individuals' capacity and competence level regarding his or her abilities within the academic settings. It can also be defined as the one's self-assessment concerning academic capabilities and skills (Trautwein, et al., 2006). The proposed model of self-concept construct as described by Shavelson et al., (1976) basically divided general self-concept into two main divisions i.e. academic (educational) and non-academic (communal/societal) self-concept. Academic self-concept is a main term used in the educational field and psychology for few decades. It is a psychological concept mostly used to explain students' certainty and belief in their abilities regarding specific academic area such as biology, engineering, etc. Wigfield & Karpathian (1991) proposed that academic (scholastic) self-concept is well-defined as the individuals' awareness and understanding in the academic settings and how they feel about their capabilities and capacities for achieving better grades in academics.

Studies conducted by Marsh, Hau & Kong (2000) and Trautwein, et al., (2006) revealed that academic self-concept of the pupils can be increased and enhanced when they are engaged in the high achievers group

within the classroom situation and they adapted the characteristics of others in the group in order to understand and enhance their academic self-concept and hence achievement also. On contrary to this, below average students' academic self-concept has mostly been affected adversely whenever the performance of the high achievers group is good in which they are placed for improvement in academics (Marsh & Parker, 1984).

Several researchers discuss that they have not been able to solve this question of the contributory prevalence between self-concept and achievement in school whether the academic self-concept stimulates the academic achievement or achievement in the academic settings effects the self-concept of the students (Marsh & Hau, 2004).

Role of Academic Self-Concept in Academic Achievement: Academic achievement is defined as the student's accomplishments in a specified academic field. In other words, it discusses the way students gain success in achieving their short-or-long term goals and objectives in educational career. Educational institutions usually maintain record of student's academic achievement in order to find out whether their current educational policies and styles are working or not, and to decide what kind of changes are required in order to increase student's academic achievements (Zimmerman 1997).

Academic achievement is the information students derived from learning and acquiring grades in educational settings. Children acquire knowledge through different means. They get instructions regarding their school task from teachers. Instructors on the other hand instructs about different activities which held at educational institution. Teachers and instructors assign certain task and activities to children and evaluate the quality of their task completion in order to raise their competency. It was revealed that instead of family, school is providing the environment where students learn to prove themselves in achieving better grades (Goetz, Cronjaeger & Frenzel, 2010).

Olatunde (2010) concluded that there is a vital, and a positive correlation between self-concept and academic achievement and also they are so linked as one effects the other and vice versa. Early researches on the self-concept also found that there was an important link between self-concept and achievement of students (Hamachek, 1995).

Barker, Dowson and McNery (2005) stated that there is a correlation between two most important variables i.e. academic self-concept and academic achievement. In another study, Matuvo (2012) found that gender and faculties (like arts and science) of the students might be the dominant factor which effect students' academic self-concept. The change in the

academic self-concept can be mirrored on the achievement of students. He found that students (males and females) have different academic self-concept and hence they differ in their academic abilities as well. Cokley & Patel (2007) and Kornilova, Kornilov & Chumakova, (2009) revealed that students who are having well-developed understanding about their potentials and competencies in the field of education are more competent. They also found that those students who have understood their selves deeply are more passionate and are more confident in obtaining better grades in exams and excel in academics.

Methodology

A cross-sectional research design was conducted to test the hypotheses of the present study. Cross-sectional research is the study which is based on information taken through questionnaires from diverse groups at the same time (Shaughnessy, Zechmeister & Zechmeister 2002).

The study was completed in two parts. Part I was aimed to prepare the instrument for the main study. It involved the adaptation of the “Academic Self-Concept Scale” by Liu & Wang (2005). Pilot study was conducted and psychometric properties of the adapted scale were determined.

Instrument

The Academic Self-Concept Scale developed by Liu & Wang (2005) was adapted. It consisted of 20 items. It was a self-report questionnaire. It comprised of two sub-scales namely Academic effort and Academic confidence. Academic effort sub-scale consisted of 10 items and academic confidence sub-scale includes 10 items. Items of even number (i.e. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20) fall in academic effort sub-scale whereas items of odd number (i.e. 1, 3, 5, 7, 9, 11, 13, 15, 17, 19) fall in academic confidence sub-scale. It was a five point rating scale. “Strongly Disagree” was rated as 1, “Disagree” as 2, “Agree” as 3, “Neither agree nor disagree” as 4, and “Strongly Agree” as 5. Scores on the first sub-scale ranged from minimum 10 to maximum 50. Same was the case with second sub-scale. Minimum total score on the instrument can be 20 and maximum total score on the instrument can be 100.

Reliability and Validity of the scale

Step I was focused on adapting the Liu & Wang Academic Self-Concept Scale (2005) for distance learners. The original instrument was

judged by five experts. The adapted instrument was given to students of Allama Iqbal Open University, Rawalpindi region for pilot testing. The sample drawn for piloting was 10% of the sample size for the main study. The aim of conducting the pilot study was to find out the ambiguities left (if any) in the instrument. In this step psychometric properties of the scale were determined i.e. validity of the scale was determined by the experts opinion and then committee approach was done for incorporating the opinions of experts in the scale. Cronbach's alpha reliability coefficient of the scale was found to be .81 and item total correlation was also calculated. Part II of the research was the main study. This part was intended to find the relationship between academic self-concept and academic achievement of the distance learners by using the adapted Liu & Wang Academic Self-Concept Scale (2005).

Administration of Tool

Data was collected from the students of Allama Iqbal Open University from Rawalpindi region. Questionnaire was handed over to those students who can be approached physically in the workshop centres after getting permission from the respective tutors, and a good rapport was established. The purpose of the research was made clear to them. The students were instructed to fill in the questionnaire honestly and were make sure to give response on all items of the questionnaire. There was no time constraint to fill in the measure. After the collecting data, appropriate statistical analysis was done to test the aforementioned objectives.

Population

All the students enrolled in the B. Ed (1.5 year) and M. Ed programme in Allama Iqbal Open University Islamabad. The total number of distance learners enrolled in M.Ed (1year) programme in Rawalpindi region was 854 and total number of distance learners enrolled in B.Ed (1.5 year) programme in Rawalpindi region were 746.

Sample

A sample of 427 distance learners from M.Ed program and 373 distance learners from B.Ed (1.5 years) program were selected by using convenient sampling which is a non-probability sampling method. This method was used for the present research because distance learners just

meet face to face during the workshop sessions and they are not available otherwise.

Data Analysis

The psychometric properties of the adapted scale were determined using SPSS version 23. The reliability coefficient for both the sub scales (Academic Effort and Academic Confidence) of Academic Self-concept Scale was found to be .85 and .84 respectively, which indicates that the scale is significantly reliable. All the items in the scale are internally consistent and measure the same variable.

Results of Data Analysis

H0₁: There is no significant relationship between academic self-concept and academic achievement of distance learners.

Table 1

Pearson Product Moment Correlation Coefficient for Academic Self-concept and Academic Achievement (N=800)

Variables	N	M	SD	Correlation Coefficient	p
Academic Self-concept	800	69.89	13.41	.73*	.000
Academic Achievement	800	61.45	6.72		

*p<.01

This coefficient indicates that there is a significant positive relationship between academic self-concept and academic achievement ($p < .01$).

Hypothesis

H0₂ There is no program-wise significant difference in overall academic self-concept of distance learners.

Table 2

Mean, Standard Deviation and t-value of M.Ed and B.Ed programs on Academic Self-concept

Self-Concept of Students	N	Mean	SD	Df	T	P	Cohen's D
Students of B.Ed	373	66.90	15.83	798	-6.01	.000*	.43
of Students of M.Ed	427	72.50	10.18				

*p<.001

Table 2 shows the difference in the mean scores of M.Ed and B.Ed programs on academic self-concept. The difference in the means of M.Ed and B.Ed students was found to be statistically significant on academic self-concept ($t=-6.01$, $df=798$, $p<.001$). Result reveals that M.Ed students have high academic self-concept ($M=72.50$) as compared to B.Ed students ($M=66.90$). Therefore, the hypothesis "There is no program-wise significant difference in overall academic self-concept of distance learners" is rejected. Cohen's d was calculated to analyze the effect size ($d=.43$), which indicates medium effect.

Analysis of Sub-hypothesis 1: There is no significant difference between B.Ed and M.Ed program distance learners' academic achievement.

Table 3

Mean, Standard Deviation and t-value of B.Ed and M.Ed program distance learners' on Academic Achievement

Program wise Academic achievement	N	Mean	SD	Df	T	P	Cohen's d
B.Ed	373	61.87	7.77	798	1.65	.000*	.12
M.Ed	427	61.08	5.64				

*p<.001

Table 3 shows the difference in the mean scores of distance learners of M.Ed and B.Ed programs on academic achievement. The difference in the means of M.Ed and B.Ed students was found to be statistically significant on academic achievement ($t=1.65$, $df=798$, $p<.001$). Result reveals that B.Ed students ($M=61.87$) show slightly high academic achievement than M.Ed students ($M=61.08$). Therefore, the hypothesis

“There is no significant difference between B.Ed and M.Ed program distance learners’ academic achievement” is rejected. Cohen’s *d* was calculated to analyze the effect size ($d=.12$), which indicates small effect.

Analysis of Sub-hypothesis 2: There is no significant difference between B.Ed and M.Ed program distance learners’ academic effort.

Table 4

Mean, Standard Deviation and t-value of B.Ed and M.Ed program distance learners’ on Academic Effort

Program wise Academic Effort	N	Mean	SD	Df	t	P	Cohen’s d
B.Ed	373	32.62	8.43	798	-5.83	.000*	.41
M.Ed	427	35.65	6.21				

* $p<.001$

Table 4 shows the difference in the mean scores of distance learners of M.Ed and B.Ed programs on academic effort. The difference in the means of M.Ed and B.Ed students was found to be statistically significant on academic effort ($t=-5.83$, $df=798$, $p<.001$). The mean values of M.Ed students ($M=35.65$) show more academic effort as compared to B.Ed students ($M=32.62$). Thus, the hypothesis “There is no significant difference between B.Ed and M.Ed program distance learners’ academic effort” is rejected. Cohen’s *d* was calculated to analyze the effect size ($d=.41$), which indicates medium effect.

Analysis of Sub-hypothesis 3: There is no significant difference between B.Ed and M.Ed program distance learners’ academic confidence.

Table 5

Mean, Standard Deviation and t-value of B.Ed and M.Ed program distance learners’ on Academic Confidence

Program wise Academic	N	Mean	SD	Df	T	P	Cohen’s d
B.Ed	373	34.28	8.03	798	5.52	.000*	.39
M.Ed	427	36.85	4.90				

* $p<.001$

Table 5 shows the difference in the mean scores of distance learners of M.Ed and B.Ed programs on academic confidence. The difference in the means of M.Ed and B.Ed students was found to be statistically significant on academic confidence ($t=-5.52$, $df=798$, $p<.001$). The mean values of M.Ed students ($M=36.85$) show more academic confidence as compared to B.Ed students ($M=34.28$). Thus, the hypothesis “There is no significant difference between B.Ed and M.Ed program distance learners’ academic confidence” is rejected. Cohen’s d was calculated to analyze the effect size ($d=.39$), which indicates small effect.

Findings

The study found that there exists a strong positive relationship between academic self-concept and academic achievement of distance learners which means that better academic self-concept of students helps them to achieve better in academics. This is supported by the findings of Olatunde (2010) and Sikhwari (2004), they revealed that there is a positive and significantly strong relationship between self-concept and academic achievement. Kumar (2001) found a moderate positive correlation among the academic performance and academic achievement of distance learners.

In the present study, it was also found that distance learners of M.Ed program showed higher academic self-concept than B.Ed (1.5 years) program distance learners. Trautwein et al. (2006) & Matuvo (2012) supported this result of the present study that there is difference in the academic self-concept of students at different levels of courses and programs. According to them students of higher classes showed better academic self-concept as compared to students of lower classes.

Another finding of the present study revealed that there is a significant difference in the achievement of distance learners of both programs (i.e.) M.Ed and B.Ed (1.5 years). Distance learners of B.Ed (1.5 years) program showed higher academic achievement than M.Ed program distance learners. It is supported by the findings of Trautwein et al. (2006) and Matuvo (2012), they reported that there is a significant difference in academic achievement of students at different levels of study. They found that students in lower classes showed better grades as compared to students of higher classes. Results of the present study also revealed that distance learners of M.Ed program have high mean scores on academic effort than distance learners of B.Ed (1.5 years) program. Matuvo (2012) work also supported the result of the present study that students having high academic self-concept showed high academic effort. It was also revealed from the present study that M.Ed program distance learners showed high

academic confidence than B.Ed (1.5 years) program distance learners. According to Matuvo (2012), students with high academic self-concept have high academic confidence at different levels of study.

Conclusion

The present study was conducted to find out the relationship between academic self-concept and academic achievement of distance learners. For this purpose, Liu & Wang Academic Self-Concept Scale (2005) was adapted. It was hypothesized that there is no significant relationship between academic self-concept and academic achievement of distance learners and that there is no program-wise significant difference in overall academic self-concept of distance learners. Results of the research showed that there exists a significant relationship between academic self-concept and academic achievement of distance learners. The distance learners of M.Ed (1 year) program showed more academic self-concept as compared to distance learners of B.Ed (1.5years).

Recommendations

In view of findings of the study, following necessary steps recommended may be taken in order to help distance learners to understand their self-concept and ultimately enhance their academic achievement. Academicians may organize workshop sessions and seminars in which they can help the distance learners to develop better self-concept so that they can sharpen their skills and lead a successful life in future. Counseling sessions may be arranged for students with low academic self-concept so that they may improve their academic position as well. It may be recommended that curriculum developers may also focus on the importance of self-concept and they may design courses that can help students to think deeply and critically in order to improve self-concept. In order to enhance academic confidence among distance learners more opportunities of participation in academic activities may be provided during workshop sessions which in turn may be helpful in increased academic self-concept and also improves the academic achievement of learners.

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