

RELATIONSHIP BETWEEN ACADEMIC SELF-CONCEPT AND ACADEMIC ACHIEVEMENT AMONG UNDER GRADUATE STUDENTS

Prafull Kumar Tandan* & Poluru Prasanna Kumar**

ABSTRACT

The research is based on undergraduate students' academic self-concepts (ASC) and academic achievement (AA) at Marwari College Bhagalpur and SSV College Kahalgaon, both of which are part of the Tilka Manjhi Bhagalpur University of Bihar. The descriptive survey design was adopted using a sample of 336 students. An original ASC scale by Liu and Wang (2005) which was further validated by Matovu (2014) for university students was used. Independent sample t-test, Pearson correlation, and linear regression were the tools used in testing the hypotheses. The findings of the study showed that there is no statistically significant gender difference in the ASC of undergraduate students and the ASC of urban undergraduates is higher than rural undergraduates. The study further revealed that ASC predicts the academic performance of undergraduate students. Students who score poorly on the ASC may benefit from attending counselling sessions in order to improve their overall performance. According to the results, stakeholders like educators and parents need to think about a number of things that might affect a child's ability to form a healthy ASC. It also suggests that educators provide kids with opportunities to attend seminars and workshops on building positive self-perception.

Keywords: Academic self-concept, academic achievement

The term academic self-concept refers to an individual's perception of their own academic strengths and weaknesses. In other words, it's the way that students approach their studies and see themselves as students. These findings are supported by other research (Guay, 2003; Harter, 1998). The self-concept theory is often seen as the logical extension of the self-worth idea, as reported by Peixoto (2003). In this context attributes refers to the subject's own personal inventory of strengths and weaknesses, abilities and restrictions, values and connections. A person's sense of themselves might include intellectual, social, emotional, and even physical components.

As students get older, they develop a more stable view of themselves as students (Guay, Marsh and Boivin, 2003). In a study by Liu and Wang (2005), it was found that academic self-concept

tends to go down from early to mid-adolescence and even into adulthood. Marsh found in 1989 that in middle school academic self-concept is at its lowest.

Several research has shown that males and females have distinct opinions regarding their academic abilities. According to much research, men have greater academic self-perceptions in scientific courses and females in non-science courses. Marsh (2006) showed in a study that modest stereotype gender inequalities fade linearly with ageing. This is also true in other groups characterized by academics' self-concept of academic performance.

Academic self-concept and academic achievement are two concepts that have been debated for many years. The debate among researchers has been considered an egg-chicken question (Marsh, Ellis and Craven, 2002). According to developed theories of self-enhancement and skill

* Integrated B.Ed.-M.Ed. Student, Lovely School of Education, Lovely Professional University, Punjab

** Assistant Professor, Lovely School of Education, Lovely Professional University, Punjab.

development, both directly and indirectly influence each other, that is, they are reciprocal. In the self-enhancement model, academic achievement is due to the consequence of academic self-concept. The skill development model highlights that academic achievement influences academic Self-concept.

Purpose of the study

The study was to investigate the academic self-concept scores on the academic achievement among undergraduate students. The study was to find the effect of academic self-concept on academic achievement among students in universities across gender, and localities of the student.

The study attempted to understand whether there is a difference among students in academic self-concept, which has been studied to be an influential factor in their academic achievement, through an analysis of academic self-concept and academic achievement among undergraduate students. It was assumed in this study that as there is a difference in undergraduate students in terms of gender (males and females), and locality (urban and rural), there might be a difference in the students' academic self-concept which could influence their academic achievement.

Research Questions.

The study tried to answer two research questions;

- (a) Is there a statistically significant difference in academic self-concept and academic achievement scores of undergraduate students across gender, and locality?
- (b) Is there any relationship and contribution of Academic Self Concept to Academic Achievement in undergraduates of the Bhagalpur district of Bihar?

Hypotheses

The study has three hypotheses:

1. There is no statistically significant difference in academic self-concept and academic achievement among university students across gender and locality.
2. There exists no significant relationship between

ASC and AA among undergraduates of the Bhagalpur district of Bihar.

3. Academic Self Concept will not individually predict AA among undergraduates of the Bhagalpur district of Bihar.

Methods

The data was gathered from 336 students at Tilka Manjhi Bhagalpur University, a state government university in Bhagalpur. The sample composition was of males 129 (38.39%) and females 207 (61.60%) for gender, Urban 269 (80%), and rural (19.99%) for the locality. All the students were randomly selected from their respective groups making the sample adequate for t-test, spearman correlation, and regression analysis.

S. No.	Name of the College	Male	Female	Total
1	Marwari college, Bhagalpur (Urban)	113	156	269
2	SSV College, Kahalgaon, Bhagalpur (Rural)	16	51	67
	Total	129	207	336

Procedure

The researcher with the help of various research assistants moved to the various faculties of the Marwari college and SSV College, Bhagalpur, University and collected data from the students who came to attend lectures. The students were requested to fill out the academic self-concept scale which also had a part for their demographic data along with which a column of Part I result. The data which was collected was analyzed and presented as the results of this study.

Data analysis

To test the hypotheses, the collected data were analyzed using SPSS 17.0. The research looked for differences and interactions between the variables in the study.

Tools

The following tools were used in the present study to obtain reliable data.

- **Academic Achievement:** Academic achievement is said to be the academic

performance of the student toward the attainment of an educational goal. It is generally calculated in CGPA or percentage. Here the sample consists of undergraduate students. Their percentage in Part 1 final exams is considered as their Academic Achievement (Matovu, 2012). According to Sharma & Sahni, (n.d.), marks above 60 are considered to be a high academic achievement.

- **Locus of Control Scale:** There are 24 items on the scale. There are three sections: Internal LOC, Powerful Others, and Chance. The subject can have a strong internal locus of control if they have a high rating on the Internal LOC scale. LOC Scale subscales exceeded

the minimum reliability standard of 0.70 and the convergent validity of internality with self-esteem is (Kourmoussi et al., 2015).

- **Academic Self-Concept:** The tool was developed by Liu and Wang in 2005 for secondary school students in Singapore Context and was validated by Matovu, (2014) for university students. The reliability varied from 0.85 to 0.86 while convergent validity is 0.5.

Results

1.1 Significance difference between undergraduate boys and girls in their academic self-concept.

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean	t- value
ASC	Male	129	4.1225	.40384	.03556	0.00** (p value=1.00)
	Female	207	4.1225	.47962	.03334	

Table 1.1 t- value is significant at the level 0.05 (2-tailed)

At a glance, table 1.1 shows that the academic self-concept of males and females is 4.1225. As the p-value (1.00) is more than the α value (0.05), the Null-Hypothesis cannot be rejected. There is no noteworthy difference between the mean academic self-concept of boys and girls.

1.2 Significance difference between rural and urban undergraduate students in their academic self-concept.

	Locality	N	Mean	Std. Deviation	Std. Error Mean	t- value
ASC	Urban	206	4.2017	.41606	.02899	4.147** (p=0.000)
	Rural	130	3.9969	.47767	.04189	

Table 1.2 t-value is significant at 0.05 level (2-tailed)

From table 1.2, the mean academic self-concept of an urban and rural undergraduate student is 4.2017 and 3.9969. The standard deviation of urban and rural undergraduate students is 0.2899. The p- value is 0.000 which is less than the alpha-value (0.05), which shows that the result is significant. This means that there is a significant difference between the mean academic self-concept score of a rural and urban undergraduate student of Bhagalpur University. The mean Academic Self Concept of Urban students is more than the Mean Academic self-concept of the rural student.

1.3 Significance of difference between undergraduate boys and girls in their Academic Achievement.

Group Statistics						
	Gender	N	Mean	Std. Deviation	Std. Error Mean	t-value
AA	Male	129	54.0465	10.04199	.88415	-0.808 (p=0.420)
	Female	207	54.9903	10.63425	.73913	

Table 1.3

From table 1.3, the mean of Academic achievement of the male is 54.0465, and the mean of academic

achievement of females is 54.9903. The p-value is 0.420 which is more than 0.05. So, there is no significant difference in the academic achievement of males and females.

1.4 Significance of the relationship between the academic self-concept with academic achievement of undergraduate students.

Variable	Academic Self Concept	Academic Achievement	Significance
Academic Self Concept	1	0.221**	0.00
Academic Achievement	0.221**	1	

***Correlation is significant at the 0.05 level(2-tailed)*

Table 1.4

As per table 1.4, the Pearson correlation between ASC and AA is 0.221. The significance value is 0.00. The data reflect that there is a very weak positive correlation between the ASC and AA. The significance value is 0.00 which is less than 0.05 the Null Hypothesis is rejected. There is a noteworthy relationship between ASC and AA in undergraduate students. Academic self-concepts predict academic achievement.

Hence, The Null Hypothesis (H₀) "There exists no significant relationship between ASC and AA" stands rejected.

1.5 Academic Self Concept as a predictor of Academic Achievement

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.77 ^a	0.006	0.003	10.39.89

a. Predictors: (Constant), ASC; b. Dependent: AA

Table 1.5(a)

ASC is significantly correlated to AA, according to table 1.5(a). The coefficient of correlation value, which was discovered to be 0.77, indicates that both variables are positively correlated and have a moderate positive relationship. It suggests that academic self-concept is predicted by academic achievement.

According to the model summary table 1.5(a), the regression coefficient R square value was

determined to be 0.066, which indicates that ASC may account for or explain 0.6 percent of the variation in AA.

ANOVA summary for regression

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	212.334	1	212.334	1.967	.000 ^a
	Residual	36062.163	334	107.971		
	Total	36274.497	335			

a. Dependent Variable: AA

b. Predictors: (Constant): ASC

Table 1.5(b)

Whether or not the R value of 0.77 is statistically significant is indicated in the ANOVA table 1.5(b) above. The ANOVA table makes it very obvious that the regression model is statistically significant (df 1= 1, df 2= 334 total= 335, F = 1.967, p = 0.00), demonstrating that the model is statistically significant overall and has the ability to predict the dependent variable

Summary of coefficient of regression

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	52.97	1.307		40.53	.000
	ASC	.394	.281	.077	1.402	.162

a. Dependent Variable: AA

Table 1.5 (c)

Table 1.5(c) displays that if the predictor variable changes by one unit, there is a mean change in the response variable. The correlation between AA and ASC is found to be significant (p = .000), as indicated by the standard $\hat{\alpha}$ value (0.077). This means that every unit increase in ASC raises the AA score by 0.394 points (i.e., one unit increase in ASC will lead to 0.394 increase in AA).

AA (Y) = 52.977 + 0.394*ASC: is the regression equation for the relationship between ASC and AA. There is sufficient evidence to conclude that ASC is a significant predictor of AA if the gradient of the population regression line is not zero at the 0.05 level of significance.

Major Findings

- There is no significant difference between undergraduate boys and girls in their academic self-concept.
- Academic self-concept of urban undergraduate students is more than that of rural undergraduates as there is a significant difference between their mean academic self-concept.
- There is no significant difference between the academic achievement of male and female undergraduate students.
- There is a significant relationship between academic self-concept and academic achievement.
- Academic Self-concept significantly predicts academic achievement of undergraduate students of Bhagalpur University.

Discussion

Undergraduate Academic Self-Concept and gender: The findings of this study revealed that there is no significant difference between boys' and girls' academic self-concepts. This finding is consistent with that of Amoah et al., (2021), who conducted a study on Education students in Ghana with 229 sample sizes and found no significant difference in academic self-concept with gender. Furthermore, the findings of this study agree with those of Bacon (2011), who found that gender has no effect on self-concept. This might also be attributable to the fact that both male and female students, regardless of their self-perception, aspire to better academic accomplishment and hence study diligently in order to succeed. Liu and Wang (2005) found that gender had a strong association with students' academic self-concept, with female students having considerably greater perceived academic effort (academic self-concept subscale) than their male counterparts.

Undergraduate Academic Self-Concept and Locality: According to the study's findings, there is a significant difference in academic self-concept between rural and urban undergraduate colleges. The findings are consistent with those of Ramchandra, Vikrant and Wankhade (2016) who

discovered a significant difference between rural and urban school-aged adolescent students. The reason for this could be the resources available to urban undergraduates in college. Urban colleges offer more consistent classes and practicals. As a result, urban students have a positive academic self-concept. However, the findings of the study contradict the findings of Malik and Duhan, (2020), which state that there were no significant differences in self-concept between rural and urban adolescents except for the Intellectual and School Status aspects.

Undergraduate academic self-concept and academic achievement: The present study finds that there is a significant relationship between academic self-concept and academic achievement. This finding is in favour of (Tuz-Zahra and Yousuf, 2010). The findings of this study support the belief that students with a strong self-concept perform better academically because self-concept is thought to be a predictor of coping with life stresses (Bandura, 1994) and there is a link between self-concept and student academic achievement. Students with a high self-concept have a better ability to cope with stress and are more likely to take on difficult tasks. They are able to accept challenges and enjoy new learning experiences, which may account for their higher achievement.

Conclusion

The current study sought to ascertain the association between academic self-concept, locus of control, and academic accomplishment among Bhagalpur University undergraduates. To measure Academic Self Concept and Locus of Control, the Liu and Wang Academic Self-Concept Scale (2005), was validated by Matovu (2012). It was hypothesized that there is no significant association between academic self-concept and undergraduate academic achievement. The study's findings revealed a substantial association between academic self-concept and academic achievement of the undergraduate students of Bhagalpur University. When compared to rural undergraduates, urban undergraduates have a higher academic self-concept.

Recommendation

Academicians can help undergraduates improve their academic self-concept by organizing workshop sessions and seminars. For students who struggle academically, counseling appointments can be scheduled so they can also enhance their academic standing. Curriculum designers should pay attention to the significance of self-concept and create lessons that might encourage students to think critically and thoroughly. A longitudinal research design for undergraduate students should be developed.

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