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“A STUDY OF SCHOLASTIC ACHIEVEMENT AMONG UNDERGRADUATE STUDENTS OF SCIENCE, ARTS AND COMMERCE STREAM OF GHAZIABAD DISTRICT”

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ABSTRACT

The foremost aim of the study was to investigate and analyze the academic Year-wise (first, second and third year) of under graduation categorization in scholastic achievement of undergraduate students of Science, Arts and Commerce stream of the colleges of Ghaziabad district affiliated to c.c.s. university, Meerut. Scholastic Achievement of students especially at the under graduation level is not only an indicator to the effectiveness or otherwise of colleges but a major determinant of the future of students in particular and the nation in general. The sample of the study has comprised of 630 undergraduate students including science, arts and commerce stream (B.A., B.Sc., B.Com.) of first year, Second year and third year from different colleges of Ghaziabad district. For measuring the scholastic achievement of graduation year's students, investigator has used a self reported Performa based on percentage of the students in their various years of graduation. Scholastic achievement or (academic) performance is the outcome of education -the extent to which a student, teacher or institution has achieved their educational goals. Results are presented descriptively and inferentially. One way ANNOVA test has applied to study the Scholastic achievement among undergraduates. After ANOVA test, Tukey's HSD (Honest Significant Difference) test has been used to determine the multiple comparisons among the groups in the sample i.e. which groups among the sample in specific have significant differences. The results of the study have been discussed of the students of c.c.s. university undergraduate students only. In this sense, the methods and results of this research will become real source in the implement of making frustration free teaching environment for undergraduate students. The marks/percentage obtained in class 12th, graduation 1st, IInd, year of graduation were taken as indicator of scholastic achievement of under graduate students.



KEY WORDS: scholastic achievement, undergraduate, ANOVA test, and Tukey's HSD (Honest Significant Difference) test.

INTRODUCTION

According to Malavka Ganguly, scholastic achievement is the triumph of acquired efficiency in the performance of an individual in a given skill of body of knowledge and information. It may mean knowledge attained or skills developed in the school or college subjects usually designated by test scores or by marks assigned by the teacher or by the percentage by both since scholastic achievement is the criterion for selection, promotion or recognition in various walks of life, the attention of educators are being increasing

down to it. So in this way, percentage of academic year (%) are taken as parameter of Scholastic achievement in present research.

Academic achievement is defined by Crow and Crow (1969) as the extent to which a learner or student is profiting from instruction in a given area of learning i.e. achievement is reflected by the extent to which skill and knowledge has been imparted to him. Scholastic achievement also denotes the knowledge attained and skill developed in the school subject, usually designed by test scores. Achievement is influenced by several factors like personality, motivation, opportunities, education socio economic status and also self – concept.

The "Scholastic Achievement" refers to the gains acquired by the students as a result of education on educational institutions. The scholastic achievement level of the students is judged by marks or percentage that the students have scored in tests and examinations. Thus, achievement in the subjects, which is the total achievements, is called scholastic achievement. Research scholar has prepared following Performa to collect personal information & scholastic achievement record of undergraduate students

It is self prepared Performa by the researcher to obtain personal particulars' and their academic marks and percentage in their respective under graduation classes.

It is only students who are high in their scholastic achievement who can be molded to occupy strategic positioning society and thereby determine the destiny of society (Manocha, 1993). Hence scholastic achievement plays a very significant place in education as well as in the learning process at graduation level of a student. Scholastic achievement has become a directory of graduate student future in this highly competitive world.

REVIEW OF RELATED LITERATURE-

Several important studies have also been found to reflect the studies of Scholastic Achievement of the students. A number of studies on different associated variables of scholastic achievement have been carried out in India and abroad, some of which are reported here:

Choudhary (2009) studied family patterns and academic achievement of students and found that students from urban joint family were better in academic achievement than the students coming from rural joint family; students coming from urban nuclear family were better in academic achievement than the students coming from rural nuclear families; urban students were better in academic achievement than rural students

Gurubasappa (2009) studied intelligence and self concept as correlates of academic achievement of secondary school students with the objective to find out the relationship between academic achievement with intelligence and self concept by taking a sample of 400 students and found that there was high significant correlation between academic achievement with intelligence and self concept; there was significant difference in the academic achievement of students with different levels of intelligence and self concept; there was significant difference in the academic achievement of students in context of gender, type of school, medium of instruction, locality and socio economic status.

Kumari, V. (2010) conducted a study on "The relationship of academic anxiety and scholastic achievement" and found that scholastic achievement is negatively related to academic anxiety

Singh, S and Thukral, P. (2010) conducted a study on "Emotional Maturity and academic achievement of high school students" and reported that there exists no significant relationship between Emotional Maturity and academic achievement of high school students.

Vasanthi (2010) reported in his study on "Learning environment and academic achievement of higher secondary Physics students" that the correlation between learning environment and academic achievement and learning environment and socio economic status vary significantly.

Singh (2010) studied mental health in relation to spiritual intelligence, altruism, school environment and academic achievement of senior secondary students and found that male students had significantly higher level of academic achievement than female students; students residing in urban area had significantly higher academic achievement than students residing in rural area; academic achievement of students

studying in aided schools was significantly higher than students studying in government schools; academic achievement of students studying in unaided schools was significantly higher than students studying in government school; academic achievement of students studying in aided schools was significantly higher than students studying in unaided schools. Achievement of students with different levels of intelligence and self concept; there was significant difference in the academic achievement of students in context of gender, type of school, medium of instruction, locality and socio economic status.

Lal et al.(2010) studied emotional intelligence of scheduled caste students in relation to academic achievement with the objective to study relationship between emotional intelligence and academic achievement of male and female students of arts and science stream by taking a sample of 300 students from Meerut region through cluster random sampling technique and found that the male scheduled caste students having high emotional intelligence and academically superior to their counterpart; there was significant difference between mean achievement scores of male scheduled caste students of arts and science stream having high and low emotional intelligence; there was no significant difference between mean achievement scores of female scheduled caste students of arts stream having high and low emotional intelligence.

Vasanthi (2010) studied learning environment and academic achievement of higher secondary physics students with the objective to study the relationship between learning environment and academic achievement by taking a sample of 223 students of Mathematics and Science group and found that the correlation between learning environment and academic achievement of Hindu students, non BC students, and rural students vary significantly.

Gakhar et al.(2010) studied intellectual and non intellectual correlates of scientific attitude with the objective to find the relationship of intelligence and science achievement (intellectual variable) and socio economic status, scientific interest and home environment (non intellectual variables) with scientific attitude by taking a sample of 740 IXth class students selected on the basis of multistage randomization technique from eight districts of Punjab and found that science achievement was not significantly correlated with scientific attitude. The reasons may be that science achievement depends on memory, recall, knowledge and hard work whereas scientific attitude involves scientific temper of mind, rational thinking, open mindedness, objectivity .

Singh et al. (2010) studied the influence of spiritual intelligence on academic achievement of adolescents with the objective to study the influence of spiritual intelligence, gender, type of school and their interaction on academic achievement of adolescents by taking a sample of 934 students with a mean age of 16.64 years through cluster sampling technique and found that academic achievement of adolescents with low spiritual intelligence were better than adolescents with average spiritual intelligence; male adolescents had higher academic achievement than females; academic achievement of adolescents studying in aided schools were better than adolescents studying in government schools; academic achievement of adolescents studying in unaided schools were better than adolescents studying in government schools; academic achievement of adolescents studying in aided schools were better than adolescents studying in unaided schools.

Vijayakumari (2010) studied correlates of academic achievement of secondary school students with the objective to study the relationship of academic anxiety and achievement motivation with academic achievement, and to find out the interaction effect of academic anxiety, achievement motivation and gender on academic achievement by taking a sample of 400 students of IXth class through stratified sampling technique and found that academic achievement was negatively related to academic anxiety and positively to achievement motivation; the interaction of academic anxiety and achievement motivation on academic achievement was not significantly different for boys and girls; the interaction effect of gender and academic anxiety on academic achievement did not differ significantly for different levels of achievement motivation; the interaction effect of gender and achievement motivation on academic achievement did not differ significantly among different levels of academic anxiety.

Aktop (2010) conducted a study on socio-economic status, physical fitness, self-concept, attitude toward physical education, and academic achievement of children and found that academic achievements of the High SES group were higher

Lamare (2010) conducted a study on academic achievement in relation to some psycho-social variables of secondary school students in East Khasi Hills District, Meghalaya and found intelligence as one of the positive correlate of academic achievement.

Habibollah, et al. (2010) conducted a study on "Intelligence and Academic Achievement: an investigation of Gender differences "and found that intelligence was not related to academic achievement for both males and females.

Ghazi, et al. (2011) conduct relationship between students self perceived multiple intelligences and their academic achievement. Results of the study showed that the relationship between self perceived bodily/kinesthetic intelligence and academic achievement was very weak

Kumar (2011) studied the effect of change in medium of instruction and language background on the academic achievement of the school students The students from Konkani medium scored significantly lower than the students from English medium in English, history, geography, science, mathematics and in overall academic achievement at class vii. But the students from Konkani medium scored significantly higher than the students from the English medium in Konkani at class vii

Malathi B, Subbiah M (2013) studied on the topic in our society academic achievement is considered as a key criterion to judge one's total potentialities and capacities. Hence academic achievement occupies a very important place in education as well as in the learning process. Academic achievement is defined by Crow and Crow (1969) as the extent to which a learner is profiting from instructions in a given area of learning i.e., achievement is reflected by the extent to which skill and knowledge has been imparted to him. Academic achievement also denotes the knowledge attained and skill developed in the school subject, usually designated by test scores. Achievement is influenced by personality, motivation, opportunities, education and training. Similarly, the concept of level of aspiration is also one of the major factor which influences learning among students at all levels

RESEARCH METHODOLOGY-

Objective of the study- To compare the scholastic achievement among undergraduates students of science, arts and commerce stream.

Hypothesis of the study-

Academic Year-wise categorization produces no difference in frustration undergraduate students of Science, Arts and Commerce stream.

Sample of the study-

The study was conducted on 630 undergraduate students of science, arts and commerce streams. 210 students of B.A. 1st, 2nd and 3rd year, 210 students of B.Sc. 1st, 2nd and 3rd year, 210 students of B.Com. 1st, 2nd and 3rd year has been included in the sample. The sample of 630 under graduate students of first year, second year & final year with arts, science & commerce subject stream of girls and coeducational institution was selected

Area of the study- The area under the study is situated in the western region of utter Pradesh. The exact locale of the study is the area which falls within the jurisdiction of the C.C.S. University, Meerut.

Technique Chosen- The main technique that is used in the present study is survey with the help of questionnaire and statistical analysis. Findings are to be described, so it is descriptive survey.

Cluster random sampling method is used-To select the intact group randomly as a whole is known as a Cluster random sampling. So **Cluster random sampling method is used**

Subject stream	Undergraduate of first year	Undergraduate of second year	Undergraduate of final year	Total graduates
Science	70	70	70	210
Arts	70	70	70	210
Commerce	70	70	70	210
Total	210	210	210	630

Tools used in the study—

In this study Scholastic achievement is considered as performance in examinations of undergraduate students (percentages in academic year). Research scholar has prepared self prepared Performa by the researcher to obtain personal particulars' and their academic marks and percentage in their respective under graduation classes.

Scholastic Achievement Record of under graduate students (self Reported performa)

1. Name of student-----
2. Name of class B.A./B.Sc./B.Com----- Ist/ IIInd/IIIrd year
3. Fathers Name-----
4. Mothers Name-----
5. Date of Birth-----
6. Address-----
7. Name of college-----
8. Type of College- Only Girls/ Coeducational
9. Gender-----
10. Intermediate - Grand Total----- Marks Obtained----- Percentage-----
11. B.A. /B.Sc. /B.Com. Ist Year
Grand Total----- Marks Obtained-----Percentage-----
12. B.A. /B.Sc. /B.Com. IIInd Year
Grand Total----- Marks Obtained-----Percentage-----
13. B.A. /B.Sc. /B.Com. IIIrd Yea
14. Grand Total----- Marks Obtained-----Percentage-----

Student Signature

Statistical Techniques used-

Obtained raw scores of the samples were converted into standard scores using 20 versions of SPSS, subsequently the mean and SD was calculated. In present study, academic year-wise one way ANOVA analysis has been carried out to find out the significant difference in frustration. After ANOVA test, Tukey's HSD (Honest Significant Difference) test has been used to determine the multiple comparisons among the groups in the sample i.e. which groups among the sample in specific have significant differences.

Data Analysis-

Academic Year-wise categorization produces no difference in scholastic achievement of undergraduate students of Science, Arts and Commerce stream.

I Year

Descriptives

Scholastic Achievement

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Science	69		
Arts	69	66.06	6.176	.744	64.57	67.54	50	76
Commerce	69	69.39	7.556	.910	67.58	71.21	55	83
Total	207	66.24	7.625	.530	65.20	67.29	48	84

ANOVA

Scholastic Achievement

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1293.952	2	646.976	12.353	.000
Within Groups	10683.971	204	52.372		
Total	11977.923	206			

Multiple Comparisons

Dependent Variable: Scholastic Achievement

Tukey HSD

(I) Which stream do you belong to?	(J) Which stream do you belong to?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Science	Arts	-2.783	1.232	.064	-5.69	.13
	Commerce	-6.116*	1.232	.000	-9.02	-3.21
Arts	Science	2.783	1.232	.064	-.13	5.69
	Commerce	-3.333*	1.232	.020	-6.24	-.42
Commerce	Science	6.116*	1.232	.000	3.21	9.02
	Arts	3.333*	1.232	.020	.42	6.24

*. The mean difference is significant at the 0.05 level.

II Year

Descriptives

Scholastic Achievement

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Science	69		
Arts	69	63.65	5.625	.677	62.30	65.00	48	74
Commerce	69	61.12	6.130	.738	59.64	62.59	46	79
Total	207	61.65	5.631	.391	60.88	62.42	46	79

ANOVA

Scholastic Achievement

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	443.681	2	221.841	7.432	.001
Within Groups	6089.275	204	29.849		
Total	6532.957	206			

Multiple Comparisons

Dependent Variable: SchAchievement

Tukey HSD

(I) Which stream do you belong to?	(J) Which stream do you belong to?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Science	Arts	-3.464*	.930	.001	-5.66	-1.27
	Commerce	-.928	.930	.579	-3.12	1.27
Arts	Science	3.464*	.930	.001	1.27	5.66
	Commerce	2.536*	.930	.019	.34	4.73
Commerce	Science	.928	.930	.579	-1.27	3.12
	Arts	-2.536*	.930	.019	-4.73	-.34

*. The mean difference is significant at the 0.05 level.

III Year Descriptives

Scholastic Achievement

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Science	72		
Arts	72	62.71	7.609	.897	60.92	64.50	34	74
Commerce	72	55.25	4.681	.552	54.15	56.35	45	64
Total	216	59.78	6.561	.446	58.90	60.66	34	74

ANOVA

Scholastic Achievement

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2281.287	2	1140.644	34.840	.000
Within Groups	6973.486	213	32.739		
Total	9254.773	215			

Multiple Comparisons

Dependent Variable: Scholastic Achievement

Tukey HSD

(I) Which stream do you belong to?	(J) Which stream do you belong to?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Science	Arts	-1.319	.954	.351	-3.57	.93
	Commerce	6.139*	.954	.000	3.89	8.39
Arts	Science	1.319	.954	.351	-.93	3.57
	Commerce	7.458*	.954	.000	5.21	9.71
Commerce	Science	-6.139*	.954	.000	-8.39	-3.89
	Arts	-7.458*	.954	.000	-9.71	-5.21

*. The mean difference is significant at the 0.05 level.

FINDINGS-

In context of scholastic achievement, in I year, science, arts and commerce streams show standard errors 0.947, 0.744 & 0.910 respectively. The F-statistic value is 12.353 with p-value 0.000, less than 0.05. Tukey’s HSD test shows the mean difference 2.783 between science and arts streams with p-value 0.064, more than 0.05; mean difference 6.116 between science and commerce streams with p-value 0.000 and mean difference 3.333 between arts and commerce streams with p-value 0.020.

In II year, scholastic achievement in streams science, arts and commerce show standard errors 0.543, 0.677 & 0.738 respectively. The F-statistic value is 7.432 with p-value 0.001. Tukey’s HSD test shows the mean difference 3.464 between science and arts streams with p-value 0.001; mean difference 0.928 between science and commerce streams with p-value 0.579, more than 0.05 and mean difference 2.536 between arts and commerce streams with p-value 0.019.

In III year, science, arts and commerce streams show standard errors 0.506, 0.897 & 0.552 respectively. The F-statistic value is 34.840 with p-value 0.000. According to Tukey’s HSD test, the mean difference is 1.319 between science and arts streams with p-value 0.351, more than 0.05; mean difference 6.139 between science and commerce streams with p-value 0.000 and mean difference 7.458 between arts and commerce streams with p-value 0.000.

CONCLUSIONS-

Here F-statistic values are 12.353 (p-value 0.000), 7.432 (p-value 0.001) & 34.840 (p-value 0.000) in I, II & III years respectively, implies that null hypothesis is rejected; hence academically year wise there is significant difference in scholastic achievement of undergraduate students of science, arts and commerce streams.

As per Tukey’s HSD test, multiple comparisons reveal that there is significant difference between different combinations in all years with some exceptions as in I year, there is insignificant difference between science and arts streams since the mean difference is 2.783 with p-value 0.064 which is more than 0.05. Likewise, there is insignificant difference between science and commerce streams in II year since mean difference is 0.928 with p-value 0.579, more than 0.05, and in III year also, there is insignificant difference between science and arts streams as mean difference is 1.319 with p-value 0.351, which is more than 0.05.

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