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Influence of stream of study on educational adjustment and study involvement of higher secondary students

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Abstract

The study aimed to find the influence, if any, of higher secondary students' stream of study on their educational adjustment and study involvement. Stratified random sample of 600 higher secondary students (300 girls; 300 boys) aged 16 to 19 years belonging to middle socio-economic status families of Kolkata was selected. 200 each of the students belonged to Arts, Commerce and Science streams. Socio-Economic Status Scale ^[5] was administered to determine the socio-economic status of students for controlling it. Adjustment Inventory for School Students ^[10] and Study Involvement Inventory ^[2] were administered to assess educational adjustment and study involvement of participants. Mean and Standard Deviation values were computed. One-Way ANOVA was conducted. Results indicated significant influence of streams of study on academic adjustment and study involvement of higher secondary students. The sampled Arts students seemed most suited for academic activities at the higher secondary stage; they were highest in educational adjustment and most dedicated to studies.

Keywords: Higher secondary students; Stream of study; Educational adjustment; Study involvement

1. Introduction

Pupils are grouped into streams of study at the higher secondary level. The impacts of this compartmentalization on student-attributes require probe. Adjustment to academics and study involvement are of great importance to parents and educators. Therefore, it seems pertinent to examine these variables from the perspective of educational streams at higher secondary level. Babu (2004) ^[1] selected a sample of 240 students of class XI (Commerce stream). It was found that there was significant relationship between attitude of higher secondary students towards study of commerce and their adjustment; the participant Commerce students displayed very poor educational adjustment. Prabu (2015) ^[8] chose a sample of 250 class XI students. Academic stress reported by Science students was found to be higher than that for Arts students. Vamadevappa (2006) ^[12] studied adjustment of overachievers and underachievers in biology. It emerged that there was inverse and significant relationship between adjustment-problems and achievement in biology. Maladjustment caused low achievement in biology; underachievers manifested poor adjustment while overachievers had good adjustment. Meera and Jumana (2015) ^[4] studied a sample of 265 higher secondary students. It was concluded that Science students had more positive attitude towards potential careers than Arts students. This indicates the superior educational adjustment of the participating Science students. A minority of researches carried out in India have negated the determining impact of students' stream of study on their adjustment. In one such investigation, Menaga and Chandrasekaran (2014) ^[6] worked with a sample of 250 higher-secondary school students (129 Arts students; 121 Science students). It was found that there was non-significant difference between higher-secondary students of Arts and Science streams in their academic stress (which indicates academic maladjustment). It is apparent that there is paucity of studies conducted in India on the influence of educational stream at the higher secondary level on pupils' academic adjustment; more researches are needed.

Researches have revealed the difference in study involvement of pupils of various streams of study. Majority of relevant investigations ^[3, 7, 9, 11, 14] have found that Science students are more study involved. This was probably because the more brilliant, hard-working and motivated students in India gravitate towards Science stream. But a minority of studies ^[13] have upheld the supremacy of Arts students. Mukherjee and Chatterjee (2016) ^[7] selected a sample of 90

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higher secondary students (30 each of Humanities, Commerce and Science streams). Students of Humanities (Arts) stream were found to be most intuitive (imaginative and theoretical) while Science students were least intuitive. Humanities (Arts) students scored highest on perceiving dimension of cognitive style demonstrating ineptitude and laziness which suggest lack of study involvement while Commerce students scored the least on that dimension. Science students had highest scores in sensing dimension of cognitive style indicating tendencies to observe fine points and be accurate; Humanities students scored least on that dimension. Chatterji (1983) ^[3] selected a sample of 760 male class XII students. 190 Arts students, 180 Science students, 190 Commerce students and 200 Agriculture students were included in the sample. Science and Commerce students were found to be significantly higher in achievement motivation as compared to Arts students. Tali and Rosy (2012) ^[11] selected a sample of 200 higher secondary students from three government-run and three private schools. Science students were found to be more concerned regarding their career than Arts students. Science and Commerce students did not differ much in their vocational aspirations. Singh (2014) ^[9] chose a sample of 565 Scheduled Caste students of class XI from colleges. The sample included 210 Arts, 41 Commerce and 314 Science students of either gender. Science students differed considerably in achievement motivation from both Arts and Commerce students. Mean achievement motivation of Science students was highest. Arts and Commerce students were not found to differ much in achievement motivation. Wani and Masih (2015) ^[14] selected a sample of 100 male and 100 female higher secondary students. There were 75 Arts, 50 Commerce and 75 Science students in the sample. Significant differences were noted in pupils' achievement motivation across different academic streams. Significant difference was reported in achievement motivation of Arts and Science students. But Science and Commerce; and Arts and Commerce students did not differ much in achievement motivation. Investigators explained that Science students perceived themselves as achievers and held positive attitudes towards education due to intrinsic nature of Science as a discipline and brighter job opportunities that study of Science offered. Vidhyageetha and Padma (2012) ^[13] chose a sample of 855 students (335 Arts students; 520 Science students) of higher secondary level. Outcomes from the study revealed that students of Arts stream were more involved and higher achievers in computer science than those of Science stream. It appears from the survey of relevant researches that there are debates on whether streams of study at higher secondary level do indeed influence students' educational adjustment; and students of which stream are superior in study involvement. The present study intends to help resolve the controversy.

2. Research Objectives

To find the influence, if any, of stream of study of higher secondary students on their educational adjustment and study involvement.

3. Methodology

3.1 Hypotheses

1. There is influence of higher secondary students' stream of study on their educational adjustment.
2. There is influence of higher secondary students' stream of study on their study involvement.

3.2 Operational Definitions

Stream of Study: It means a group of related subjects of

study. In India, there are four streams of study at the higher secondary level viz. Arts (Humanities), Commerce, Science and Vocational. The Vocational stream is not available at most schools hence is not very popular. So in the present context, three streams of study will be considered i.e. Arts, Commerce and Science.

Educational Adjustment: Degree of experienced harmony of school students with their curricular and co-curricular activities ^[10].

Study Involvement: It refers to extent of involvement (motivated participation and emotional connectedness) of pupils to their scholastic pursuits ^[2].

3.3 Tools

The following standardized tools were used for data collection from participants:

- a) **Adjustment Inventory for School Students** ^[10]: It was used to assess educational adjustment of sampled school students. It comprises 60 items with 20 in the area of educational adjustment. Response-options for each item are Yes and No - one of which the testee has to indicate. There is no time limit. It can be administered individually or in group. Maximum score to be obtained in educational adjustment is 20. Higher score indicates maladjustment. Reliability coefficients (Split-half; Test- Retest; Kuder-Richardson Formula 20) for educational adjustment are between 0.93 and 0.96. Validity coefficients computed between educational and emotional adjustment is 0.19; while that between educational and social adjustment is .24 - these values are expectedly low and satisfactory. Item analysis involved computation of biserial correlation; items which were significant at .001 levels were retained. Percentile Norms are based on random sample of 1950 pupils aged 14-18 years (1200 boys; 750 girls) of classes IX to XI of 40 schools in Bihar. Chi-square tests revealed that distributions of scores were more or less normal ^[10].
- b) **Study Involvement Inventory** ^[2]: It was administered to measure the study involvement of sampled students. It contains 40 items related to 10 need areas viz. abasement, achievement, affiliation, aggression, autonomy, deference, nurturance, order, recognition and succorance. There are four items pertaining to each need. There are two negatively-worded and 38 positively-worded items in the inventory. Response-options for each item are Yes, Undecided and No - one of which the testee has to indicate. There is no time limit. It can be administered individually or in group. Minimum score to be obtained is 16 and maximum is 76. Test- retest reliability is .87 (N=150) with a time interval of one month. Split-half reliability applying the Spearman-Brown formula is .67 (N=150) with an index of reliability of .70. It is claimed to have high content and construct validity. Percentile norms are based on a quota sample of 600 students of class X ^[2].
- c) **Socio-Economic Status Scale** ^[5]: The tool was used to assess the socio-economic status of adolescents. It consists of items spanning four areas viz. finance; property; education and social status. The scale has been standardized on a sample of 1127 (rural and urban) students of class VIII through XII. For 153 boys of class XI in a senior secondary school, the test-retest reliability (with a time interval of 10 days) has been found out to be .82. Besides, this tool has been administered on two samples (N₁ =37 & N₂ = 42) of pupils of a reputable public and an

ordinary government school respectively. t-value of the difference between the samples was 9.29 ($p < 0.01$ level). It manifests the discriminating power (validity) of the scale [5].

3.4 Sample

A stratified random sample of 600 higher secondary students (300 girls; 300 boys) aged 16 - 19 years belonging to middle socio-economic status families of Kolkata was selected. 200 each of the students belonged to Arts, Commerce and Science streams.

4. Procedure

Standardized tools were administered on participating students for data collection. Venues of data collection were schools. Data were collected from groups of about 20 students each at a time. Among the tools, the socio-economic status scale [5] was used for assessment and control of participants' socio-economic status (extraneous variable). Adjustment Inventory for School Students [10] and Study Involvement Inventory [2] were administered to assess educational adjustment and study involvement of participants. After data collection and scoring, mean and standard deviation were calculated and One-Way ANOVA was carried out.

5. Results and Discussion

Table 1: Mean and Standard Deviation Values of Variables

Stream	Educational adjustment		Study involvement	
	Mean	SD	Mean	SD
Arts (N=200)	6.4	3.34	51.65	7.41
Commerce(N=200)	6.81	3.66	49.44	6.54
Science (N=200)	7.25	3.3	49.48	6.37

SD: Standard Deviation

From observation of mean values on educational adjustment of participant higher secondary students (Table 1), it seems that the Science students, on the average, have highest mean indicating more maladjustment in the academic sphere perhaps due to relentless pressure of studies and competition. This is supported by results of earlier studies [8]. Commerce and Arts students have almost equal mean values on educational adjustment. As for mean values on study involvement, the sampled Arts students appear to be most engrossed in academic pursuits possibly because they enjoy what they learn. The finding finds support from a minority of studies [13]. The Commerce and Science students are almost at par in their involvement in learning activities. From these results it seems that the participant Arts students are best positioned for academics at least at the higher secondary level; they are least educationally maladjusted and most committed to studies. This is in line with findings of previous studies [13]. Standard Deviation values are not very high indicating moderate homogeneity of variance. It shows that intra-group variability of scores on the variables is not high.

Table 2: Results of One-Way ANOVA- Independent Variable: Stream of Study (N=600)

Dependent Variable	F	DF
Educational Adjustment	3.06*	2, 597
Study Involvement	6.9**	2, 597

* $p < .05$; ** $p < .01$

From the results reported in Table 2, it is evident that there is significant influence of stream of study (Arts / Commerce /

Science) on educational adjustment and study involvement of higher secondary pupils. Thus both the hypotheses (sub-section 3.1) are supported. Educational streams appear to play powerful roles in academic adjustment and study involvement of plus-two students as also evident from results of prior investigations [3, 4, 7, 8, 9, 11, 13, 14]. There may be two reasons underlying this finding. Firstly, students having distinct characteristics flock to the different streams. Secondly, students may not have disparate traits when they join the streams but gradually, through their experiences as pupils of Arts or Commerce or Science streams, their traits change. These two explanations seem equally plausible.

6. Conclusion

Streams of study seem to play influential roles in academic adjustment and study involvement of higher secondary students. The participant Arts students appear to manifest most appropriate characteristics for scholarly activities; they are highest in educational adjustment and most devoted to studies. Therefore, career-prospects in Arts or Humanities must be popularized among secondary students so the stream gets the importance it deserves. Admission to Science course should not solely rely on secondary examination performance. Psychological testing must become a part of the selection-process so that only the most suitable get to study Science. This would check overcrowding, lack of interest and undue competition. Science and Commerce curricula need to be revamped so that pupils' study involvement improves.

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