

Intelligence and Attitude of Off-Campus and On Campus Students Towards Education

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Academic credibility of distance/open learning system has been well established though the debate on its comparability with face-to-face education still continues in some academic circles. The crucial factor that contributes to the success of distance learners is their informed decision which adds to their motivation to study. As adult learners, they develop, or should develop the right kind of attitude toward learning independently. Bhoodev Singh and Chaturvedi have compared through the present study the intelligence and attitudes of two categories of students: off campus and on campus. Their conclusions are significant in the cultural context of India, since they reassure the distance learners about the latter's advantages in achieving educational goals.

Introduction

The main purpose of this study was to compare intelligence and attitude towards education of off campus and on campus students. Ravens' Progressive Matrices and Attitude Towards Education Scales were administered on 1000 first degree and post-graduate off campus and on campus students of Allahabad and Faizabad regions. It was found that the off campus students had a better attitude to education in comparison to the on campus students. Off campus students of rural culture scored higher on intelligence test than their urban counterparts. Significant differences were also found between off campus and on campus students with respect to intelligence and attitude towards education when both the variables were considered together.

In any country the greatest achievement and most persistent challenge is that of offering satisfactory education to its people. A good education enables the people to be free, to explore, to invent, and to see matters in a proper perspective. Since the whole population of a country profits from the works of its educated people, it is the duty of every Government to provide educational opportunities to all its citizens. However, political leaders, administrators and policy makers of India are very much worried about the natural resources, talk about the energy crises but neglect the most important natural resource — the child who is our potential leader in all avenues of life. A country cannot hope to be among the best in the world, if it does

not solve the problem of illiteracy. The backwardness, in such cases, will have implications for the socio-cultural, economic and political spheres. Therefore, it is time to add a big 'E' in our national agenda (i.e. 'education for all') of priorities. The big challenge to all of us is to set in motion a more comprehensive means of education to all students. Open university system accepts this challenge and arranges cheap and best education to all students who are unable to take regular admission in conventional system of education.

Psychologists argue that school environment plays an important role in the development of cognitive, affective and psychomotor domains of students. But it is true that formal system of education is inadequate to provide equal educational opportunities to all students. Only the students of high or average socio-economic status can take advantage of our system of higher education. Many students from low socio-economic status are denied admission. This constitutes a great waste around the world. Too many bright students live and die without making the contribution of which they would have been capable. We all know that the greatest waste of all today is human ability left hidden and underdeveloped. The off campus system of education can reduce this wastage in education and provide a chance to those who are very poor and living in remote areas.

Research studies in the area of distance education are meagre in India, because the field of distance education is in an infantile stage. Academic achievement of distant learners and on campus learners has been compared by some researchers. Mouley (1986) reported that at post-graduate level in certain subjects like commerce, and political science, the academic achievement of distant learners was found better than that of on campus learners. At the undergraduate level, the academic achievement of distance learners was also found better than that of on campus learners. Reddy (1986) reported that the result of off campus B.Ed. students of S.V. University was found to be better than the regular students. Jevans (1992) found that off campus students were no worse than on campus students. Indeed, they do slightly better, though the difference was marginal. The percentage of distinction and high distinction of off campus students was found to be higher than that of on campus students. The main reasons for the betterment of distance learners on academic achievement are the quality of instructional material and curiosity of the learners. In contrast, Anand (1979), Biswal (1979), Sahoo (1985), Gupta (1985), Panda (1986) reported lower performance of correspondence learners than that of on campus learners. Unfortunately there is a methodological flaw in the above mentioned studies which makes interpretation of the results unclear. The investigators undoubtedly realize that they have not considered cultural factors which strongly influence academic achievement of the students. They have also not used sophisticated statistical procedures to control the uncontrolled variability.

Attitude and perceptions of the students towards various aspects of distance/correspondence education have been studied by Biswal (1979), Pillai and Mohan

(1983), Sahoo (1985), and Mouley (1986). In general, these studies have revealed that the quality and adequacy of instructional material, student services, contact programmes, and delivery system could not reach upto the level of student's expectations. Hence, the students get stuck with the doubts and unsolved problems, ultimately affecting their self-learning, attitude, and motivation. In contrast, Knapper and Waslycia-Coe (1982) found that off campus students show high satisfaction with their experiences of correspondence learning than on campus students. Entwistle et al (1974) write that distance learners are usually motivated to learn, through free choice and for economic and career rewards. Bonani (1982) identified motivation, personality, state of maturity, ability, educational background, occupation etc. as characteristics of distance learners. In India, most of the universities started correspondence courses to generate income besides offering education to those who could not afford face-to-face education. Therefore, they enrolled a large number of students and supplied poor quality instructional material to the students.

In the area of distance education, researchers have paid much attention to the unit cost, delivery system, student service, adequacy of distance education material etc., and reported that distance education is economically more viable. To pay attention to these aspects of distance education without considering a student's abilities and attitudes is almost like studying plant growth without considering the soil. It is a half hearted attempt to construct a theory of distance education.

Researchers have confirmed that attitude towards education affects intelligence of the students. Empirical evidences have also shown that attitude towards education developed at the later years of life helps the people do commendable work. Lehman (1953) writes that there were six mathematicians who had made significant contribution after the age of seventy. George Beard (1874) found that seventy percent of the greatest contributions had been made by men at forty years of age, and that eighty percent of the worlds best contributions had been produced at the age of fifty. Formal system of education cannot help at this age. It is only the distance education system which can provide a chance to those who have a strong inner urge to do something for the welfare of the society. It was hypothesized that distance education may develop intelligence and attitude towards education significantly more than the formal system of education.

The main purpose of this study was to compare the intelligence and attitude of off campus and on campus students towards education.

Method and Procedure

Sample

The sample of the study consisted of 1000 (500 off campus and 500 on campus) students randomly selected from among those studying in the undergraduate and post-graduate classes of Allahabad and Faizabad regions. Data were collected randomly from Sultanpur, Faizabad, Gonda, Bahraich, Barabanki and Pratapgarh dis-

tracts. The sample of off campus students include the students who were enrolled for Indira Gandhi National Open University's Degree and Diploma courses and the students who joined correspondence courses at under-graduate and post-graduate levels of that area. The sample of on campus students include the regular students of degree and post-graduate classes of the selected regions.

Tools Used

The following tools were used for the data collection:

1. Ravens' Progressive Matrices (set A, B, C, D and E) developed by Raven (1987).
2. Attitude Towards Education Scale developed by Chopra (1982).

Description of the Tools

Ravens' Progressive Matrices include five sets (set A, B, C, D and E). The scale consists of sixty problems divided into five sets of twelve each. In each set the first problem is almost self evident. The problems which follow become progressively more difficult. The five sets provide five opportunities for grasping the method and five progressive assessments of a person's capacity for intellectual activity. The test was designed to cover the widest possible range of mental abilities and to be equally useful with persons of all ages. A person's total score provides an index of his intellectual capacity with relatively little influence from the cultural environment in which the individual grew up or got his education. Test-retest reliability of the test was found very high. Since the test is homogenous, it has high internal consistency. The validity of the test was also found very high. The correlations with intelligence and achievement measures were found highly significant. The bi-serial correlation in the test-items and combined results of three IQ tests raised from +.2 to +.8. The test has been described as one of the purest and the best measures of 'g' or general mental functioning. The test was administered on the selected sample according to the instructions given in the manual. A person's score on the scale is the total number of problems to mark quickly through the series from beginning to the end.

Attitude towards education scale was developed by Chopra (1982). The scale was developed on the lines of Edward's (1957) scale. The scale consisted of twenty two items and the scale value of each item was finalized with the help of judges. Test-retest reliability of the test was reported as .98 with the help of Spearman Brown formula. The test was administered on the selected sample according to the instructions given in the manual. Scoring was done according to the procedure given in the manual. The scale value of each item ranges from .5 to 10.79.

Analysis

Analysis was done with the help of discriminant function analysis of variance.

Table 1 Mahalanobis D^2 analysis for off campus and on campus students with respect to intelligence

Source	Type	Mean	No. of sets	D_p^2	F	df	p
Urban Male	Off Campus	29.07	5	$D_3^2 = .3116$	1.112	5,177	NS
	On Campus	28.54					
Urban Female	Off Campus	27.35	5	$D_3^2 = .2420$	1.4706	5,125	NS
	On Campus	26.72					
Rural Male	Off Campus	28.53	5	$D_3^2 = 1.759$	4,397	5,117	$\leq .05$
	On Campus	25.21					
Rural Female	Off Campus	28.01	5	$D_3^2 = 1.907$	3.7206	5,46	$\leq .05$
	On Campus	25.09					

Table 1 presents the Mahalanobis D^2 information based on five sets of Ravens' Progressive Matrices and Intelligence Scale between off campus and on campus students. As can be seen, no significant differences were found between urban off campus and on campus male and female students. It means that the off campus and on campus students of urban culture do not differ significantly on intelligence. Significant differences were found between off campus and on campus students of rural culture. The mean intelligence test scores of off campus male and female students were found significantly higher than that of on campus male and female students. It indicates that off campus rural students are more intelligent than on campus rural students.

Table 2 Mahalanobis D^2 analysis for Off Campus and On Campus students with respect to Attitude Towards Education

Source	Type	Mean	D_p^2	F	df	p
Urban Male	Off Campus	87.79	$D_1^2 = 2.7669$	4.372	1,182	$\leq .05$
	On Campus	72.80				
Urban Female	Off Campus	81.72	$D_1^2 = 2.4732$	3.785	1,120	$\leq .05$
	On Campus	62.79				
Rural Male	Off Campus	72.56	$D_1^2 = 2.6738$	4.549	1,120	$\leq .05$
	On Campus	64.37				
Rural Female	Off Campus	87.39	$D_1^2 = 3.729$	5.5906	1,49	$\leq .05$
	On Campus	72.56				

Table 2 shows the Mahalanobis D^2 information based upon attitude towards education of off campus and on campus students.

All the obtained 'F' Values were found significant ($p \leq .05$). The mean values of off campus urban and rural male and female students were found higher than that of their counterparts. It indicates that off campus students have significantly better attitude towards education than on campus students.

Table 3 Mahalanobis D^2 analysis for Off Campus and On Campus Students with respect to interaction between intelligence and attitude towards education

Source	Type	No. of sets	D_p^2	F	df	P
Urban Male	Off Campus On Campus	6	$D_6^2 = 1.327$	2.167	6,177	$\leq .05$
Urban Female	Off Campus On Campus	6	$D_6^2 = 1.9573$	2.05	6,122	$\leq .05$
Rural Male	Off Campus On Campus	6	$D_6^2 = 2.139$	3.29	6,116	$\leq .01$
Rural Female	Off Campus On Campus	6	$D_6^2 = 1.927$	2.9307	6,45	$\leq .01$

Table 3 contains Mahalanobis D^2 information based on the interaction of intelligence and attitude towards education between off campus and on campus students of urban and rural cultures. The obtained 'F' values between off campus and on campus male and female students of urban areas were found significant at .05 level whereas the 'F' values between off campus and on campus students of rural sample were found significant at .01 level. The mean values of off campus students were found to be higher than that of on campus students (Tables 1 & 2). It means that off campus students are better than on campus students on the interaction of intelligence and attitude towards education.

Discussion

The present study involved a tentative attempt to ferret out and focus upon the off campus and on campus systems of education. The findings are very much impressive and they support the assumption made in the beginning of the study that the distance education programmes may develop significantly better attitudes in learners towards education than the formal system of education. It seems that distance education system plays an important role in the development of the positive attitude towards education among students. Distance education system provides a chance to those who could not get regular face-to-face education in the schools/colleges and are interested to increase or update their qualifications and knowledge. Learners' curiosity to increase their qualifications develops in them a positive attitude towards education. Cross-lagged panel study is required to study whether curiosity of distance learners increases attitude towards education or vice-versa. The distance learners, it is found, are very much interested to increase their qualifications and knowledge. The second most important thing observed by the investigators is that only in those studying through distance education the seeds of attitude towards education, curiosity to learn, study habits etc., are alive. The distance education system provides the appropriate environment for the seeds to germinate.

The distance education theorists argue that open university system of education caters to the needs and aspirations of various categories of learners with varying attitudes, skills, and interests at a reasonable cost with appropriate study time. The results of this study directly and indirectly support this argument. It was also observed that the needs and aspirations of distance learners are very high. Level of aspiration plays the role of a catalyst in the development of cognitive and affective domains. Research is needed to compare the needs and aspirations of off campus and on campus students. Need and level of aspiration help the students to study deeply. The history of Nobel Laureates supports this view. This may be one of the reasons for the high mean intelligence scores of off campus students in comparison to on campus students. The data support the significant difference in favour of off campus rural students on intelligence test. The mean intelligence test scores of urban off campus male and female students were also found higher than their counterparts. But the differences were not significant.

The most important and salient finding to be extracted from the analysis is that the interaction effects of intelligence and attitude towards education were found significant in the discrimination of off campus and on campus students. The mean values of off campus students were found to be higher than that of on campus students. It indicates that performance of off campus students is far better than that of on campus students. The significant difference between off campus and on campus students with respect to intelligence and attitude towards education provides, when both the variables were considered together, the idea of betterment of Open University system of education. These findings may help course makers, policy planners and administrators to finalyse courses, delivery systems, contact programmes etc., of an Open University system.

References

- Anand, S. (1979); *University without walls*. New Delhi: Vikas Publications.
- Beard, G. (1974); *Legal responsibility at old age*. New York: Russel.
- Biswal, B.N. (1979); "A study of correspondence education in Indian Universities." Unpublished Doctoral Dissertation, University of Baroda.
- Bonani, G. (1982); "Correspondence teaching, second choice or second class." Cited in S.P. Daniel and et al (Eds.). *Learning at a Distance: A World Perspective*.
- Chopra, S.L. (1982); *Attitude Towards Education*. Agra: National Psychological Corporation.
- Entwistle, N. Thompson, J. and Wilson, J. (1974); "Motivation and Study Habits." *Higher Education*, 3, 4.
- Gupta, M.L. (1985); *Indian economy and higher education with reference to correspondence education*. Jaipur: Alka publications.
- Jevans, F.R. (1982); "How different is the distance education?" Cited in S.P. Deniel and et al (Eds.). *Learning at a Distance: A World Perspective*.
- Knapper, C.K. and Waslycia-Coe, F.M. (1982); "Characteristics and attitudes of correspondence studies." Cited in S.P. Daniel and et al, (Eds.). *Learning at a Distance: A World Perspective*.

Lehman, H.C. (1953); *Age and Achievement*. Princeton: Princeton University Press.

Mouley, V. (1986); *Correspondence education in Indian University: A Review*. A report submitted to U.G.C. New Delhi.

Panda, S.K. (1980); "Comparison of academic achievement of correspondence and regular course students of Utkal University. Master thesis," University of Kurukshetra.

Ravens, J.C. (1987); *Ravens Progressive Matrices*, New Delhi: Mansyan.

Reddy, A.V.R. (1986); "One more study on the performance of students of correspondence and regular courses." *Paper presented in the National Seminar on Distance Education*, Ahmedabad.

Sahoo, P.K. (1985); "Distance Education in Indian Universities: Some corner for future development." *The Education Quarterly*.