ORIGINAL RESEARCH PAPER

Education

STUDY OF SOCIO-ECONOMIC STATUS AND CERTAIN PERSONAL FACTORS OF B. TECH. STUDENTS

KEY WORDS:

Dr. Aftab Ahmad Ansari Associate Professor Department of Education Aligarh Muslim University-Aligarh, 202002 (INDIA).

India is a secular and democratic country, which provides freedom to each and every individual to choose their own life style, type of education and vocation. Thus, our society is divided into different socio-economic groups. As per the government statistics nearly 15% of total population of our country belongs to the higher socio- economic status. It may not be considered as good sign but on the other hand about one third of total population is still deprived of even basic needs like food, clothing and shelter. In such conditions, it is extremely difficult for them to send their children for education in schools. However, the major chunk of Indian population belongs to middle class. The people of this group always try to imitate the life style of higher socio economic status group. Thus, in the hope of matching their standards with this group, they work hard and in many cases they succeed in doing so by achieving success in their respective areas. While on the other hand this competitive attitude leads them in the troubles and frustration in majority of cases. People belonging to this group don't have enough money to bear the expenditure incurred on quality school education, which is considered as the key of success for higher and professional education. This is the basic factor which creates a dilemma. Because of financial constraints, majority people of our country despite having high aspirations and the desire to receive and excel in professional and higher education are unable to fulfill their wishes. Professional courses like B. Tech., MBBS and B.D.S. are the most popular and most attractive among the Indian masses. The people who are in these professions enjoy the great respect and social approval in the society. Doctors are considered as the God on the earth. One of the most important factors, which provide these professions social approval, is that they yield high monitory returns, glamorous life style and opportunity to go abroad. Studies conducted in the related areas show that SES plays a pivotal role in the achievement of the students in the field of education. Mehrotra, S.A. (1986) found out that in both boys and girls there was a positive relationship between SES of the family of the students and academic achievement. Jain, S.P. and Shah, l. M. (1974) revealed that family background also aspires for the professional education; Mangat, D. (1988) studied the relationship between socio-economic status and academic achievement and SES and found that SES exhibited a significant relationship with academic achievement. Jayaram, N. (1976) found out that the admission to higher professional education is based on socio-economic background and ability to afford the financial constrains of social courses. Further it has also been found that those students selected in higher education were overwhelmingly a meritorious lot, and continued it in merit and latter academic performance as well. Thus, it is clear that the students belonging to higher socio-economic status tend to qualify more for B. Tech., MBBS, and B.D.S. other professional courses.

After independence, India has achieved tremendous progress in 'every walk of life including education. Industrialization, modernization, urbanization has totally changed the entire scenario of present society. This seems to be a big change in the attitude of the Indian people. Thus, the women education is also getting adequate attention and positive trends in the fields of women education have come out. The women literacy has increased from 8.86% in 1951 to 54.16% in 2001 (census, 2001), 65.46%. in 2011 (Census-2011)

and 48% in 2018-2019 (UGC Annual Report). Not only the literacy but women are also achieving even much higher in other areas too. The enrolment of girls in higher education was just 10% in 1950-1951, which has increased to 27.6% during 2000-2001 session and 45% in 2010-2011 and 48% in 2018-2019. (AISHE and UGC Annual Report). Bastan (1997) reported that teaching profession in Germany was women profession. It is, perhaps, Indian tradition, governed by the religion, which compelled them not to offer jobs involving skilled and technical courses such as B. Tech., polytechnic, IITs, etc. Now there is positive change in this direction with the change in attitude of the society in the modern world. As a result women's are coming forward to join the above said courses and are also not behind in performing with their male counterparts. It depicts that parents, especially from urban areas and from relatively good socio-economic backgrounds, are keen to send their daughters to professional courses.

Medium of instruction is one the important factors which plays influential role for getting the selection of professional courses like B. Tech. India being a multilingual country as it has 18 officially recognized languages since 1992. It is believe that it has 1652 mother tongues, of which 33 are spoken by people numbering over lakh. As far as the common language spoken by all is concerned, Indian never had a single language, which was intelligible to the masses. Pt. Jawaharlal Nehru recommended that English should be the medium of technical education, since he felt that almost all the literature in this sphere was available only in English. But the question is how many Indians know English? In the opinion of the Kothari Commission 1964-66 the progress of industrialization dependence upon proper understanding of science, and it also necessitates the best possible training of engineers.

Place of living or domicile: In this competitive examination "place of living or domicile" (urban/rural) probably plays significant role as far as the selection of the students in B. Tech. and other professional courses is concerned. The student belonging to urban areas might have greater chance to get admission in these courses. The urban areas have better prospects, facilities and other amenities such as mass-media, computer, information technology, coaching and guidance facilities and availabilities are some of the positive aspects, which are helpful in better achievement. Thus, the chances for the selection of these courses are greater.

Socio-Economic Status (Ses): In general, socio-economic status has been considered as one of the important variable influencing child's social, psychological development and his academic achievements. Obviously for any study related to socio-educational problems, economic status of the parents and their occupation may be considered an important variable. All these factors influence child's academic achievement and his social, cultural and aesthetic development.

Kuppuswami has defined that socio-economic status is based on assumption: There is class structure in society. According to B. Kuppuswmi (1962) social prestige in India is attached to the amount of income as well as the sources of income, occupation and education.

B. Tech Course: Engineering is the science dealing with design, construction, and operation of the various structures machine, engines and computer and other devices used in industry and everyday life. Hence, engineers contribute a lot to the society. They are very useful for social purpose.

OBJECTIVES OF THE STUDY:
1. To study the Socio-Economic Status of B. Tech. students.
2. To study the gender differences of B. Tech. students.
3. To study the medium of instruction at qualifying examination (+2) of B. Tech. students.
4. To study place of living (urban/rural) of B. Tech. students.

HYPOTHESES OF THE STUDY:
H_{01}: There will be no significant difference in the socio-economic status of B. Tech. students.
H_{02}: There will be no significant gender differences among B. Tech. students.
H_{03}: There will be no significant difference in the medium of instructions at; qualifying examination (+2) of B. Tech. students.
H_{04}: There will be no significant difference in the place of living (urban /rural) of B. Tech. students.

Sample Of The Study:
For the present study investigator has collected data from 90 respondents from B. Tech. (78 male and 12 female) students studying in Zakir Husain College of Engineering and Technology at AMU Aligarh.

TOOLS OF THE STUDY:
1. Personal Profile Sheet: The investigator has used a self-made personal profile sheet for getting the personal information of the respondents.

2. Socio- Economic Status Scale (SESS): The investigator has used the Socio-Economic Scale developed and standardized by Gyanendra P. Shrivaslava in 1991.

Statistical Technique Used
I. Percentages
2. t-ratio: to see the significance of difference between two percentages

$$t= \frac{|P_1 - P_2|}{\sigma D\%}$$

P1 = percentage of the first group.
P2 = percentage of the second group.
σD% = standard error of error difference between two percentage

$$\sigma D\% = \sqrt{pq\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}$$

$$p = \frac{N_1 P_1 + N_2 P_2}{N_1 + N_2}$$

q = 1 − p

Analysis And Interpretation
Table-1.1 Distribution of the levels of Socio-Economic Status of B. Tech. students

SES Level	N	%	Groups	t-value	Level of significance
High (H)	23	25.56	H & M	6.12	0.01
Middle (M)	64	71.11	M & L	9.41	0.01
Low (L)	03	3.33	H & L	4.24	0.01

The above table reveals that the students who are doing B. Tech. course have great variation in their socio-economic status. The students from middle class are 71.1 1% whereas the students from high SES level are 25.56%. but very less percentage i.e. 3.33 % of students is from lower level. The t-values for the difference are found to be 6.12 for high and middle levels, 9.41 for middle and low levels and 4.24 for high and low levels. All t-values are significant at 0.01 level. It shows that the students of middle SES level are significantly more as

compared to either group i.e. high and low SES levels in B. Tech. course. Also high SES students are more than the lower one in the same course.

Table-1.2 Distribution of the Levels of Socio-Economic Status among Male B. Tech. Students

SES Level	N	%	Groups	t-value	Level of significance
High (H)	18	23.08	H & M	6.25	0.01
Middle (M)	57	73.08	M & L	8.89	0.01
Low (L)	3	3.84	H & L	3.52	0.01

The above table reveals that the male students who are doing B. Tech. course also have variation in their SES. The male students from middle class are 73.08% and from high SES level are 23.08% whereas from the lower level they are 3.84% only. The t-values for the difference are found to be 6.25 for high and middle levels, 8.89 for middle and low levels and 3.52 for low levels. All t-values are significant at 0.01 levels. It shows that male students of middle SES level 'are significantly more as compared to either group i.e. high and low SES levels in B. Tech course. Also high SES male students are more than the low SES levels in the same course.

Table 1.3 Distribution of the Levels of Socio-Economic Status among Female B. Tech. Students

SES Level	N	%	Groups	t-value	Level of significance
High (H)	5	41.67	H & M	0.82	NS
Middle (M)	7	58.33	M & L	3.14	0.05
Low (L)	0	00.00	H & L	2.51	0.05

The above table clearly reveals that the female students pursuing B.Tech. course, too have variations in their SES levels. The female students from middle class are maximum i.e. 58.33% and from high SES level they are 41.67%, whereas there is not a single female student from the low SES. When these values are subjected to t- test, t-values are found to be 0.82 for the high and middle SES levels, 3.14 for middle and low levels and 2.51 for high and low levels. The t-value for high and middle SES levels is insignificant where as the t-values for middle and low and high and low SES levels are significant at 0.05 levels. It shows that female students of middle SES level are significantly more as compared to low SES level in B. Tech course. Also female students belonging to high SES level are more than the lower one.

Thus, the null hypothesis. "H_{01}: There will be no significant difference in the socio-economic status or B. Tech. students," has been partially accepted and partially rejected.

Table 1.4 Distribution of Gender among B. Tech Students

SES Level	N	%	t-value	Level of significance
Male	78	86.67	9.84	0.01
Female	12	13.33		

The above table reveals the gender distribution of B.Tech. students. The male student in this course is 86.67% while females are only 13.33%. When these values are subjected to t-test, the t-value is found to be 9.84, which is significant at 0.0 1 level. It shows that the male students are significantly more than female students in the above course.

Thus, the null hypothesis, "Ho2: There will be no significant gender difference among B. Tech. students," has been rejected.

Table 1.5 Distribution of the Medium of Instruction at qualifying examination (+2) of B. Tech. Students

Medium of Instruction	N	%	t-value	Level of significance
Hindi	04	4.44	12.23	0.01
English	86	95.56		

It is also from the table that when total sample students who

are at present pursuing B. Tech course, only 4.44% are from Hindi medium background where as 95.56% representation are from English medium background. The t-value for the difference between these values is found to be 8.65, which is significant at 0.01 level of significance. It clearly shows that the students coming from English medium background are significantly more in B. Tech course than their Hindi medium background counterparts.

Table-1.6 Distribution of the Medium of Instruction at Qualifying Examination (+2) Male Students

Medium of Instruction	N	%	t-value	Level of significance
Hindi	04	5.13	11.21	0.01
English	74	94.87		

The above table clearly shows among all the male students who are in B. Tech course; only 5.13% are from Hindi medium background, whereas 94.87% are from English medium background. When the difference is subjected to t-test, t-value is found to be 7.92% which is significant at 0.0 l level. It clearly shows that the male students coming from English medium background are significantly more in B. Tech course (i.e. 94.87%) as compared to Hindi medium background students (5.13%).

Table-1.7 Distribution of the Medium of Instruction at Qualifying Examination (+2) of Female B. Tech. Students

Medium of Instruction	N	%	t-value	Level of significance
Hindi	00	00.00	4.90	0.01
English	12	100.00		

As far as the female students who are in B. Tech course are concerned, there is 0% representation from Hindi medium background, whereas all 100% are from English medium background. When this difference is subjected to t-test, the value is found to be 4.90 which is significant at 0.01 level of significance. It clearly shows that in B. Tech course, the female students who are from English medium background are significantly more as compared to Hindi Medium background.

Thus, the null hypothesis, "H03: There will be no significant difference in the medium of instructions at qualifying examination (+2) of B. Tech. students." has been rejected.

Table- 1.8 Distribution on the Basis of Place of Living (Urban/Rural) of B. Tech. Students

Place of Living	N	%	t-value	Level of Significance
Urban	85	94.44	11.93	0.01
Rural	05	5.56		

It is also clear from above table when total samples are taken into consideration for B. Tech. course; urban students are 94.44% and rural are 5.56% only. When it is subjected to t-test, t-value is found to be 8.43 which is significant at 0.0 l level. It clearly shows that the urban students are significantly more in B. Tech. course as compared to rural students who are only 5.56%.

Table-1.9 Distribution on the Basis of Place of Living (Urban/Rural) of Male B. Tech. Students

Place of Living	N	%	t-value	Level of Significance
Urban	73	93.58	10.89	0.01
Rural	05	6.42		

The above table reveals that among the male students pursuing B. Tech course, 93.53% are from urban areas whereas only 6.42% are from rural areas. When these values are subjected to t-test, t-value is found to be 7.69 which is significant at 0.01, showing that the male urban are significantly more in B. Tech. course than their rural counterparts.

Table- 1.10 Distribution on the Basis of Place of Living (Urban/Rural) of Female B. Tech. Students

Place of Living	N	%	t-value	Level of significance
Urban	12	100.00	4.90	0.01
Rural	00	00.00		

From the above table it is clear that the female students who are at present doing B. Tech. Course, all 100% are from urban areas whereas there is not a single representation from rural areas. The t-vale for the difference between these percentages is found to be 4.90 which is significant at 0.01 level. It clearly shows that urban female students are significantly more in B. Tech course than their rural counterparts

Thus, the null hypothesis, "H04: There will be no significant difference in the place of living (urban/rural) of B. Tech. students," has been rejected.

FINDINGS AND CONCLUSIONS
Findings:
i. For the total sample it is found out that there is difference in the socio- economic status of B. Tech. students. The students of middle socio- economic status level are significantly more as compared to either groups, i.e. high and low socio-economic level in B. Tech courses. High socio- economic students are more as compare to the lower on in the same course.
ii. For the B. Tech. male students it is also found out that there is difference in socio economic status level among the B. Tech. male students. The students of middle socio economic status level are significantly more as compared to the high and low socio economic status level in B. Tech. courses. High socio economic status students are more than the lower on in the same course also.
iii. The sample shows that the B. Tech. females are significantly different in their socio economic status. The findings exhibits that the female B. Tech. students of middle socio economic status level are significantly more as compare to the low socio economic status level. Similarly high socio economic status female students are more than the lower one.

• There is the significant difference in the ratio of male and female students in B. Tech. course. The male students are significantly more as compared to the females.
• Thus, the hypothesis H02 is rejected for B. Tech. students.

Medium of Instruction:
i. There is a significant difference among B. Tech students due to the medium of instruction of +2 levels in qualifying B. Tech entrance test. B. Tech. student having English medium background are significantly more as compare to the Hindi medium background.
ii. There is a significant difference due to the medium of instruction among B.Tech. male students. English medium background B.Tech male B.Tech students are significantly more as compare to their Hindi medium background.
iii. There is a significant difference due to the medium of instruction among B.Tech. female students. English medium B.Tech. female students are significantly more as the Hindi medium female students.

Place of Living:
i. There is a significant difference due to the difference in the place of living (urban/rural) of B. Tech. students. The urban B. Tech. students are significantly more in B. Tech. course as compare to the rural one.
ii. There is a significant difference due to the difference in the place of living (urban /rural) of B.Tech. male students. The urban male students are significantly more in B. Tech. courses as compare to the rural one.
iii. There is a significant difference due to difference in place

of living (urban /rural) of B. Tech female students. The B. Tech. female students are significantly more as compare to the rural female students.

CONCLUSION OF THE STUDY:

The idea for work under consideration came principally due to two reasons. Firstly there was no previous work on socio-economic status of the B. Tech. students in general. Secondly, the other selected personal factors which plays pivotal role in the selection of the professional course like B. Tech. course, such as gender, medium of instruction at qualifying examination +2, place of living (urban/rural).

The findings of the previous studies conducted in this area made clear that the socioeconomic status as well as the parental education had great influence in the selection or the achievement of the professional courses like B.Tech. as shown by -Satyanandam, B.D. (1969), Jayaram, N. (1976), Modi, B.M. (1981), Shah, M.M. (1982) Mangat, D. (1988), Sharma, R.R. (1990) Sexena, S.K.(2001). Literacy and education of father has great influence in the selection of these above said professional courses as by Jain. S.P. and Shah, J.M. (1974) and Modi, B.M. (1981).

The present study found that generally, the total sample from middle socio- economic status are significantly more in number as compare to other groups i.e. high and low SES selected in few in number. The male and female students are also found significantly more in number as compare to the high and low SES level in above said courses.

Gender differences as well as the academic achievement found significantly correlated by researchers as shown by Satyanandam, B.D.(1969), Shah, M.M. (1982), Catasambis, Sophia (1988), Chakarbarty, S.(1998), Ojha, N.C.(2000).

But contradictory to some other studies reveals that females perform better than the males as shown by Mehrotra, S.A.(1986), Gupta, V.P. (1997), Sharma, Reetu, (2000) while O-Sakai, K.M.(1997) found that males perform better than the females.

Moreover, the findings of the study brought to limelight the fact that number of the male students are significantly more as compared to the female students in B. Tech. course in general, on the other hand in B. Tech. the ratio of male students are significantly more in number.

The medium of instruction also have great influence in qualifying the above mentioned professional courses as shown by Kumudhavalli, S. (1999) similarly the present study found that B. Tech. students having English medium of instruction of+2 level in qualifying B.Tech. entrance test are significantly more in number than the Hindi medium of instruction in general. It has also been found that students of English medium are significantly more in number as compared to the Hindi medium students in both the genders i.e. male and female.

The place of living i.e. domicile (urban/rural) plays a significant role in achieving admission to professional courses, like B.Tech. as surveyed by Chakraberty, S. (1988), Biswas, Parbir Kumar (2001) Aswal, G.S.(2001).

Interestingly, it has also been found that there is great influence of place of living, i.e., being urban or rural in getting admission in the professional courses like B. Tech. The urban B. Tech. students are significantly more in number as compared to the rural one in general.

Moreover, the urban male and female students are significantly more in number as compared to their rural counterparts in the above mentioned courses.

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