In this age of industrialisation and technological advancements, technical education will continue to play its crucial role. Mere increased number of industrial units and availability of equipment does not ensure the effective and gainful progress. These are the skilled workers at all levels whose quality will determine the ultimate output.

In India, more attention has been given perhaps to the material resources than the human. The tremendous amounts of money have been spent in increasing the number of Institutes and equipments for training more man power. It is the effective utilisation of these resources created at great cost which needs to be paid more care. The human resources deserve even more attention than the material resources, so that the alarming rate of wastage in the technical education can be reduced. Unfortunately the maximum rate of wastage in technical education is at the middle level positions, i.e., technician. Technician is a middle level supervisory position where the individual is required to play the key role of bridging the gap of lower level of craftsman and the top level Engineer or Technologist, in areas of skill, knowledge and management functions. He is supposed to play the role of a semi-professional Engineer. India cannot afford to undertake such heavy burden of wastage at technician level which is very important stage of the industrial set-up.

It may be appropriate to know the various attributes of a technician. A student who passes the eleven year schooling with
Science and Mathematics subjects becomes eligible to join the three year course in any one of the branches of Engineering taught in polytechnics. Majority of the students joining these courses are having academic achievements around 50% obtained in the qualifying examination.

The decision to join the polytechnic may be the outcome of the influences of various factors:

(i) Environmental: Culture, Subculture, Family, School, Sex, Urban and Rural, Race and Religion.

(ii) Psychological: Intelligence, Aptitude, Personality, Academic Achievements, Interests etc.

Both types of factors are quite important in the decision to make the occupational choices. The review of literature shows that significant work has been done in finding the relationships of the influences of various environmental factors and their subsequent effect on the adjustment and success of the person on job. The research on the various relationships of the psychological variables that affect the occupational choices and their further influences on the success on the area of choice needs thorough probe. The investigation is all the more needed in the context of the Indian system of education today. This system impels a student to take a decision to join a particular course at the higher secondary stage. The new system of Education, 10+2 yrs has already taken shape in various schools in India, where every student has to take the crucial decision of his future occupational plans at 10+. It will be appropriate to investigate the relationships of various psychological variables which may be helpful in making adequate occupational choice.
In order to find the relationships among Intelligence, Aptitude, Personality, Academic Achievement and Occupational Choices, a sample of 335 polytechnic students from the three popular (Electrical 100, Civil 110, and Mechanical Engineer 125) branches were taken. They were given tests to measure their Intelligence, Aptitude, Personality, and Occupational Choices. The Academic Achievements of these subjects were obtained from the registers of their institutes. In all there were 33 scores: Intelligence-2, (Time and Standard Progressive Matrices), Aptitude-4 (Space Relation, Numerical Ability, Mechanical Reasoning, Abstract Reasoning), Personality -3 (Extraversion/Introversion, Neuroticism and Lie Scale), Academic Achievements-2 (Internal Academic Achievements and External Academic Achievements). Occupational Choices-24 (8 groups of occupations x 3 levels). The data collected on these variables was processed and analysed.

The means and SDs of all the variables were computed for the Whole Sample as well as for the sample of each of the branches. The t-ratios among the three branches were calculated in order to see the significance of differences of means of the three branches on all the variables. The means and SDs by pooling the levels of occupations were also found in case of the Semantic Differential Scale for Occupational Choices. The t-Ratios between these means for the branches were calculated and their significance levels were obtained. The intercorrelations on Intelligence, Aptitude, Personality and Academic Achievements were obtained for the whole sample as well as for the three branches. The intercorrelations on the SDSOC for the
whole sample were also obtained. Then the level-1 of the groups of occupations was taken from each group and on the same lines Level II and Level III scores were taken to get levelwise scores on SDSOC. The intercorrelation on levelwise groups of SDSOC and Intelligence, Aptitude, Personality and Academic Achievements were computed to see the relationship with Occupational Choices. In order to see which of the variables may have similar contribution and mutual relationships, Factor analysis by Principal Axis and then by Varimax rotation was applied to whole sample on Intelligence, Aptitude, Personality and Academic Achievements as well as for each of the branches. Factor analysis by Principal Axis and then by Varimax Rotation was applied to the whole sample.

In order to see the relationships further more clearly, the sample was divided into high and low achievers. The means and t-ratios for the whole sample on high and low achievers on four variables (Intelligence, Aptitude, Personality and Academic Achievements) and in all the branches were obtained. The intercorrelations of the sample on high and low achievers of the whole as well as branchwise sample on Intelligence, Aptitude, Personality and Academic Achievements were obtained. These results provide relationships for more successful students. The salient features unfolded by the investigation are given below:

The polytechnic students have given first preference to the group of occupations (Technology) for which they were undergoing training, i.e., they have given definite and well considered choice for this group. Therefore, it can be said that the polytechnic
students who are in the late adolescence age having joined the course give realistic choice for the Technology group. The intercorrelations indicated that these students may also take up some position at higher level in technical organisations.

Most of the choices in various other groups and in Technology group were given for the first level of occupations, which may be due to the social desirability and of social acceptability of occupations to which the adolescents may attach sufficient importance.

The means obtained on Intelligence test are comparable with the means of students on common courses. Rather, polytechnics have higher mean on SPM in comparison to other general academic courses students in many cases. The means on the Aptitude Tests were also found to be higher than similar comparable groups of students pursuing general academic courses and some of the occupational areas also.

The scores on K/I and N dimensions of Personality have been less in comparison to students of other professional groups and to groups of general academic course students of equivalent age level.

The intercorrelations between Intelligence and Occupational Choice is low. It was not significant for the whole group. It was not significant in any other branch (Electrical, Civil and Mechanical). Intelligence played hardly any role in their choices for Technology group of occupations.
The correlations of occupational choice (Technology) and Aptitudes (Space Relations, Numerical Ability and Abstract Reasoning) were positive and significant. It brought out that for vocational courses, Aptitude is associated to the choice of the course.

Personality and Academic Achievements did not play any role in the choice of Occupational courses. There was also low correlation between Personality and Intelligence, Personality and Aptitudes for these courses.

The relationship between the Academic Achievements and Personality dimensions E/I and N was found to be negative. The low score on Neuroticism and Extraversion were associated with high achievements in these difficult, complex courses requiring lot of persistence to do work at desk and machine.

The Academic Achievements and Aptitudes are positively correlated in the whole sample as well as sample in the branches. This relationship was supported by the factor analysis that both these variables formed one common factor. This was further strengthened by the relationship in the sub-sample, that there was high correlation between the Academic Achievements and the scores on aptitude. The Personality and Aptitude did not show any significant trend. The sub-sample analysis has brought the relationships more clearly and definitely on the various variables. Though the sub-sample results are on the pattern similar to the results on the whole sample. These patterns are also found in the relationships of the various branches. These results have strengthened the
nature of the relationship. The results on the sub-sample can serve as guidelines for predicting success of the students in the polytechnics.

The polytechnics have given their realistic choice for the Technology group. The relationships of Personality, Academic Achievements and Intelligence with Occupational Choice have not shown significant relationship. The choices of the polytechnic students thus are not having rational and scientific basis. Lack of rational basis may be the major reason for the wastage in these institutes. The low correlations between the variables may also be due to similar reasons.

It is, therefore, high time that measures are undertaken to overcome such causes of wastage at technician level of technical education. The guidance and counseling centres may be established which will be helpful in reducing such wastages. It will be further appropriate if admissions in polytechnics courses are based on the personal correlates of the students. These personal correlates can be assessed through standardized tests. The students must be prepared to take up such decisions at the earlier stages of their education. The provisions for vocational education and vocational explorations may be made at the school level.