

CHAPTER 4

ANALYSIS AND DISCUSSIONS

This part of the thesis analyses the data collected from students pursuing their final year under graduation or either year of post-graduation or professional course during the academic year 2014 - 2015 in various arts and science colleges affiliated to Bharathiar University. Originally the structured validated questionnaire is administered to 1425 students in arts and science colleges. Valid response rate is 89.40% that comprises 1274 students pursuing studies in twenty Arts and Science Colleges.

The statistical tools such as Mean and standard deviation, Chi-square test, T- test and ANOVA, Pearson Correlation, Regression analysis and Discriminant analysis are used for the analysis of data to determine the results for the objectives of research.

4.1 Demographic details of the respondents

The validated instrument had demographic details such as age, gender, qualification, department or discipline, family income per month (rupees in thousands), number of family members, work experience in years, board of school education, part - time work experience during the study period and the stay status of the students during their schooling as well as during their studies in college. The table 4.1 depicts the demographic details of 1274 students in terms of and percentage.

Table 4.1 Demographic details of the respondents

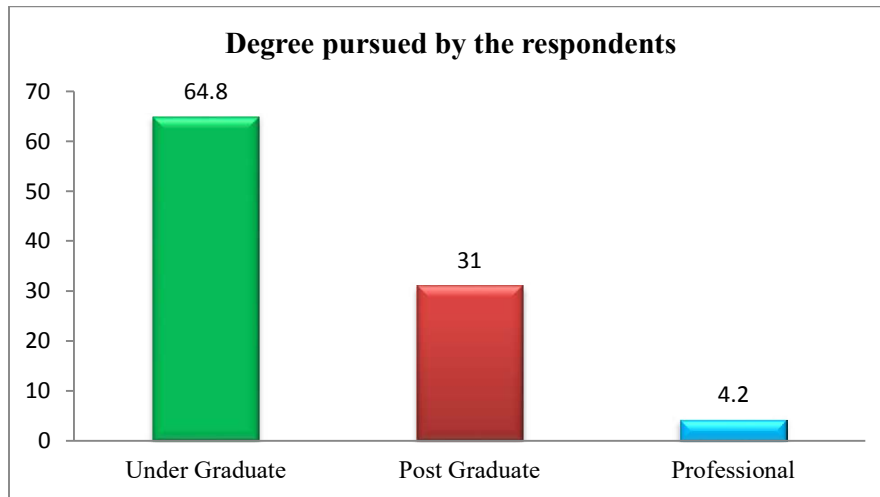
Demographics	Number of respondents	Percentage of respondents
1. AGE		
18 – 19 years	327	25.7
20 - 21 years	633	49.7
22 - 23 years	249	19.5
23 – 24 years	65	5.1
2. GENDER		
Male	552	43.3
Female	722	56.7

3. COURSE PURSUED		
Under Graduate	826	64.8
Post Graduate	395	31.0
Professional	53	4.2
4. DEPARTMENT		
Psychology	48	3.8
Statistics	25	2.0
Business administration	382	30.0
Commerce	295	23.2
Chemistry	77	6.0
Costume design and fashion	12	.9
Catering science	5	.4
Nutrition	6	.5
Clinical nutrition	3	.2
Computer science	215	16.9
Electronics	6	.5
Mathematics	48	3.8
English	14	1.1
Physics	9	.7
Microbiology	16	1.3
Visual communication	32	2.5
Botany	2	.2
Zoology	3	.2
Social work	32	2.5
International business	26	2.0
Economics	18	1.4
5. FAMILY INCOME PER MONTH		
Less than Rs.30,000	560	44.0
Rs.30,000 to Rs. 40,000	298	23.4
Rs. 40,001 to Rs. 50,000	149	11.7
Rs. 50,001 to Rs. 60,000	103	8.1
More than Rs. 60,000	164	12.9
6. MEMBERS IN FAMILY		
2 members	59	4.6
3-4 members	948	74.4
5-6 members	267	21.0
7. PREVIOUS WORK EXPERIENCE		
1-2 years	154	12.1
2-5 years	76	6.0
More than 5 years	30	2.4
Nil experience	1014	79.6

8. PART - TIME WORK		
Experienced	399	31.3
Not experienced	875	68.7
9. BOARD OF EDUCATION PURSUED IN SCHOOL		
State Board	1024	80.4
Central Board	198	15.5
International Board	52	4.1
10. STAY STATUS IN COLLEGE		
Hosteller	370	29.0
Day scholar	904	71.0
11. STAY STATUS IN SCHOOL		
Hosteller	199	15.6
Day scholar	1075	84.4

The study reveals the demographic characteristics of 1274 students studying in various arts and science colleges affiliated under Bharathiar University. 49.7% of the students are between the age group 20 – 21 years.

Among 1274 students, 43.3% of the students are males and 56.7% are female students. 64.8% of the students are pursuing under graduate degree, 31.0% of the students are pursuing postgraduate degree and 4.2% of them are pursuing professional degrees.

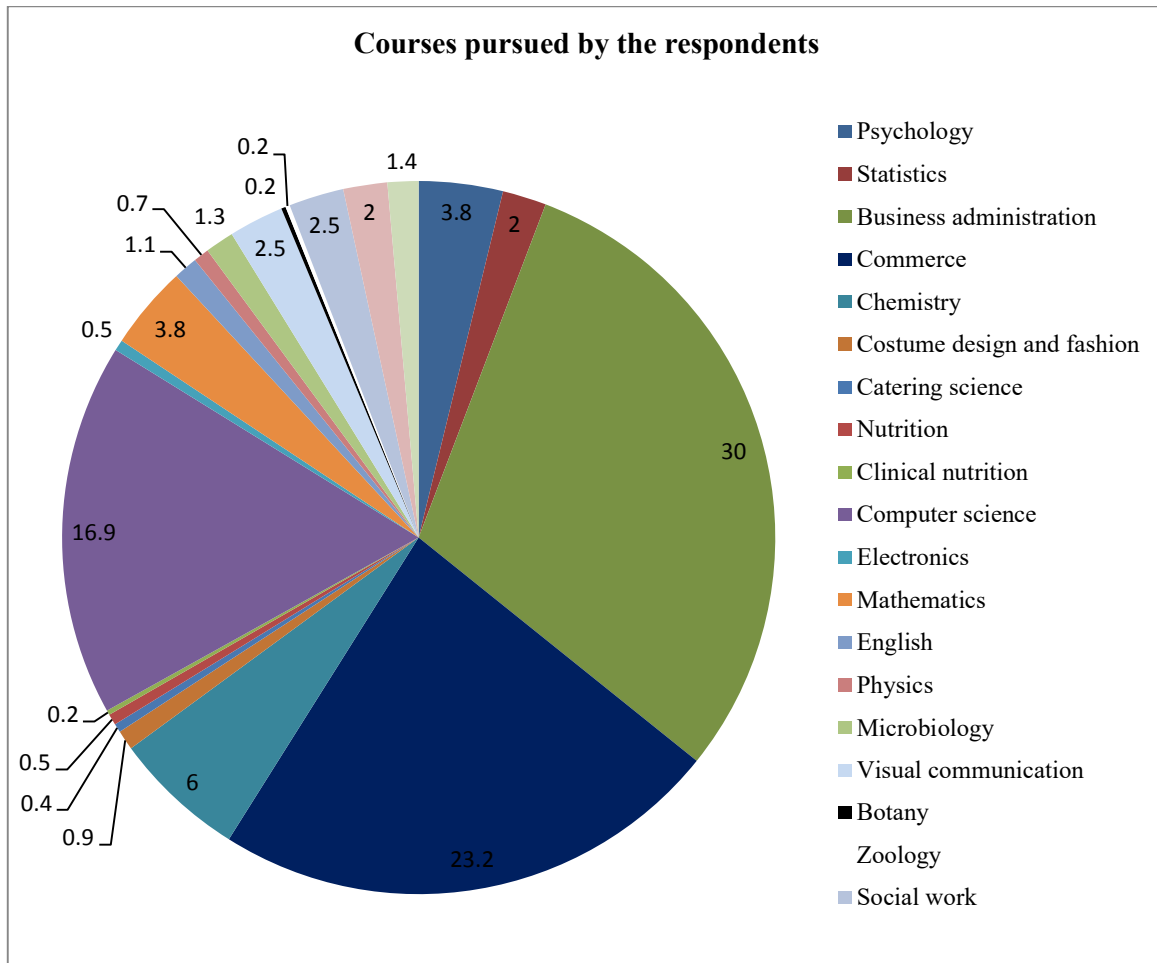


Source : Primary data

Figure 4.1: Figure showing the degrees pursued by the respondent students

Figure 4.1 shows that majority 30.0% of the students pursue business administration course, 23.2% of the students pursue commerce course and 16.9% of the students pursue

computer science course and 29.9 % of the students are pursuing various courses such as Psychology, Statistics, Chemistry, Costume Design And Fashion, Catering Science, Nutrition, Clinical Nutrition, Electronics, Mathematics, English, Physics, Microbiology, Visual Communication, Botony, Zoology, Social Work, International Business and Economics.



Source: Primary data

Figure 4.2: Courses pursued by the respondents

44.0% of the students' family income is less than Rs.30,000. 74.4% of the students' family have 3 to 4 members. 80.4% of the students are educated under Tamil Nadu State board syllabus. 71.0% of the students are day scholars during their study in college and 84.4% of the students are day scholars during their study in school. 79.6% of the students have no work experience earlier. 68.7% of the students have not done any part time work during their course of study.

4.2 Confirmation of Grouping of Transferable Skills Scale items based on total sample

The transferable skills scale containing 53 items designed by the researcher based on the literature review. Among the 53 items, 34 items, 9 items and 10 items measured the personal skills, communication skills and problem solving skills constructs respectively. The instrument has been validated through the pilot study. The same has been used for the data collection among 1274 respondents. Here it is attempted to recheck the item groups to find how well these represent the constructs. The factor structure matrix (Table 4.2) shows the loadings and cross loadings of the transferable skills scale for the full data.

Table 4.2 Factor Structure Matrix of Loadings and Cross-Loadings

Items	Personal Skills	Communication Skills	Problem Solving Skills
Personal Skills1.1	0.3043	0.2050	0.2396
Personal Skills1.2	0.5141	0.3283	0.3311
Personal Skills1.3	0.4797	0.3130	0.2809
Personal Skills2.1	0.5167	0.3487	0.2840
Personal Skills2.2	0.4963	0.3578	0.3209
Personal Skills3.1	0.4803	0.3258	0.2975
Personal Skills3.2	0.5373	0.3402	0.3411
Personal Skills4.1	0.4999	0.3253	0.3211
Personal Skills4.2	0.3257	0.2060	0.2284
Personal Skills4.3	0.5181	0.3223	0.3334
Personal Skills4.4	0.4036	0.2975	0.2543
Personal Skills5.1	0.5228	0.3684	0.3598
Personal Skills5.2	0.4891	0.3240	0.2951
Personal Skills5.3	0.4674	0.3278	0.3294
Personal Skills6.1	0.4405	0.3203	0.2864

Personal Skills6.2	0.4826	0.3175	0.2981
Personal Skills7.1	0.4710	0.3654	0.3306
Personal Skills7.2	0.4216	0.3333	0.3002
Personal Skills8.2	0.3102	0.2246	0.2020
Personal Skills8.3	0.3975	0.2785	0.2548
Personal Skills9.1	0.4250	0.2980	0.2646
Personal Skills9.2	0.4864	0.3204	0.3387
Personal Skills10.1	0.4742	0.3526	0.2886
Personal Skills10.2	0.3277	0.2288	0.1577
Personal Skills11.1	0.4448	0.3234	0.3557
Personal Skills11.2	0.2553	0.2028	0.2119
Personal Skills11.3	0.3657	0.2969	0.2928
Personal Skills12.2	0.4184	0.3483	0.2906
Personal Skills12.3	0.4078	0.3038	0.2811
Personal Skills13.1	0.5022	0.4011	0.3427
Personal Skills13.2	0.5190	-0.3861	-0.3450
Personal Skills14.1	0.4820	0.2903	0.3110
Personal Skills14.2	0.4985	0.3543	0.3450
Personal Skills14.3	0.5302	0.3978	0.3612
Communication Skills1.1	0.4162	0.5258	0.3469
Communication Skills1.2	0.3111	0.5393	0.2390
Communication Skills2.1	0.4106	0.6053	0.3414
Communication Skills2.2	0.4522	0.5990	0.3631
Communication Skills2.3	0.4110	0.5918	0.3113
Communication Skills3.1	0.4126	0.6061	0.3553

Communication Skills3.2	0.4051	0.6137	0.3369
Communication Skills4.1	0.3948	0.5389	0.3341
Communication Skills4.2	0.3424	0.4132	0.2874
Problem Solving Skills1.1	0.3786	0.3405	0.4528
Problem Solving Skills1.2	0.3194	0.3197	0.4321
Problem Solving Skills2.1	0.3586	0.3187	0.5462
Problem Solving Skills2.2	0.3853	0.3006	0.6271
Problem Solving Skills3.1	0.3542	0.2477	0.4916
Problem Solving Skills3.2	0.2581	0.2093	0.3718
Problem Solving Skills4.1	0.3172	0.2781	0.4364
Problem Solving Skills4.2	0.2912	0.2848	0.4517
Problem Solving Skills5.2	0.4139	0.3639	0.6475
Problem Solving Skills5.3	0.3613	0.3273	0.6274

It is examined and understood the results of the pilot study is further supported evidently as the higher loadings of each items are under the same construct. This ensures construct validity.

4.3 Overall perception about the existing level of Transferable Skills and Self-efficacy among students

Having the knowledge of what skills, competencies and abilities would assist the higher education in producing employable graduates (Paadi, 2014). In addition to the major-specific knowledge students gaining in academic classes, the skills are necessary to help them to be competitive when they begin to apply for internships, jobs, or graduate school (NACE, Job Outlook Survey, 2012). In this research, students pursuing higher education are asked to mention their level of agreement towards the possession of transferable skills and self-rating of the efficacy. It is assumed that the students have given rational responses. Hence the researcher attempts to find whether the students have rated themselves to be on the higher side or not. This is tested through mean statistics. This statistical tool would help in finding

the average skill level and the index of variability in the distribution of transferable skills and self-efficacy. The following tables show the mean and standard deviation of transferable skills and self-efficacy. This is used to find the existing level of transferable skills and self-efficacy.

The Table 4.3 reveals that the mean scores of all transferable skills are either close to 3.5 or above 3.5 out of 5, the maximum score, except tenacity. Hence it can be understood that the students have good level of personal skills, communication skills and problem solving skills. They have perceived that they have adequate skills sets required for the employment setting. Bakar and Hanafi (2007) studied the employability skills of technical education students and found that their skills were slightly higher (Mean = 3.8) as technical education has more opportunities for practical training programmes which enhances the skills of the students. Tenacity, the personal skill of the students has been found with lesser score 2.9097. This may be due to the immature state of their age that they are not stubborn and take things lightly.

The standard deviation scores can be interpreted that there is a higher level of variability with the skill sets among students. The variation is the skill sets can prevail as the students are pursuing different courses. The findings of Lanbee *et al.*, (2012) suggest that interpersonal, teamwork, and technical knowledge are those skills that affects the employability of engineering students. The students in this study were in arts and science colleges, hence forth understood that the skill levels as well as skill sets may vary based on the nature of the course and type of career they look for.

Table 4.3 Mean and Standard Deviation of Transferable Skills

Transferable Skills	Mean	Std. Deviation
Personal Skills		
Initiative	3.64	.841
Independence	3.71	1.015
Self-Assessment	3.66	.942
Work in teams	3.57	.764
Leadership	3.58	.874
Seize Opportunities	3.48	.968
Time Management	3.54	1.033
Effectiveness	3.31	.922
Planning	3.43	.966
Organising	3.52	.990
Establishing Priorities	3.35	.875
Flexibility	3.40	.990
Tenacity	2.90	.611
Stress tolerance	3.54	.904
Communication Skills		
Writing Skills	3.41	.957
Explaining Skills	3.52	.904
Oral Presentation	3.42	.989
Listening	3.38	.991
Problem Solving Skills		
Finding information	3.26	.992
Assessing information	3.60	.917
Decisiveness	3.54	.953
Numeracy	3.38	.991
Judging skills	3.61	1.096

During the tenure of education, the students are exposed to novel situations to improve each of the skills. Iksan *et al.*, (2012) stated that among the generic skills, communication skill is an essential skill among university students. DECSAR Method of problem solving is said to be ideal by (Chaudhry and Rasool, 2012). It is explained as Define the problem, Examine the situation, Considering the Causes, Consider the Solution, Act and Test and Review the troubleshooting. Studies like Ilias *et al.*, (2012), Humphreys *et al.*, (2001), Lanbee *et al.*, (2012) etc. show self-perception of different skills possessed by the students. The overall level of transferable skills possessed by the sample respondents is shown below:

Table 4.4 Mean and Standard Deviation of Overall Transferable Skills

Transferable Skills	Mean	Std. Deviation
Personal Skills	3.74	.541
Communication Skills	3.43	.668
Problem Solving Skills	3.48	.621

The above table 4.4 can be interpreted that the mean scores of transferable skills are closer to 3.5 or above, hence it can be concluded that the students perceive themselves with more skills since the scoring was between 1 and 5. These findings reveal that the students perceive themselves that they are strong enough in the context of each transferable skill. Personal skills specifies the students ability of thinking creatively, being an initiator, understanding the requirements of doing certain job, how well to do a job, meeting deadlines, being good at working with people, adaptable to changes and many more. Their rating on the skill sets of personal skills shows that the younger generation are aware and confident about themselves.

The score of Communication skill of students highlights that students have assumed themselves as good writers and speakers. With regard to the communication skills studies have reported different results. Ilmeideh *et al.*, (2010) reported that the attitudes towards communication skills among university students are positive. This may be possible because their ability to use technology is better than the previous generation. But Iksan *et al.*, (2012) study found that the students level of competency to communicate (verbally and written form) in English was lower compared to the competency to communicate in their mother

tongue. This probe that there is a need to create as many learning activities as possible to provide opportunity for students to practice and hone their communication skills.

The student method of problem solving is much logical, figuring difficulties out rather than finding a solution directly. As the scores are equivalent to 3.5 out of 5, it can be understood that the students are strong enough to face problems. Any respondents self-assessment of skills and abilities are positively responded. Positivistic bias is common in self-assessment surveys. However, exception of the ability to communicate is the major strength of the millennial respondents. This is consistent with previous studies (Nabi and Bagley, 1999).

Table 4.5 Mean and Standard Deviation of self-efficacy among students

	Mean	Std. Deviation
Self-efficacy	3.53	.644

The table 4.5 shows the existing level of self-efficacy of the students. It is said that increased interest, persistence and motivation, all of which come with higher levels of self-efficacy (Dinther *et al.*, 2011). The high scores indicate that individuals are highly efficacious and individuals with low scores are less efficacious. The above table highlights that students were self-efficacious. Since the mean value is above 3.5, the students have perceived strong efficacy level. When a student believes he or she can control success in school, performance is improved (Skinner, Wellborn, and Connell, 1990). Higher education students, in general in this study are self-reliant, determined and have portrayed their persistence. The results of the study of Dinther *et al.*, (2011) highlights that educational programmes can enhance students' self-efficacy because educational programmes based on social cognitive theory proved successful on this. Hence the higher education institutions can concentrate on this fact.

The mean value and the respective standard deviation are calculated for the transferable skills and self-efficacy using descriptive statistics. This examined the overall average score and the variations in the students' perception with regard to the transferable skills and self-efficacy.

4.4. The difference in personality, self-efficacy and transferable skills of students based on certain demographics

This study intends to explore if there is difference in the personality characteristics and transferable skills based on certain demographic variables. It can be expected that the personality of the student may be different based on his/her experiences at school. Also when the student spends time in hostel, it also accounts to a significant part of his/her life. We generally perceive that when a student has crossed his adolescence and in a phase of life, he needs to decide about his future course. Hence the research aims in exploring if the personality characteristics changed based on the stay in hostel or home during his/her school days.

Residential care has an influence on personality development. Researchers have found that boarding experiences during school resulted in emotional disorder (Upadhyaya, 2016). Further the study revealed that there was significant difference between day scholars and hostel students on factors like health, social, emotional and overall adjustment. The study of Goldberg *et al.*, (1998) examined the associations between demographic variables and the major dimensions in the Big-Five personality. Their study found that not all the demographic variables showed significant association with personality, but age and educational qualification of individuals showed stronger associations with personality traits. To make sure whether the stay of being a day scholar or hosteller has association with personality, the following hypothesis are set and test is conducted.

H 1_a – There is significant difference in personality characteristics and transferable skills based on the respondents' stay in home or hostel.

Further, the hypothesis is split into two for the interpretation ease.

H 1_a (a) – There is significant difference in personality characteristics based on the respondents' stay in home or hostel.

H 1_a (b) – There is significant difference in transferable skills based on the respondents' stay in home or hostel.

4.4.1 Difference in the students' personality based on their stay statistics during schooling

Personality is explained through agreeableness, extroversion, neuroticism, conscientiousness and openness to experience. It is believed that personality is constant throughout one's life. Personality gets nurtured through the environment and upbringing. Staying at hostel during the school education definitely plays a role in personality development. Also Freud's theory of personality specifies that its development is through parental influence and innate instincts. Hence this research helps to check these reasons of personality development. The statistics of 199 hostellers and 1075 day scholars during their school studies was used to find its association with personality characteristics.

Table 4.6 T- test association between the students stay in hostel during school and the personality

Big Five Characteristics	Mean based on stay type in school		t	Sig.
	Hosteller	Day Scholar		
Agreeableness	3.42	3.32	1.982	.048
Extroversion	3.28	3.16	2.559	.011
Neuroticism	3.32	3.32	0.29	.977
Conscientiousness	3.23	3.09	3.022	.003
Openness to Experience	3.27	3.18	1.788	.074

An independent samples t-test was conducted to compare personality with the hostellers and day scholars during their schooling. These results suggest that stay status really does have an effect on students' personality. The above table 4.6, indicates that conscientiousness characteristic ($t = 3.022$ and $p = 0.003$) is highly influenced by the students stay status during their schooling. Other characteristics have no significance based on the stay type. According to the Big Five theory, individuals with high score in conscientiousness would be hard working, well organized, dependable and firm and unlikely to be lazy, disorganized, unreliable, or indecisive (Forrester *et al.*, 2016).

Even though the mean values reveal less difference, considering the total number of students in hostel and number of day scholars the results show that students stayed in hostel have better mean scores than the students who stayed at home. Generally in a hostel environment the positive behavioural change involves character building and preparing the students for practical life. Whereas there may be some negative changes such as careless attitude, wasting time etc. may also happen among students who do not stay with their parents (Iftikhar and Ajmal, 2015). To support this Developmental psychologist Erik Erikson in his psychosocial development theory says that teachers, friends, parents, religious leaders shine as models for Personality development. Teachers and friends may provide a realistic environment of practical life whereas parents may pamper their wards in all things they do and this may cause the individuals with a comfortable environment which is not real. Also it is emphasized that hostel students tend to develop better personality characteristics of being realistic, punctual, disciplined, independent, compromising and well organised (Iftikhar and Ajmal, 2015).

The mean scores determine that the students stay away from parents during their early age decides the characteristics of conscientiousness but not the other characteristics such as agreeableness, extraversion, neuroticism or openness to experience. The hypothesis H_{1a} (a) is disproved that there is no significant difference in personality characteristics based on the respondents' stay in home or hostel except for conscientiousness characteristic.

4.4.2 Difference in the students' personality based on their stay statistics during schooling

Transferable skills are generally acquired through educational experiences, leisure-time activities, and work experiences. Liptak (2001) has specified that leisure-time activities often provide opportunities to develop skills that can be transferred to work environments. He stressed that one need's to be more aware of the hobbies, spare-time activities, and family-related experiences of the individuals and how these activities contribute to their skills sets. School-acquired transferable skills are learned while engaged in activities at school, such as working collaboratively, creative problem solving, writing effectively, and conducting research (Liptak and Shatkin, 2011). Based on this it is assumed that the transferable skills may be developed in the school days of a student. To find whether this assumption is true or not an Independent sample t-test is performed which compares means of two different

samples. This examines whether there is any significant difference in the transferable skills among hostel students and day scholar students during school.

Table 4.7 T- test association between the students stay during school and transferable skills

Transferable skills	Mean based on stay type in school		t	Sig.
	Hosteller	Day scholar		
Personal Skills	3.48	3.53	1.056	.008
Communication Skills	3.43	3.44	.287	.005
Problem Solving Skills	3.48	3.47	.226	.821

The t-test was used to test the hypothesis H_{1a} (b) that there is significant difference in transferable skills based on the respondents' stay in home or hostel. Significant result is found in the personal skills and communication skills. The results reveal higher mean scores for day scholar (M=3.44) than the hosteller (M=3.43); at the statistical significant level (t = .287, p = .005). It can be inferred that communication skill of transferable skills is developed for the different groups based on their stay. Also, personal skills mean was found to be high for day scholar (M=3.53) than the hosteller (M=3.48); at the statistical significant level (t = 1.056, p = .008). This implies no significant difference between hostellers and day scholars with regard to problem solving skills (t = .226, p = .821). Flowers (2004) focused on students living in dormitories have better personal and social development skills which are essential for successful academic achievement. Further, Pascarella *et al.*, (1993) studied and revealed that students who live on campus gained more critical thinking and cognitive skills and at the same time their comprehension ability and numerical ability was not strong.

As the table 4.7 shows, this study results support that personal skills and communication skills are better developed among day scholars. It can be comprehended that hostel students most of the time are in the school environment. Their interactions with societal activities or community people are less. There takes lot of changes in the world of work and society every day. But this exposure to the day scholars would have increased the level of acquiring the transferable skills. The results may imply that parents of Generation Y involve themselves during childhood of a student in his or her academic achievement. This

mutually develops their communication and personal skills. Thus, the day scholars might have developed such skills through parents support. In reality, the workplace and professions need graduates to communicate with multiple individuals like colleagues, employers or managers, clients, the media and the general public it is understood that there is a high requirement of communication skills. However, one cannot conclude that stay of students provides for improvement of certain skills. It is clear that this issue rises for further research.

4.5 Relationship between monthly income of the students' family and their part time work experience

Chi-square test is a test for the 'goodness of fit' between observed and expected data. It is used to compare observed data with the data expected according to a specific hypothesis. Students may work for independence, to enjoy work, to experience or may the experience in part time job may fetch employment in future, or may work for financial reasons (Lyn, 1999). These assumptions have intended the researcher to set the following hypothesis:

H_{2a} – There is significant association between monthly income of the students' family and their part time experience.

This study aims to test the hypothesis H_{2a} based on the data. The relative standard for accepting or rejecting the hypothesis is at $p > 0.05$ the value is that probability that the deviation of the observed from that expected is due to chance alone. In order to find out the frequency of part time work experience of students and family income per month, cross tabulation is done. Also to understand the significant relationship between part time work experience and family income per month, chi square test is performed.

The cross tabulation 4.8 indicates that about 31.31 % of students have part time work experience in relation to their family income per month. In less than Rs. 30000 category of family income 210 students were experienced and 350 students are not experienced. In rest of the categories students having work experience are lesser. This may be because of the higher family income. However, it has to be tested if this difference is significant. Hence Chi- square analysis was performed (Table 4.9).

Table 4.8 Cross Tabulation of monthly income of the students family and their part time work experience

FAMILY INCOME PER MONTH	PART TIME WORK EXPERIENCE		Total
	Experienced	Not experienced	
Less than Rs.30,000	210	350	560
Rs.30,000 to Rs. 40,000	85	213	298
Rs. 40,001 to Rs. 50,000	43	106	149
Rs. 50,001 to Rs. 60,000	19	84	103
More than Rs. 60,000	42	122	164
Total	399	875	1274

Table 4.9 Chi-Square Tests output

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.868 ^a	4	.000
Likelihood Ratio	22.485	4	.000
Linear-by-Linear Association	15.826	1	.000
N of Valid Cases	1274		

There is significant association ($\chi^2 = 21.868$, $p < 0.001$) between part time work experience and family income per month. As the chi-square significant value ($p = 0.000$) is less than 0.01, it indicates that there is significant relationship between part time work experience and family income per month. Also, considering the number of part time experienced in the income category of lesser than Rupees. 30,000 per month are found to be more among the total part time experienced students. Hence the hypothesis (H 2_a) is proved and it is inferred that the students do part time jobs when their family income is lesser. This may be due to that students' family has poor income to manage during economic crisis

situations. And otherwise a student may attend a job to get introduced to the work culture or to pay for own education or to understand the value for money or to have a fresh attitude. Jessica and Linda (2009) found that those college graduates who were employed in retail stores (part-time) expected enjoyable work, a sense of accomplishment, good pay, and opportunities to develop new skills. Hodkinson, (1995) suggest that many young people accept or reject a particular career based on personal work experience or part-time employment. People aged 16–24 are much more likely to take a part-time job because they are still studying and part-time working is one of the most wide spread alternatives for those who wish to balance their commitments (Parry and Urwin, 2009). Athas *et al.*, (2013) suggest that when students feel as their employment experience has fostered a sense of community, and provides them with a comfortable environment within which they exercise interpersonal skills, learn new skills, focus their academic and career goals, and improve personal wellness. Even though the results convey that students had worked for financial reasons, the previous studies highlights that work experience during studies have raised up the skill sets. From these thoughts, providing practical experience in various jobs over a period of time would enhance the transferable skills and also provides for the students financial independence.

4.6 The influence of gender on transferable skills and self-efficacy

Study shows that there is a gender gap between the skills used in men's and women's jobs (Felstead *et al.*, 2002) and also there may be difference in skills among male and female counterparts while self-rating of the skills scale. And studies of self-efficacy reveal results of gender influence on self-efficacy. Bandura (1997) stated that gender can influence academic performance through its mediating effects on self-efficacy. Smist (1993) found that there was significant difference among male and female science students. Gender influence on self-efficacy and transferable skills is not studied among Gen Y students. Hence this research attempts to find the following hypothesis and further it is divided into two sub hypothesis for the analysis and interpretation convenience:

H 3_a - There is significant difference in transferable skills and self-efficacy based on gender.

H 3_a (a) - There is significant difference in transferable skills based on gender.

H 3_a (b) - There is significant difference in self-efficacy based on gender.

Analysis of variance (ANOVA) is used to test the above hypotheses. ANOVA is a test of means for two or more populations. The Analysis of Variance (ANOVA) technique is used to find whether the perception regarding transferable skills of the students' varies based on demographics. The demographics considered for ANOVA analysis are work experience and board of school education. Post hoc test was also performed at 5% level of significance, when statistical significant differences were perceived.

4.6.1 The extent to which transferable skills vary among gender

It is found that more Indian women are more educated and employed. The effective strategies to increase women participation, skills development programmes have improved scope for the increase in skill competence of female students. Hence a need rose to find whether females are good in the level of personal skills, communication skills and problem solving skills. The following table 4.10 shows the mean statistics sorted by gender.

Table 4.10 Transferable Skills sorted by Gender

Transferable skills	Gender		F	Sig.
	Male	Female		
Personal Skills	3.72	3.76	1.593	.207
Communication Skills	3.42	3.44	.248	.618
Problem Solving Skills	3.47	3.49	.177	.674

The mean scores for transferable skills of both male and female students are with a less difference. The table reveals that male and female students are equally better in personal, communication skills and problem solving skills.

In a research conducted about medical students' attitudes towards learning communication skills women scored significantly higher on communication skills. Females show more positive attitudes towards learning communication skills compared to males (Molinuevo and Torrubia, 2013).

Abdullah (2009), have found that the undergraduates appeared to perceive that they have mastered all the components of the generic skills but one component was noted at the mediocre level. The component of Oral/Written Communication Skills was scored relatively

lower than the rest. The male and female respondents had different views about the skills. The males rated their own abilities higher for all components of skills. He has also pointed out that the male graduates scored higher than female graduates in the skills such as decision making, thinking, oral/written communication, computer and organising skills. The mean scores of the male graduates were higher than the female graduates. Nabi and Bagley, (1999) have indicated that males perceive themselves to be significantly better at communication and problem solving than females. The findings also reveal that males and females perceive the quality of their skills differently and the development of certain transferable skills may be moderated by gender. Male and female students have different reasoning skills; however, they do not differ in problem solving ability (Kunchon, 2012). On contrary, study of Javed *et al.*, (2013) reveals that there was no difference between the performance of male and female students in writing skills. Considering prior researches, this study reveals that there is no significant statistical difference H_{3a} (a) in the perception of transferable skills level among male and female students.

4.6.2 The extent to which self-efficacy vary among gender

Gender differences were investigated in perceived self-efficacy. The female students had significantly lower self-efficacy certain subjects than the male students. Except for a particular subject female students outperform the male students (Busch, 1995). Block (1983) states that gender differences in self-efficacy as males describe themselves as more powerful, ambitious and energetic. They have perceived themselves as having more control over external events than females. The self-concept of females did not emphasize on competition and mastery (Gecas, 1989). These perceptions paved a need to find the variability of self-efficacy among different gender. Hence the mean scores and standard deviation is sorted based on gender as shown in the table 4.11.

Table 4.11 Self-efficacy among students sorted by gender

Self-efficacy	Gender		F	Sig.
	Male	Female		
	3.5377	3.5374	.118	.731

According to Table 4.11, there are differences in the self-efficacy level between the gender male and female ($F = .118$, $p = .731$). It can be observed that there is no significant

difference in the perception of the self-efficacy. Male students have perception about their self-efficacy ($M=3.5377$) whereas female students have understood themselves efficacious ($M=3.5374$). But the mean values are too marginal to conclude that male and female students are significantly different from each other's self-efficacy. This is also evident from previous literature that there was no significant interaction effect of self-efficacy and gender related to intelligence (Kumar and Lal, 2006). On contrary, the study on self-efficacy in female and male undergraduate engineering students concluded that women have lower academic self-efficacy than men at the point of entry in their undergraduate engineering education (Burgel *et al.*, 2010). Hence, it is found that there is no significant difference in self-efficacy based on gender and the hypothesis H_{3a} (b) is disproved. However, if the level of self-efficacy is found to be low or moderate it can be improved through strategies in learning among every individual.

4.7 Inter relationship between Transferable Skills, Self-efficacy and Personality of Students

Content, capability and character are the three key factors for developing student and graduate employability. This relates content as the accumulation of relevant hands-on knowledge, capability as the direct application of that content in a relevant employer context, and character to the ability to work effectively alone and in teams (Leary and Denton, 2013). Iksan *et al.*, (2012) stated that employers placed greater importance on generic skills and personality in choosing their employees. Gist and Mitchell (1992) observed that there are factors related to self-efficacy and found that it is related to skill level. Also found that it is related to both an efficacious personality and the complexity of the task at hand. Therefore, it is believed that the three variables have a significant influence on the employability of the higher education students. The best personality, right transferable skills and being more efficacious would give an idea that help in identifying a career. Hence, it is assumed that there is an association between transferable skills, self-efficacy and personality of students. This research attempts to examine the relationship and the strength of the association between transferable skills, self-efficacy and personality of student. Correlation measures and analyses the degree of the relationship between two variables that is it measures the closeness of the relationship between the variables. Hence correlation analysis is done to test the hypothesis which is been framed as:

H 4_a – There is significant association between the different study variables personality traits, self-efficacy and transferable skills.

The above hypothesis is classified into three and presented in the respective analysis part.

4.7.1 Relationship between personality characteristics and transferable skills

Klaus (2010) notes that personality measures are equally important predictors of work success as cognitive ability and work accuracy. This research intends to find whether the personality characteristics have correlation with the transferable skills of tertiary students. Higher education in India is concerned about the competence, scholastic attainments, appreciable value system and rich personality of the graduates. As higher education is linking itself with employment, significance is on the skills of the students. But industry complains that students lack resources. Resources are expressed in terms of subject knowledge, communication skills, team work abilities, being social, emotional instability and many more. Each educational institution strives to achieve employability of students by filling the gaps. Hence this research is interested to find the relationship between personality and transferable skills. The correlation analysis will help the researcher to find out which type of personality has more correlation with the personal skills, communication skill and problem solving skill of transferable skills based on the hypothesis H 4_a (a) that there is significant association between the different personality traits and transferable skills. The test result would help the educational institutions to provide personality development programs and also designing the course curriculum in such a way that it helps in skill enhancement.

Table 4.12 Correlation between personality characteristics and transferable skills

Correlations					
Scale Items	A	E	N	C	O
Personal Skills (PS)	.382**	.318**	.389**	.299**	.232**
Communication Skills (CS)	.283**	.271**	.312**	.238**	.198**
Problem Solving Skills (PSS)	.303**	.260**	.286**	.252**	.218**
** . Correlation is significant at the 0.01 level (2-tailed).					

A - Agreeableness

E - Extroversion

N - Neuroticism

C - Conscientiousness

O - Openness to experience

Table 4.12 shows statistically significant correlation between personality characteristics and transferable skills. Each of the personality characteristic is highly associated with personal skills, communication skills and problem solving skills of transferable skills as all the correlations are statistically significant and positive in its numeric value. Among the variables considered, highest correlation exists between neuroticism and personal skills ($r = .389$, $p = 0.01$) followed by agreeableness versus personal skills ($r = .382$, $p = 0.01$) and extroversion and personal skills ($r = .318$, $p = 0.01$). The other two personality characteristics conscientiousness and openness to experience have lesser correlation with personal skills comparatively. Neuroticism and communication skills ($r = .312$, $p = 0.01$) have closer correlation while other personality characteristics have moderate correlation with communication skills. Agreeableness and problem solving skills ($r = .303$, $p = 0.01$) are highly correlated and other personality characteristics have average correlation with problem solving skills. This implies that agreeableness, extroversion and neuroticism characteristics plays big role in expressing personal skills, communication skills and problem solving skills. This proves the hypothesis H 4_a (a) that there is significant association between the different personality traits and transferable skills.

The antonym of neuroticism explains emotional stability. An emotionally stable person has ability to think clearly, make decisions and cope effectively with stress. He/ She can control anger, manage anxiety and never be depressed. These characteristics can be an

ideal match for the skill set mentioned in this study such as initiative, independence, self-assessment, leadership, time management, effectiveness, flexibility, tenacity and stress tolerance. Also the skills like explaining and listening can be well expressed by an emotionally stable individual. Hence it is understood that there is a meaningful correlation that exists between neuroticism and personal skills and communication skills. The results are in line with the previous study by Smit (1995) which found significant correlations between the use of communication skills and big five personality traits. Another research reveals an interrogation skill (where communication is most important) was positively correlated with extraversion and conscientiousness and negatively with neuroticism (Fruyt *et al.*, 2006). Also self-report measures of assertiveness and communication skills were found with positive relation (Kukulu *et al.*, 2006).

Agreeableness is correlated with personal skills as well as problem solving skills. Agreeable people possess good social skills. As their characteristic is to cooperate with everyone, they are very friendly and generous. They are characterized by trust, morality, altruism, cooperation, modest and sympathy. These features enable an individual to solve problems effectively. Extraverts tend to be enthusiastic; action oriented and looks for opportunities. In order to manage crisis one needs to find information, assess it and make rational decisions. When individuals are friendly, confident and active, they can handle people effectively. As conscientiousness and openness to experience does not express about social interactions and it concentrates only on the self-concept, it resulted with lesser correlation with the transferable skills. The results are mixed with positive and negative correlations. Kuntze *et al.*,(2016), found that the big-five personality factors were not significantly related to the mastery level of the communication skills. The results explained that personality as non-significant predictor of communication skills and acquiring communication skills was not influenced by personality. Further negative correlation was found between closed-mindedness and self-reporting basic communication skills (Riggio and Taylor, 2000). As the views and results are contradictory it is observed that generally when people do self-rating, they are biased. This would have influenced the results. Hence better self-rating interventions can be stream lined and can further deeply studied.

4.7.2 Relationship between personality characteristics and self-efficacy

The hypothesis H₄(b) is represented as there is significant association between personality traits and self-efficacy as the present study assumes that students regulate their

behavior in order to accomplish their tasks. This is in line with, Boekaerts and Corno, (2005) study. They stated that students regulate their cognitions, emotions, motivation behaviours, and environment. Also the psychological research of University students' academic performance revealed that the motivational factors may mediate and moderate the effects of dispositional characteristics (e.g., intellectual capacity and personality) and psychosocial contextual influences on academic performance. The five psychological constructs (conscientiousness, academic self-efficacy, grade goals, test anxiety, and effort regulation) were included to their research to test the association. It resulted in a larger correlation for performance self-efficacy with the other psychological constructs and it was the one to have the strongest correlation (Richardson *et al.*, 2012). Athas *et al.*, (2013) found that students who had a positive attitude towards community reported higher levels of academic self-efficacy. With these correlations, this research also focuses to find the relationship based on the hypothesis assumed.

Table 4.13 Correlation between personality characteristics and self-efficacy

Personality characteristics	Self-efficacy
Agreeableness (A)	.277**
Extroversion (E)	.239**
Neuroticism (N)	.275**
Conscientiousness (C)	.247**
Openness to experience (O)	.207**
**. Correlation is significant at the 0.01 level (2-tailed).	

Table 4.13 shows statistically significant correlation between personality characteristics and self-efficacy. Each of the personality characteristic is associated with self-efficacy, as all the correlations are statistically significant. The highest correlation is between self-efficacy and agreeableness and ($r = .277$, $p = 0.01$) followed by neuroticism ($r = .275$, $p = 0.01$) and conscientiousness ($r = .247$, $p = 0.01$). The other two personality characteristics extroversion and openness to experience have related correlation ($r = .239$ and $r = .207$, $p = 0.01$) with self-efficacy. The correlation values being positive, it can be said that there is correlation between the personality characteristics and self-efficacy. But none of the

personality characteristics has strong or high correlation on self-efficacy. The correlations averaged across all personality characteristics in demonstrating self-efficacy. Hence it proves the hypothesis H₄₀ (b) is significant to an extent.

The study of Judge and Ilies (2002) highlighted that there was average correlation between personality and self-efficacy. They also found that conscientiousness and openness were not strongly related to self-efficacy, and the correlation between neuroticism and self-efficacy was higher in academic settings. This is further supported by Schmitt (2008) that there is strong relationship between emotional stability (un- neurotic) and self-efficacy and women have more emotional stability and efficacious than men. Added, this is in line with another personality study that conscientiousness was the strongest correlate of performance among the Big Five personality factors (Richardson *et al.*, 2012).

As stated earlier, agreeable and emotionally stable people portray high amount of morality and able to handle situations rationally. Conscientious people believe that they have high intelligence and they are self –driven. In such a way, the correlations are meaningful. Conscientious individuals avoid trouble and achieve high levels of success through purposeful planning and persistence. Conscientiousness is explained through orderliness, dutifulness, self-disciplined, cautious and achievement - striving. Extraverts are assertive, positive and sociable. Open (to experience) people tend to think and act in individualistic ways. They are highly intellectual, imaginative and adventurous. Hence the overall personality of an individual relates to his/her self-efficacy but not a particular characteristic in all the situations.

However, Higher education should foster a strong sense of personal competence of the students. It can be done through identifying, and valuing nature or character of the students. Also developments have to be undertaken in their behavior towards readiness in accepting success or failure, determination to persist when difficulties are faced, their option for deliberations, their cooperation with others and develop them to bring out their ideas and opinions. These can be achieved when the trainers are aware of their personality profile, personal beliefs, their social surrounding etc.

4.7.3 Relationship between Components of transferable skills and self-efficacy

Nakamura (2002) acknowledges that cognitive, affective and social skills that help students to transcend. Indeed, developing skills would be developing their self-efficacy

levels. The relationship between the skills (transferable) and self-efficacy is described by the association which is represented by correlation and the hypothesis H4_a (c) explaining the significant association between transferable skills and self-efficacy is framed. Pearson Correlation test was used to assess the relationship between the variables. Transferable skills were explained by personal skills, communication skills and problem solving skills. The table 4.14 shows the results of Pearson correlation between the constructs.

Table 4.14 Correlation between transferable skills and self-efficacy

	PS	CS	PSS	SE
Personal Skills (PS)	1			
Communication Skills (CS)	.692**	1		
Problem Solving Skills (PSS)	.669**	.680**	1	
Self-efficacy (SE)	.630**	.531**	.849**	1

There is highest correlation between problem solving skills and self-efficacy ($r=0.849$, $p<0.000$) followed by personal skills. Personal skills have good correlation with self-efficacy ($r=0.630$, $p<0.000$). Among the transferable skills, communication skills has lower correlation with self-efficacy ($r=0.531$, $p<0.000$). Still, this implies that students' efficacy level play a vital role in their transferable skills.

Specifically personal skills and problem solving skills are more related than communication skills with their efficacy. This position is further supported that the study results of Hommes (2012) found no relationship between self-efficacy and mastery in communication skills. This correlation signifies the convergence of the skills and efficacy of students. Gecas (1989) views that high self-efficacy leads to favorable consequences for the individual and even for society. It has good effects like better physical and psychological health, creativity, cognitive flexibility, better problem-solving and coping skills, higher self-esteem, and great involvement in political processes etc.

Haddoune (2009) suggests that self-efficacy is different from talent or aptitude. It is the determination to expose and use the skills in challenging situations. It involves active use of cognitive, affective and self-regulatory skills.

Based on the correlation analysis, the hypothesis H_{4(c)} is been proved that there is significant association between self-efficacy and transferable skills.

4.8 Measuring the impact of Personality Characteristics on Transferable Skills of Students

Neuroticism and agreeableness are positively correlated with soft skills such as leadership, conflict management, organisational effectiveness, team work, stress management, communication and trustworthiness (Motah, 2008). The study of Sackett and Walmsley (2014) also found that agreeableness trait influences interpersonal skills of individuals. The time spent by individuals in improving skills results in the development of self-efficacy (Garcia, 2015). Although studies reveal positive impact, this thesis believes it is important to examine the impact of personality characteristics such as agreeableness, extraversion, neuroticism, conscientiousness and openness to experience on transferable skills and self-efficacy of Generation Y students in Indian context. It also helps to determine to which extent the personality characteristics influence transferable skills and self-efficacy.

Regression analysis studies the relationship between a variable of interest (dependent variable - metric) and one, two or more independent variables. This determines whether the personality characteristics (independent variable) explain a significant variation in the transferable skills and self-efficacy of students (dependent variable). The result would reveal whether a relationship exists between personality characteristics and the dependent variables. The values are represented by r^2 . Higher the value of r^2 , better the effectiveness or reliability of the regression equation. The r^2 explains the variability of the dependent variable as predicted by the independent variables. Hence this analysis would help in testing the hypothesis:

H 5_a– There is an impact of personality traits on transferable skills.

4.8.1 Impact of Personality characteristics on Transferable Skills

Transferable skills can be enhanced if the students' personality is groomed. Therefore, the hypothesis has been framed to measure the impact of personality characteristics on transferable skills. Regression analysis showed that personality characteristics has a small impact on transferable skills of students as shown in the model 5 of model summary in table 4.15

Table 4.15 Regression analysis model summary of characteristics of personality

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.367 ^a	.135	.134	.50432
2	.447 ^b	.200	.199	.48510
3	.480 ^c	.231	.229	.47588
4	.496 ^d	.246	.243	.47139
5	.498 ^e	.248	.245	.47074
A. Predictors: (Constant), Neuroticism				
B. Predictors: (Constant), Neuroticism, Agreeableness				
C. Predictors: (Constant), Neuroticism, Agreeableness, Extroversion				
D. Predictors: (Constant), Neuroticism, Agreeableness, Extroversion, Conscientiousness				
E. Predictors:(Constant), Neuroticism, Agreeableness, Extroversion, Conscientiousness, Openness To Experience				
F. Dependent Variable: Transferable Skills				

The technique was used with step wise estimation method for the entire sample. It has resulted in identifying the predictor personality characteristics that explain transferable skills of the students to the extent of 24.5% (Adjusted R square value = 0.245) as shown in the table 4.15. This implies that 24.5% variability in the dependent variable i.e. transferable skills is being predicted by the independent variable characteristics of personality.

Coefficient of determination (R^2) describes the variability in personality characteristics accounted for by the regression which is found statistically significant. This can be interpreted as the personality characteristics have a significant impact on transferable skills of students and hence they have significant explanatory power of the regression equation. Therefore, the hypothesis H 5_a is proved that there is an impact of personality traits on transferable skills in students.

The unstandardised coefficients obtained in Table 4.16 were used to derive the regression equation (4.1) which may be used to estimate transferable skills.

Table 4.16 Coefficient of regression model

Model		Unstandardised Coefficients		Standardized Coefficients	t	Sig. **
		B	Std. Error	Beta		
5	(Constant)	1.591	.098		16.169	.000
	Neuroticism(N)	.167	.021	.215	7.946	.000
	Agreeableness(A)	.166	.023	.194	7.134	.000
	Extroversion(E)	.118	.021	.154	5.772	.000
	Conscientiousness(C)	.100	.021	.127	4.821	.000
	Openness To Experience(O)	.042	.020	.056	2.133	.033
A. Dependent Variable: Transferable Skills (TS)						

** Statistically Significant at 0.05 level

Model 5 assumed the five personality characteristics Neuroticism, Agreeableness, Extroversion, Conscientiousness and Openness to Experience as the independent variables.

4.1 Regression Equation $TS = 1.591 + 0.167 N + 0.166 A + 0.118 E + 0.100 C + 0.042 O$

McLean (1998) explains that many skills are closely linked with the character and personality of a person but other skills need to be taught. He added that assessment of personality by self has shown results of increased motivation. Recruiters usually verify the evidence of skills by examining the personality of students. Being able to identify when, where, what and how the transferable skills are developed, the recruiters would head start with the type of job that could be offered to the concerned individual. Greenan (1997) suggest that the students can develop their skills through the learning strategies. Continuous programs based on interactions, application of theoretical concepts in practical situations along with the techniques used by the higher education system in enhancing learning and developing leadership qualities. Gewertz, (2007) stated that soft skills include the character traits which are definite part of one's personality.

The table 5.14 shows that all the personality characteristics Neuroticism $\beta = .215$, $t = 7.946$, $p < 0.000$, Agreeableness $\beta = .194$, $t = 7.134$, $p < 0.000$, Extroversion $\beta = .154$, $t =$

5.772, $p < 0.000$, Conscientiousness $\beta = .127$, $t = 4.821$, $p < 0.000$, and Openness to Experience $\beta .056$, $t = 2.133$, $p < 0.033$, have significant impact on transferable skills. It is evident that all five personality characteristics has significant influence on the transferable skills and thus the hypothesis H 5_a is been proved that there is an impact of personality traits on transferable skills. The β value is highest for the neuroticism characteristic, indicating that this characteristic has a major explanation for the transferable skills. The other side of neuroticism is emotional stability and hence the results imply the need for enhancing the emotional stability part of personality in students so as to enrich the transferable skills that they would adapt from one atmosphere to another.

Iksan *et al.*, (2012) observed that employers' give robust importance to generic skills and personality while choosing their employees. Hogan (1991) agrees that people portray positive self-presentation skills when personality tests are conducted. This reflects the finding that agreeableness and openness to experience were related to interpersonal skills (Nikolaou, 2003).

Molinuevo and Torrubia (2013) found the students self-ratings of communication skills were related to personality traits. Extraversion and Psychoticism had an impact on communication skills. Extraversion is always represented by being sociable, lively, active, assertive, sensation-seeking, carefree, dominant, surgent, and venturesome whereas the personality of psychoticism is identified by aggressiveness and interpersonal hostility. The extraverts spend most of their in socializing develops them to be better in communication skills and also acquire social competencies. Personality traits had more impact on poor attitude towards learning communication skills. His study reveals that higher scores in extraversion are related to students' higher self-ratings of communication skills.

There is a gap of awareness among the students. The students' do not know about their own strengths and weaknesses, world around them and their future. Successful career is possible when the components like skills, interests and personal traits are strong. People rich in skills tend to portray impressive personality. Also, the skills and learning outcomes expected by the labour market has been well defined. This makes sure that using transferable skills helps an individual to face a lesser risk of obsolescence. This reason ensures that development of transferable skills is essential as they are dispersed across the sectors and also assures students' to find alternate jobs that suit their personality. This view of the study

requires more about the students' skills perfectly evaluated by a peer group which ensures further substantiation of the results.

4.9 Identifying the Personality Characteristics that Distinguish Highly Skilled Students

Abdullah (2009) has analysed and determined the most efficient components of skills which can be the differentiators in comparing the gender groups. The skills were analysed and later summarised that communication skill was a differentiator between genders. This study aims at determining which personality trait would differentiate students on the basis of skill. Hence, the discriminant analysis is carried out with the aim of identifying the personality characteristics that are specific to highly skilled students with reference to transferable skills. It would enable to identify the personality characteristics that discriminate the high skilled students from the less skilled students.

Discriminant analysis is used to classify a given set of objects, individuals, entities into two or more groups based on the data given about their characteristics. The students were grouped as superior in personal skills, communication skills and problem solving skills when their mean score for each transferable skill was greater than or equal to 4. The 20 items pertaining to Big Five personality measured using Likert scales are used to predict different groups. All items under the personality scale were considered to test and to discriminate the two groups and a discriminant function was arrived.

4.9.1 Discriminating Students with high transferable skills based on indicators of personality characteristics

This section intended to identify the students as highly effective in personal skills, communication skills and problem solving skills. The discriminant weight or the discriminant coefficient is determined by the variance structure of the original variables across the superior skilled and less skilled groups of students. Students of different personality traits may have different level of transferable skills. The tertiary education needs to assess the personality traits and train to enhance the skills of the students.

H 6_a – There are significant personality traits that distinguishes students skill level

Out of the total 20 items measuring personality characteristics, few items hold a discriminant value higher than 0.4 were only considered for depicting that these items discriminate the groups. The description of the 20 items with its discriminant weights and

discriminant loadings were presented in the table 4.17. The discriminant weight or the discriminant coefficient relates to the discriminatory power of the independent variable across the groups of dependent variable. Independent variable with large discriminatory power has large weights and those with little discriminatory power usually have little weights. The subsequent table 4.18 explains the order of the personality characteristics which has more discriminatory power represented by the term rank.

Table 4.17 Results of Discriminant Analysis (1)

Item No.	Item Description And Item Construct	Personal Skills		Communication Skills		Problem Solving Skills	
		W	L	W	L	W	L
1	My comment sometimes deeply hurt other students (A)	-.040	-.094	-.028	-.100	-.108	-.159
2	I think that, when doing things, people can be trusted as having goodwill(A)	.169	.408*	.072	.362*	.042	.351*
3	I accept people as they are (A)	.113	.359*	.088	.342*	.243	.480*
4	It is easy for me to get back to people (A)	.159	.373*	.131	.379*	.150	.392*
5	I don't like drawing people's attention to myself (E)	-.016	-.131*	-.152	-.282	.009	-.138*
6	I make friends easily (E)	.160	.483*	.073	.441*	.092	.430*
7	I can easily attract my counterparts and hold their attention (E)	.200	.437*	.275	.502*	.208	.475*
8	I prefer keeping a low profile in my campus (E)	.059	-.046	.058	-.054	.039	-.080
9	I have frequent mood swings (N)	.057	.169*	.013	.139	-.132	.033

10	Generally, I don't bother about people views and attitude towards me (N)	-.240	-.396*	-.145	-.361*	-.282	-.439*
11	I often panic, easily, about things around me (N)	-.076	-.205*	-.154	-.290*	-.066	-.202
12	Generally, I am very pleased with myself (N)	.271	.491*	.233	.535*	.161	.492*
13	I carry out my plans to reach my goals (C)	.235	.517*	.168	.477*	.280	.552*
14	I often find myself unwilling to do my study work (C)	.066	-.045	.102	-.053	.103	-.034
15	I often pay attention to details(C)	.186	.340*	.260	.413*	.209	.362*
16	I often waste my time by doing unnecessary things (C)	.126	.045	.090	-.013	.065	-.022
17	I am not interested in abstract ideas (O)	-.014	-.103*	-.047	-.161*	-.059	-.157
18	I prefer voting for accepted leaders of students (O)	.118	.393*	.156	.434*	.084	.368*
19	I tend to support liberal students' leaders (O)	.136	.317*	.179	.384*	.112	.316*
20	I avoid logical/practical discussions in class (O)	.050	.045	-.031	-.060*	-.111	-.138
Const ant		-6.110		-4.841		-3.897	

*statistically significant discriminant loading

W – Discriminant weight or discriminant coefficient

L – Discriminant Loadings

Personal Skills

The items 2, 6, 7 and 12 hold a discriminant loading value higher than 0.4 depicting that these items discriminate the groups substantially in explaining possession of personal

skills. The item 2, “I think that, when doing things, people can be trusted as having goodwill” which explains agreeable trait. The items 6 and 7, “I make friends easily” and “I can easily attract my counterparts and hold their attention” are the constructs of extroversion. “Generally, I am very pleased with myself” is the 12th item which expresses neuroticism. The impact of personality traits on skills cannot be underestimated. The significance provided to shape personality may improve the personal skills of students of Gen Y.

The 13th item has a crucial value of above 0.5. It is the item relevant with conscientiousness that is “I carry out my plans to reach my goals”. This characteristic portrays the dutiful, plan-ful and orderly behaviour. Owens (2015) states that conscientiousness describes it as a tendency that makes an individual organised and goal oriented. It is made up of self-efficacy. Also, Komarraju *et al.*,2011 found that conscientiousness was positively and significantly associated with learning styles. Conscientiousness can facilitate learning strategies and may be a practical trait for managing high levels of academic achievement. Further, Soubelet (2011) states that this trait may help to compensate for age differences in cognition. Conscientiousness tends to develop across age and positively associated with age (Donnellan and Lucas, 2008). Overall, it can be understood that monitoring behaviour, habit development, training a person to be accountable, controlling the influence of environment, stress management etc would enhance a person’s conscientiousness. A self-introspection at intervals would aid an individual in understanding himself. Concentration of conscientiousness through special training programmes during the course of study improves the skill of students.

Communication skills

It can be interpreted that the discriminating items belong to the personality characteristics agreeableness, extroversion, neuroticism and conscientiousness. Therefore the students with the nature of these personality characteristics may be identified as those that discriminate the highly skilled students from lower skilled students with regard to their communication skills.

The items 6, 7, 12, 13, 15 and 18 hold a discriminant loading value higher than 0.4 depicting that these items discriminate the groups substantially in explaining possession of communication skills. The personality characteristics extroversion, neuroticism, conscientiousness and openness discriminate individuals as good or poor in their communication skills.

Among the 6 items, the items with high values of above 0.5 that is the 7th item of extroversion and 12th item of neuroticism discriminates better, the students with more skills from the students of low skills. It is known from the study of Sutin *et al.*, (2009) that extrinsic career success has been consistently linked to neuroticism and extravert people have more job advancement opportunities. The longitudinal study of Guerin *et al.*, (2011) reveals that adolescent extroversion was completely mediated by adult social skills. Friedman and Schustack (2003) stated extroversion and neuroticism can predict the communication technology. Being cheerful, thinking positive, soft spoken, helping attitude, non-egoistic, patient-listening ensures extravert and un-neurotic personality traits. If these are built strong, higher level of communication skills can be ensured.

Problem Solving Skills

The items 3, 6, 7, 12 and 13 hold a discriminant loading value higher than 0.4 depicting that these items discriminate the groups substantially in explaining possession of problem solving skills. It can be interpreted that the discriminating items belong to the personality characteristics agreeableness, extroversion, neuroticism and conscientiousness. Therefore the students with the nature of these personality characteristics may be identified as those that discriminate the highly skilled students from lower skilled students with regard to their problem solving skills.

The conscientiousness personality trait is the key trait that distinguishes the problem solving skills of the students. Koruklu (2015) study illustrated that extroversion, openness, conscientiousness, agreeableness were significantly and positively correlated with social problem-solving. Individuals performing in challenging jobs require high level of decision-making, problem-solving, creative thinking, and individual autonomy (Meyer *et al.*, 2004). The people who score more on conscientious are generally always prepared, doing things right, pay attention to the details of the problems and also be at peace under stressful conditions. They can manage the gap between what is learnt and what is faced in reality. To develop a person with more conscientious, the intervention of presenting real time cases and asking the students to solve can be fostered. This ensures that the student is prepared to face challenges. Since, problem solving skill is the one crucial skill to face the constant changing times of today, interventions like brain storming, problem solving games can also be used to enrich the conscientious level and skills of the students.

Table 4.18 Results of Discriminant Analysis (2)

Item No.	Item Description And Item Construct	Personal Skills			Communication Skills			Problem Solving Skills		
		W	L	R	W	L	R	W	L	R
2	I think that, when doing things, people can be trusted as having goodwill (A)	.169	.408*	5						
3	I accept people as they are (A)							.243	.480*	3
6	I make friends easily (E)	.160	.483*	3	.07 3	.441*	4	.092	.430*	5
7	I can easily attract my counterparts and hold their attention (E)	.200	.437*	4	.27 5	.502*	2	.208	.475*	4
12	Generally, I am very pleased with myself (N)	.271	.491*	2	.23 3	.535*	1	.161	.492*	2
13	I carry out my plans to reach my goals (C)	.235	.517*	1	.16 8	.477*	3	.280	.552*	1
15	I often pay attention to details(C)				.26 0	.413*	6			
18	I prefer voting for accepted leaders of students (O)				.15 6	.434*	5			
Const ant		-6.110			-4.841			-3.897		

*statistically significant discriminant loading

W – Discriminant weight or discriminant coefficient

L – Discriminant Loadings

Rank – Discriminating power of the identified variables

A discriminant function (5.2) (5.3) (5.4) was derived based on their unstandardised discriminant coefficients or the discriminant weights.

4.2 Discriminant function, Z (Personal skills) = - 6.110 + .169 (A) + .160 (E) + .200 (E) + .271 (N) + .235 (C)

4.3 Discriminant function, Z (Communication skills) = - 4.841 + .73 (E) + .275 (E) + .233 (N) + .168 (C) + .260 (C) + .156 (O)

4.4 Discriminant function, Z (Problem Solving skills) = - 3.897 + .243 (A) + .092 (E) + .208 (E) + .161 (N) + .280 (C)

The interpretation of discriminant analysis results in describing each group in terms of a profile, using the group means of the predictor variables. These group means are called as centroids. These are displayed in the group centroids table (Table 4.19). The Group 0 is understood as less skilled and Group 1 is understood as highly skilled.

Table 4.19 Functions at Group Centroids

Groups	Personal Skills	Communication Skills	Problem Solving Skills
0	-.395	-.241	-.225
1	.773	.730	.707

Unstandardised canonical discriminant functions evaluated at group means

In the case of personal skills, the hit ratio (percentage correctly classified) revealed that the discriminant function has classified 71.2% of the original cases correctly and 70% of the cross validated grouped cases were correctly classified. The hit ratio of 68.8% of the original cases were correctly classified and 67% of the cross validated grouped cases were correctly classified for the communication skills construct. Whereas for problem solving skills, the hit ratio of the discriminant function has classified 69.2% of the original cases correctly and 67.5% of the cross validated grouped cases were correctly classified. Therefore the items that have discriminated the groups have obtained a valid hit ratio for the original grouped cases and the cross validated grouped cases.

To validate the discriminant function, a respondent whose profile was not added in the discrimination analysis, was chosen and the discriminant function value was calculated. The score was - 2.61, 3.452 and 0.339 for the personal, communication and problem solving skills respectively.

The items pertaining to conscientiousness and neuroticism characteristics are found to discriminate more the highly skilled students from less skilled students in case of personal skills and problem solving skills. The items pertaining to neuroticism characteristic and extraversion characteristic discriminate the students with good communication skills and the students with poor communication skills. It is also observed that neuroticism characteristic discriminated better in case of all the transferable skills. This proves that the hypothesis H 6_a that there are significant personality traits that distinguishes students skill level.

The students who have better balance on their emotions can perform well in all the horizons. For successful careers, less score on neuroticism and high scores on other characteristics may be critical.

4.10 Estimating a path model relating to personality, transferable skills and self-efficacy.

A path model based on the theory based conceptual model was estimated using Visual PLS technique. The bootstrapping was done for 1000 samples. The model was evaluated and the results were obtained.

Partial least square method is used for constructing predictive models when the factors are too many and when the relationship between the variables are high. PLS can be a useful tool when the numbers of factors to be measured are too many to predict the responses. The path model developed using the PLS technique helps in determining the strength in the relationship between the variables of the study. The relationships between the constructs are portrayed visually in a path diagram where arrows represent the relationships and the circles represent the constructs or variables. Once the path diagram is set, the program gives the output in the regression values by assessing the validity of data to fit the model. The path diagram constructed is evaluated using the fit indices. Appropriate sample size is ensured. Bootstrapping is selected as the method of model estimation. The measurement of the model is to be evaluated using the composite reliability and variance extracted. The final structural model fitness evaluation is based on t – statistics and coefficient of determination value.

H 7_a – There is a significant moderating impact of self-efficacy in the relationship between personality traits and transferable skills of students.

Estimation of the path models

This part of the thesis provides the models predicted through PLS technique to explain the relationship between the variables big five personality, transferable skills and self-efficacy. The theoretical model presented in the figure 2.9 specifies the relationship between the big five personality traits/characteristics and transferable skills of the students and the moderating role of self-efficacy. The researcher has applied the structural equation modelling with PLS procedure using Visual PLS software (1.04). The bootstrapping sample is 1000 to obtain the sample errors.

4.10.1 Overall influence of Big Five Personality characteristics on Personal Skills

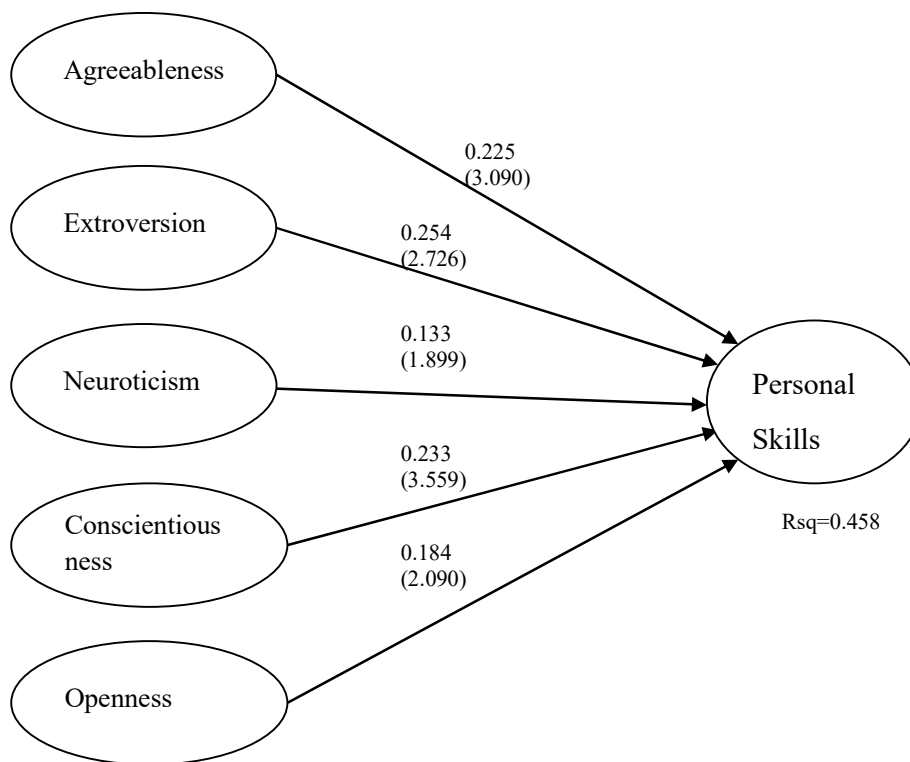


Figure 4.3 Impact of all big five characteristic on personal skills

The path model (Figure. 4.3) explains that the variance in personal skills due to the big five personality characteristics is 45.8%. The t values between the personality characteristics: agreeableness and personal skills is 3.090, extroversion and personal skills is 2.726, conscientiousness and personal skills is 3.559, and openness and personal skills is 2.090 which are significant as per the thumb rule. The neuroticism and personal skills is 1.899 which closer to 1.96 but lesser than the thumb rule.

The personality traits statistically signify that personal skills are blended in all traits. Any individual scoring high in all the traits except neuroticism can create successful endeavours. The emotionally instable character alone may not have good personal skills. When the emotional stability is high, it leads to a perfect life balance as it is highlighted as a social capacity, which necessitates an individual to be with strong interpersonal skills (Zaccaro, 2007). Persons aware of these traits can foster career growth based on their natural preferences.

A set of skills are required for personal growth. Students need to realise the importance of initiative, independent, self-awareness, effective in team, leadership ability, exploring opportunities, management of time, planning and organising, adaptability, strong, and stress management. These enable them to enhance their personalities. Personality traits are a blend of these attitude and values. The potential recruiters look for such skills. If a student internalises these values and attitudes, it empowers them to transcend as successful citizens.

4.10.2 Overall influence of Big Five Personality characteristics on Communication Skills

The path model (figure 4.4) is constructed to find the impact of all the Big Five personality characteristics on communication skills. The t values are significant agreeableness = 1.971 and conscientiousness = 4.001. The other personality characteristics such as extroversion = 1.685, neuroticism = 0.706 and openness = 1.863 are insignificant since the t-values are lesser than 1.96 which is against the thumb rule. It explains that variation in communication skill due to the personality characteristics is 31.5%.

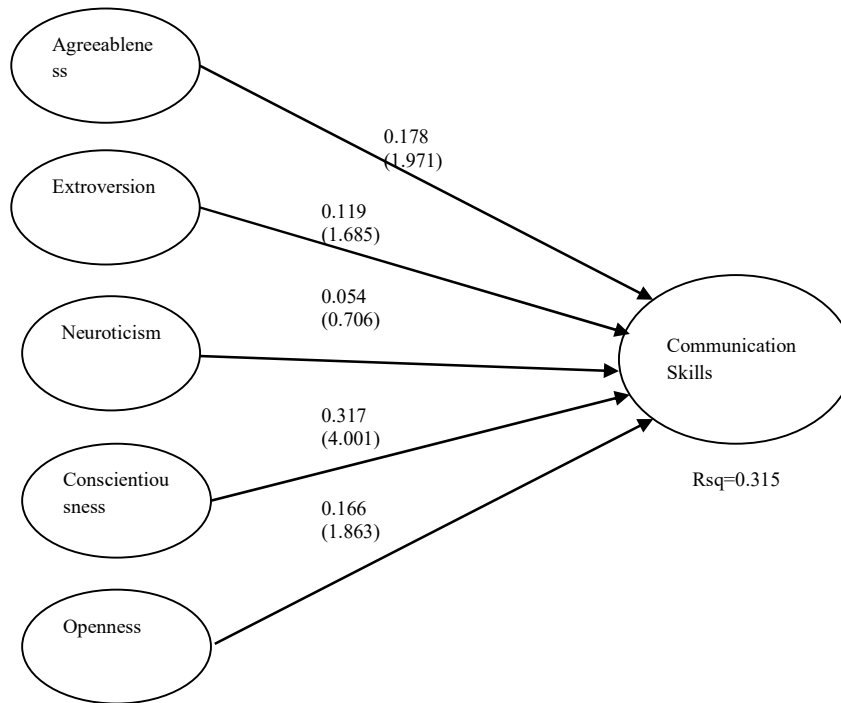


Figure 4.4 Impact of all Big Five Characteristic on Communication Skills

Extroversion the most outgoing character is found to be less significant in the skill part of communication. On the contrary, Erin (2010) has found that the individuals' who are digital natives were extraverts with the usage of social networking sites especially facebook. The study also highlights that those who heavily used facebook have found themselves as extraverts. Molinuevo and Torrubia (2013) study results from regression analyses revealed that personality significantly predicted attitudes towards learning communication skills. The students who rated themselves as having excellent communication skills scored higher on the psychoticism scale, impulsive-sensation seeking scale and aggression-hostility scale. Even though the personality scale used is different it tries to measure the personality trait of individuals. Hence it is in line with the current findings that personality predicts communication skill of students. It is observed that individuals become more agreeable, more conscientious, and less neurotic, while transitioning from adolescence into adulthood and these results hold across many cultures (Bleidorn *et al.*, 2013).

Extroverts love to communicate. They are very friendly with everyone. This may pave for their excellence in their explaining and oral presentation skills. Similarly, conscientious people are perfectionists. They adhere the rules and more precise, and logical. These traits would nurture their written skills. For these reasons, this study has resulted that extroverts

and conscientious people would have significant contribution to communication skills. People have the ability of shaping the personality traits. Hence education providers must cultivate the habits of listening, speaking, reading and writing since childhood. This act not only hones the skills, but also grooms the personality of an individual in the adulthood.

4.10.3. Overall influence of Big Five Personality characteristics on Problem Solving Skills

The path model constructed in the Figure 4.5 shows the impact of personality characteristics on problem solving skills. There is 30.0% of variation found in the problem solving skills due to the personality characteristics. The characteristics agreeableness ($t = 2.049$) and extroversion ($t = 2.398$) shows high variation as the t values are greater than 1.96. Hence it can be stated that agreeableness and extroversion influences the problem solving skills of the students since the t values of neuroticism ($t = 1.875$), conscientiousness (1.626) and openness (1.223) are lesser than the thumb rule.

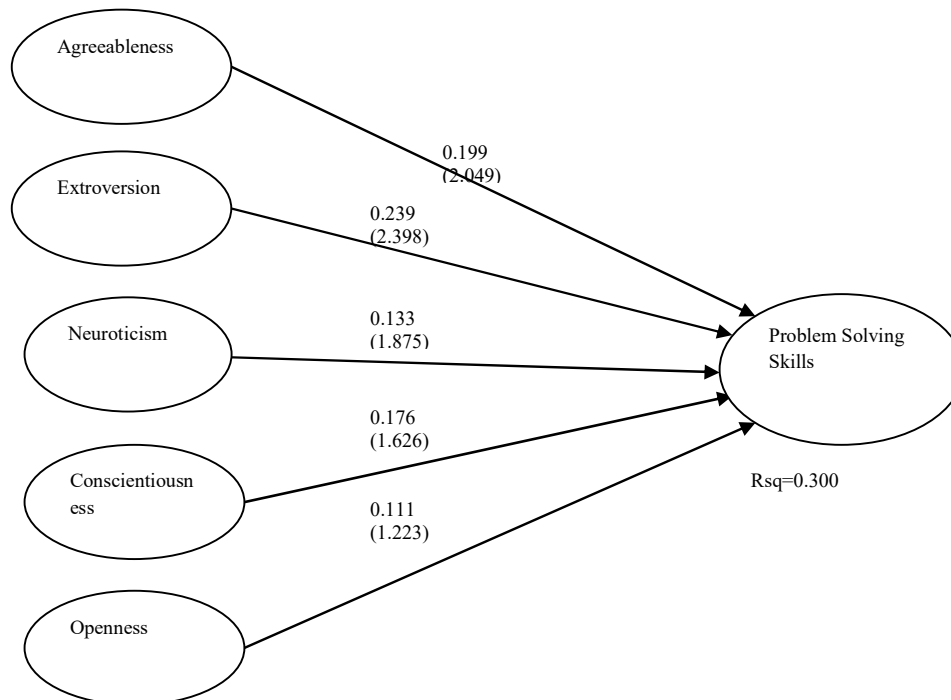


Figure 4.5 Impact of all Big Five Characteristic on Problem Solving Skills

Rowan and Catherine (2001) believe that students' meta cognitive skills can be developed significantly by taking a proactive approach and by designing an environment specifically for problem solving and meta cognition. They have proposed that self-monitoring own problem solving approaches can help them in using their knowledge. Wendy (2007) highlighted that regardless the nature of the problem the students have the same level of strengths and weaknesses to solve it. Further it is stated that only few type of skills are required to solve problems. These indicate that, this study is also in line with the result that is based on the problem solving approaches, but understanding and the intensity of the problem may vary the personality characteristics exhibited.

From career perspective, problem solving skill is more significant. Agreeable and extroversion are found to have more problem solving impact. In organisations, various problems are faced at the strategic, tactical and at the operational level. Such scenario expects people to solve problems which need immediate attention. Such times, an agreeable person is one who is not selfish, kind, generous, fair and cooperative would handle the problem effectively. Also, an extravert can handle problems in a smooth manner because such persons are assertive, enthusiastic and sociable. These traits support that naturally problem solving skills are consistently present in agreeable and extravert persons.

4.10.4. Impact of Big Five Personality on Transferable Skills through the mediation of Self-efficacy

The path model in Figure 4.6 shows that self-efficacy level varies about 27% due to the personality characteristics of the students. The t value of extroversion (2.286) is found to be the most significant personality characteristic among the other characteristics. The t values of self-efficacy towards the transferable skills are highly significant.

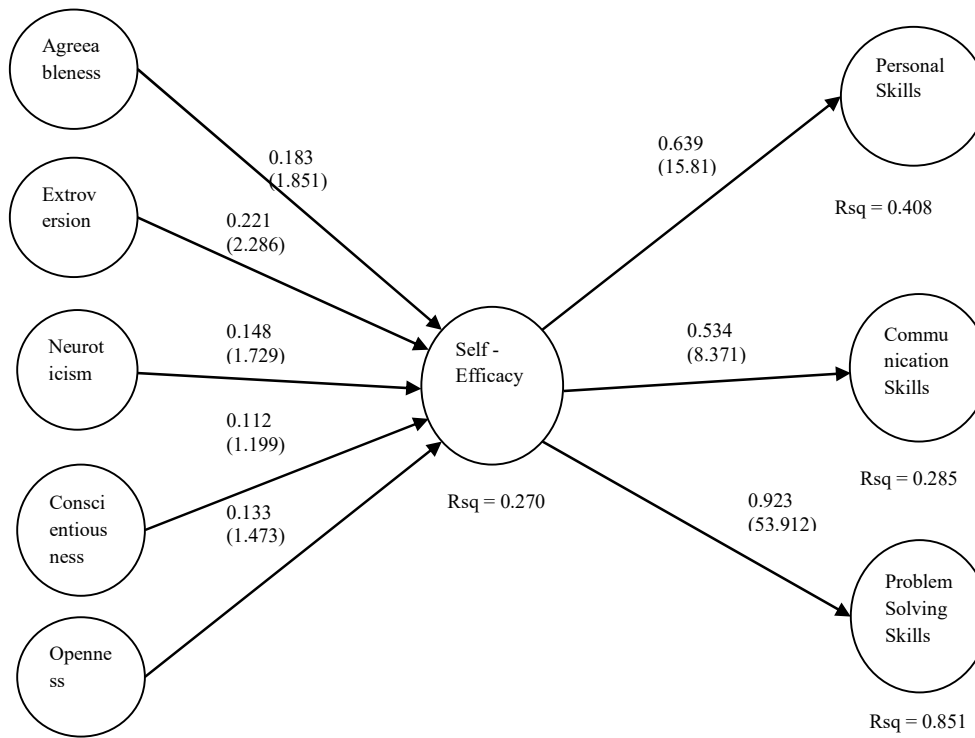


Figure 4.6 Impact of all Big Five Characteristic on Transferable Skills with the moderating effect of Self-efficacy

The composite reliability and average variance extracted is shown in Table 4.20 are examined to determine the measurement of model fit.

Table 4.20 T value and R² value between the constructs

S. No.	Constructs Associated	Direct influence of Personality on Transferable Skills R ² value	Influence of Personality on Transferable Skills with Self-efficacy as moderator R ² value
1	Personality and Personal skills	0.458	0.408
2	Personality and Communication skills	0.315	0.285
3	Personality and Problem solving skills	0.300	0.851

The structural model fit is evaluated based on the t statistics obtained on running the model through the PLS technique and by analysing the correlation between the factors. The PLS model given in Figure 4.6 shows the extent of impact of personality characteristics on self-efficacy. As the r^2 value of self-efficacy is 0.27, it determines that the 27% of variance in the self-efficacy is caused by personality characteristics. The self-efficacy the moderator variable impacts the personal skills at 40.8%, communication skills at 28.5% and problem solving skills to the greatest extent of 85.1%. This proves the hypothesis H 7_a that there is a significant moderating impact of self-efficacy in the relationship between personality traits and problem solving skills of students.

These results are in line with the study of Judge and Ilies, 2002 and self-efficacy relates positively to openness (personality trait) among the students who were selected for their work through university campus placements (Strobel *et al.*, 2011), which are based on skills.

The study addressing the impact of the Big Five personality trait, conscientiousness, on academic performance and instructor performance ratings also examined the mediating role of self-efficacy. Analysis of this research longitudinal data from three military academies in Norway showed that conscientiousness was related to both military and academic performance. Self-efficacy emerged as a partial moderator for the relationship between conscientiousness and performance (Fosse *et al.*, 2015). Strobel *et al.*, (2011) stated that their research results demonstrated the mediating role of self-efficacy in linking personality factors and Social Well Being. The influence of neuroticism, extraversion, openness, and conscientiousness on life satisfaction was mediated by self-efficacy. Self-efficacy moderated the impact of openness and conscientiousness. Results reveal that there is a significance of cognitive beliefs on relating personality traits and Social Well Being.

Jass (2007) study has found that self-efficacy correlated with data-gathering behaviour. Students gathered more data were found to be more efficacious. Erozkan (2013) study examined communication skills, interpersonal problem solving skills, and social self-efficacy perception of adolescents and the role of communication skills and interpersonal problem solving skills on social self-efficacy. The findings highlighted that the communication skills and interpersonal problem solving skills were correlated to social self-efficacy and communication skills and interpersonal problem solving skills were found as

predictors of social self-efficacy among students. All these studies describe that self-efficacy has played a significant mediating role in predicting various factors.

The present study provides evidence that personality traits are highly influencing problem solving skills at a greater extent in the presence of self-efficacy as a moderator. General self-efficacy is said to manage challenges in everyday life situations. It is also understood that extraversion personality trait has more significance with regard to self-efficacy. Extraverts are socially skilled, energetic, bold, confident, and adventurous. These characters can be linked with life situation. Any person need to face challenges of usual nature and exceptional nature in daily routine. The threats of routine nature can be solved with ease. But the unexpected problems pose robust challenges which require more competencies to resolve. The competencies required are ability of finding facts, ability of assessing information, decision making ability, numerical ability and judging ability.

These abilities would have been developed based on the traits and efficacy level of a person. An extravert character influences self-efficacy and so, the skills of problem solving are also high. Firstly, Extraverts being confident, they make decisions. Their self-efficacy level is more and ensures to make bold decisions. As these decisions are based on scientific process, they are successful. Secondly, extraverts tend to take risk because of their adventurous nature. They try to expose themselves to take risk as they try to imitate or model successful people. Based on this, self-efficacy level is increased. Finally, there is no sign of physiological stress in extroverts as they are basically energetic. The self-efficacy level does not increase or decrease when they are not stressed. Problem solving skills explaining making decisions were found to be developed in work place situations (Crebert, 2004). Understanding this, universities and higher education institutions shall provide for an industry interface, wherein a student gets hands on work experience.

The conscientious trait explained the performance of individuals through the moderation of self-efficacy (Fosse *et al.*, 2015). An individual who is more self-reliant, determined and persistent can change his behaviour according to the situations. But in this study extroversion has influenced self-efficacy in portraying problem solving skills. People believe that the academic abilities influence the students in making decisions (Haddoune, 2009). The problem solving skills relate with creative and effective solutions. The confidence to solve the problems is interplayed by self-efficacy. The students trust on their abilities to solve tricky problems is the part of efficaciousness. Bandura's theory suggests that high level of self-efficacy belief facilitates decision making, which is an important element of problem

solving. Ancel (2016) studied the effect of training on perceived problem solving skills and the self-efficacy belief of nursing students. The training programs provided to the nursing students had a contribution to the students' perception on problem solving. However no studies were found to explain that personality characteristic to influence skill with the moderation of self-efficacy. In this study, the personality trait extraversion, significantly influence the problem solving skill of the students. Also, when self-efficacy was added as a moderator, the extraversion trait further tremendously influenced the problem solving skills. Thus self-efficacy guides and contributes in portraying personality characteristics.

Aurah *et al.*, (2014) have found self-efficacy moderated the relationship between meta-cognition and genetics problem-solving ability. Athota and Roberts(2015) focussed on how extraversion predicts problem-solving ability. The mediation is done through the effects of pleasure-oriented values, hedonism and stimulation. They found that extraversion was not sufficient for the individual to solve problems. But they stress that if extraversion is associated with pleasure orientation it may lead to greater problem-solving ability. Pleasure orientation is the state of being happy, positive feedbacks of an individual who is social, cheerful, enthusiastic, optimistic can solve the problems in a better way.

Problem solving skill is the ability of coping up with a problematic situation using rationality to find a solution. Arslan (2016) stated that individuals with high self-compassion, extraversion, open to experience, agreeable, and responsible would have a constructive problem solving behaviour.

Considering all these views, it is evident that extraversion personality trait influences problem solving skills of the individuals. The mediation of self-efficacy beliefs between personality and problem solving need further investigation to explore more results. As problem solving skills is ought to be a critical skill for a students' career, this association holds attention for the future research. The nurturing of extraversion character gains significance. It can also be considered that what moderates other personality traits and personal and communication skills. Hence it can be concluded that the study variables are correlated with each other and also impacts one variable through the other.