ECONOMICS OF EDUCATION OF MUSLIM STUDENTS IN THE SELF FINANCING ENGINEERING COLLEGES IN KERALA

Thesis Submitted to the University of Calicut
for the award of the Degree of

Doctor of Philosophy in Economics

By

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CERTIFICATE

This is to certify that this thesis entitled, "Economics of Education of Muslim Students in the Self Financing Engineering Colleges in Kerala" being submitted by Jessy David for the award of the degree of Doctor of Philosophy, to the University of Calicut is a record of bona fide research work carried out by her under our guidance and supervision.The contents of this thesis, in full or in part, had not been submitted to any other institute or University for the award of any degree, diploma, fellowship or other similar title or recognition before. Plagiarism is checked and found within the permitted limits.

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DECLARATION

I, Jessy David, affirm that this thesis titled "Economics of Education of Muslim Students in the Self Financing Engineering Colleges in Kerala" submitted to the University of Calicut for the award of the degree of Doctor of Philosophy in Economics is a bona fide record of research done by me under the guidance of Dr. K. Rajan, Associate Professor of Economics (Retired), Mar Dionysius College, Pazhanji and Dr. Zabeena Hameed. P, Assistant Professor & Head, Department of Economics, Dr. John Matthai Centre, Aranattukara, Thrissur. I declare that this thesis had not been submitted by me earlier for the award of any degree, diploma, fellowship or any other similar title or rcognition of any University/Institution.

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ABSTRACT

Economics of Education of Muslim Students in the Self Financing Engineering Colleges in Kerala

There are wide variations in the educational achievements of people across Indian states and among religious groups, castes and gender. The religious category that has been far behind in education in India has been the Muslim community. The scenario has been the same in Kerala as well. However, Kerala Muslims could improve their educational achievements for the last many decades. This is due to the efforts made by Muslim organisations and leaders, migration of Muslims to the gulf region, liberalisation policy of the government and the resultant emergence of self-financing educational institutions in Kerala.

There are some studies about the educational status of Muslims in India and Kerala. However, these studies are mainly concerned about the educational status of Muslims in general and hence did not provide necessary information about the achievements of Muslims in professional and engineering education. Recently, it is found that almost about 90 percent of the engineering colleges in Kerala are now in the self-financing sector where the fees and other expenses are very much higher compared to the government and government aided colleges. There is a feeling among the general public that the students who study in the self financing engineering colleges are from rich families especially the children of gulf migrants. Hence, there are some who believe that there are some students who are admitted to these self financing engineering colleges who do not have intellectual capacity to perform well in their studies and may fail to complete their programme successfully.

It is in this context that this study has examined the performance and the cost of education of Muslim students in the self-financing engineering colleges in Kerala. The study also analysed the professional achievements and the effects of academic and soft skill performance of these students on their professional attainments.

This study is based on both primary and secondary data and relates to the colleges of four districts of Kerala viz., Malappuram, Kozhikode, Palakkad and Thrissur where Muslim population is very high and the number of self-financing

colleges is comparatively higher. For data analysis, we have used descriptive statistics like mean, quartile deviation, standard deviation and one sample t- test, independent t-test, chi-square tests using IBM SPSS 21 software package. In addition, the Co-variance Based Confirmatory Factor Analysis (CB-CFA) and Structural Equation Modeling (SEM) techniques were also employed using IBM SPSS AMOS 21.

As per our examination, the performance of Muslim students in the university examinations is good even though it is not as good as the performance of non-Muslim students and the total number of students. More than 71 percent of Muslim students have qualified for the engineering degree in their first attempt although this percentage came to 78 within four attempts. In the case of Non-Muslim students, the corresponding percentage is much higher and it is about 83 percent and the overall pass percentage is close to 79.

We have estimated the average expenditure incurred by Muslim students in their engineering education in the self-financing colleges and it is Rs. 1,140,838 although the average total cost without special academic and special maintenance costs is Rs. 6, 40,484. Out of the total academic cost, the scheduled fee including tuition and examination fee is the major item of expenses which occupies 70 percent and in special academic cost, about 64 percent is capitation fees. In maintenance cost, more than 66 percent goes to travelling and outfit expenses. In special maintenance cost, the major item is mess fees (55 percent).

The professional achievements of graduated Muslim students of self-financing engineering colleges in Kerala have been measured on the basis of their job position, job performance and job satisfaction. The professional achievements of graduated Muslim students of self-financing engineering colleges in Kerala were above average in terms of Job position, Job Performance and Job Satisfaction. However, there is no gender disparity in job position although the job performance of male graduates was somewhat better than that of female graduates. This may be due to the better soft skill performance of male graduates.

An examination of the effects of academic and soft skills on the professional attainments of graduated Muslim students of Self-Financing Engineering Colleges in Kerala revealed that academic performance does not have any positive effects on the

job performance of the students. Thus, the engineering education provided by the self-financing engineering colleges in Kerala needs to be more practical and application oriented. The study found that academic excellence and ability in soft skills have helped them to attain superior position in employment in their organizations. Our analysis of job satisfaction showed that the major factors that resulted in the job satisfaction of the students were their better job performances and better job position. The findings of the study shows that government intervention is required to enhance the infrastructure of self financing engineering colleges and to provide soft skill training programmes to all those economically backward students to augment their job performance.

Chapter 1

Introduction

Education occupies an important place in the socio economic development of any nation. It plays a vital role in the formation of human capital, which is essential for technological innovation and economic growth. Education always helps to improve the knowledge and skills of individuals and thus paves the way for social transformation. In addition education influences the chances of employment for people. Thus education is indispensible for the growth and development of individuals and society. Without an efficient education system, a nation cannot able to achieve progress and keep in pace with the other countries of the world (Gupta, 2014). “Education’s direct and immediate purpose is to make people better informed, more able, more skilled and more enlightened” (Sen, 2003). Moreover, education helps to reduce inequalities existing in a society including inequalities in asset ownership, capabilities, and opportunities. It is not possible for an uneducated community to come forward and keep in pace with the society. Because of education people become aware of their rights and obligations towards society. Among various levels of education, higher education occupies a predominant place in the development of a nation. Higher education equips the individual with needed skills and capabilities for attaining various goals and thus contributes to the social development. It is generally accepted that the condition of higher education in a nation is an important indicator of its future wellbeing (Shihabudheen, 2014).

1.1 Economics of Education

Economics of education is the study of economic matters relating to education like demand for education, the provision and financing of education and the comparative efficiency of various educational policies and programs. The development of economics of education as a separate branch of economics has started since 1960s. Theodore W Schultz is recognized as the founder of educational economics. He promoted the importance of educational benefits and of an economic approach to the analysis of education (Teixeira, 2000). He mainly focused on the importance of education as an investment for the future. It is expected that education and training will enhance an individual's productivity in the workplace, thus it will lift up his expected income in the future. The idea of human capital is the central point of educational economics. Educational system in any economy is expected to furnish fresh knowledge, training, skills, and innovations and thus improve the quality of

work-force. The writings of several Classical economists like Adam Smith, J.S. Mill and Alfred Marshall explained the significance of education as a form of national investment and analysed the different ways of financing education. Adam Smith regarded expenditure incurred on the formation of skills as investment in man. 'The most valuable of all capital is that invested in human being' (Marshall, 1930). The researches in the field of economics of education mainly concentrated on the aspects of the costs of education, ways of financing education, returns from education and also the impact of education on the distribution of income and wealth.

1.2 Higher Education in India

Education in India has always been given a central position. India's improved education system is one of the main contributors to its economic development. India's Higher Education sector has witnessed a tremendous increase in the number of Universities/University level Institutions and Colleges since independence. India's higher education system is the third largest in the world after China and United States in terms of enrolment (Gupta and Gupta, 2012). However, in terms of the number of institutions, India has the largest higher education system in the world. In January 2019, India had over 900 universities and 40,000 colleges. The last two decades has witnessed an exponential growth in Indian higher education system. The number of institutes has grown at a compounded annual growth rate of 11% while student enrolment has grown at a compounded annual growth rate of 6%.

Higher education sector of India consists of Universities established by an Act of Parliament (Central Universities) or of a State Legislature (State Universities), Deemed Universities (institutions which have been accorded the status of a university with authority to award their own degrees through central government notification), Institutes of National Importance (prestigious institutions awarded the said status by Parliament), and Institutions established by State Legislative Act and colleges affiliated with the University (both government-aided and unaided) (Sanat, 2006). There are also 14 open universities in India and Indira Gandhi National Open University (IGNOU) was the pioneer among them.

The Higher Education sector ensures the quality of the educational system with the help of various agencies set up for the purpose. The Indian Union

government set up a statutory body called The University Grants Commission of India (UGC India) in accordance to the UGC Act 1956 under Ministry of Human Resource Development. It is charged with coordination, determination and maintenance of standards of higher education in Universities and Colleges offering UG, PG, Doctoral and Post-Doctoral courses in different streams. The major agency which accredits universities and colleges in general education is the National Assessment and Accreditation Council (NAAC) established by the UGC in 1994 (Gupta and Gupta, 2012).

1.3 Privatisation of Higher Education in India

Indian higher education sector especially the professional education sector has witnessed several radical changes during the last two decades. In India up to 1970's the government took initiative for setting up and running of higher education institutions. But by the end of the 1970's most of the state governments found it difficult to increase the number of colleges and seats under government and aided sector due to financial constraints. Majority of these institutions need developed infrastructure and other facilities which require huge expenditure from the side of the government. During this period there occurred rapid increase in the demand for higher education especially for technical education. Thus the excessive demand for higher education together with the inability of governments to provide the necessary support has made the problem more severe. In spite of various efforts of government, higher education did not flourished in India to the level of meeting the requirements of the people and the nation. Hence liberalisation of higher education became an inevitable choice. Privatization and liberalization of education sector has led to the withdrawal of the government from the field of higher education and the increased participation of private institutions (Vattilthodi, 2018). As a result of this both the number of higher educational institutions and the number of seats especially for professional courses increased considerably. Consequently in terms of both the number of education institutions as well as student enrolments the size of the private sector is about twice that of the public sector in India (Ahmad and Nisa, 2017).

1.4 Technical Education in India

In India technical education is treated as a separate sector. It covers programmes in engineering/technology, pharmacy, architecture, hotel management and catering technology, management studies, computer applications and applied arts & crafts. The instigation of formal Technical Education in India started in the period of mid of 18th century. The first school was established in Chennai in 1794 Later on, technical education expanded to other parts of the country (Mohanty and Dash, 2016). It has got much importance during the last decades. The establishment of Indian Institutes of Technology, Indian Institutes of Management and Indian Institutes of Science was significant mile stone in the evolution of technical education in the country (Gupta and Gupta, 2012).

An important step taken by the Government related to the technical education of India was the establishment of All India Council of Technical Education (AICTE). It started with the appointment of a committee in 1945 under the chairmanship of Shri. N.R. Sarkar, popularly known as the Sarkar Committee, which recommended for the establishment of four higher technical institutes, on the pattern of Massachusetts Institute of Technology (MIT), USA (Kurian 2016). The main aim of AICTE is to control and monitor the activities of all technical institutions in the country. AICTE was formed initially in November 1945 as an advisory body and later in 1987, given statutory status by an act of Parliament. Promotion of quality in Technical Education, Planning and Coordinated development of Technical Education system and Regulations and maintenance of norms and standards etc are the important objectives of AICTE. The Directorate of Technical Education, the state Universities to which colleges are affiliated and Board of Technical Education are the state government level agencies which deal with technical education. The vast technical education of India comprises of 17 IITs, 20 NITs, state technical universities and a large number of engineering colleges spread across the country (Surekha, 2018).

1.5 Engineering Education in India

According to World Wide Web “Engineering is the science, skill and profession of attaining and relating scientific, social and practical and economic knowledge in order to design and build structures, machines, devices, systems,

materials and processes." It is said that Engineers are builders and designers of the world. In India the importance of engineering education is increasing day by day as a result of fast improvement in science and technology. As a profession, engineering addresses both urgent needs and challenges faced by our society and offer a wide range of career opportunities. Engineering education is very much linked with the society and human beings. It has an important role in the development of human resources by creating skilled man power and increase of productivity of industries thereby improving the quality of life in the nation (Surekha, 2018). Students of Engineering should graduate with experience in working in teams, have strong written and oral communication skills and be well versed in the economic, social, environmental and international context of engineering professional activities.

Engineering is one of the most sought after professional courses in India. It contributes a major share to the overall education system and plays a vital role in the social and economic development of our nation. One-sixth of all Indian students are enrolled in Engineering/Technology degrees (kurian, 2016). The four Southern states of India produce about 75 percent of the country's total engineering workforce, which is more than that produced by the USA (Patil and Pudlowski, 2000). By realising the importance of this sector planners have given high priority to this sector. As a result our engineering education sector has achieved phenomenal growth during the planning periods.

Engineering education in India was started during the British era and concentrated chiefly on Civil Engineering. The first school was started in Madras in 1794 and then Engineering College at Roorkee (1847), Poona Civil Engineering College at Pune (1854), Bengal Engineering College at Shibpur (1856), Banaras Hindu University (1916), Visvesvarayya College of Engineering (1917) and Harcourt Butler Technological Institute Kanpur (1920) are established at various parts of the country (Banerjee and Muley, 2007). In India the past two decades have witnessed an eight-fold increase in the number of institutions providing engineering education at the under graduate level. At the same time a clear regional imbalance has occurred in the provision of engineering education. About 66 percent of the engineering institutions are situated in four southern states, and Maharashtra, even though they account for less than 33 percent of the population (Kurian, 2016).

1.6 Higher Education in Kerala

Kerala has received international attention for the achievements it has made in the sectors of education and health. Its achievements in the fields of several social indicators like literacy rate, enrolment of students, women's educations etc are well known. Kerala is renowned as one of the highly developed states in India in terms of education. According to 2011census Kerala's literacy rate was 93.91percent while it was only 74.04 percent for the country as a whole. Kerala has achieved a high female literacy of 91.98 percent as against 65.46 percent for the nation. Kerala's male literacy was 96.02 percent while male literacy of India was only 82.14 percent. By the end of 1990 Kerala achieved 100 percent literacy for the 5-60 age group. Kerala has also able to maintain high levels of enrolment ratios in secondary education. The expansion of higher education has attained somewhat high levels in Kerala. "On the basis of many of the overall quantitative indicators, the higher education scene in Kerala is found to be favourably comparable with the all India scene and in some respects the situation in Kerala is better than some of the rapidly expanding higher education systems in southern states" (Tilak, 2015). Kerala witnessed rapid increase in the number of higher education institutions especially during the last few decades. Total enrolment in higher education is also recorded significant increase. An important feature of the educational system of Kerala is the dominance of the private sector institutions.

Kerala has been experiencing severe fiscal crises since the 1980's. The impact of the crisis reflected in almost all sectors of the economy. The education sector also experienced crisis because of the simultaneous working of both demand-side and supply-side factors. On the one hand, the demand for higher education institutions, especially professional and technical education, has been increasing. On the other, the supply of funds to meet the quantitative expansion and to improve the quality of education has not been increasing. As a result of financial crisis the government was forced to increase fees and other charges. It also curtailed educational subsidies to higher education. Another important step taken by the government was the introduction of large number of self- financing institutions and courses in both the government and private sectors (Salim, 2004). In 1991, government and government-aided private institutions constituted the total higher education sector of Kerala and

there existed no self-financing colleges in any field. In 2012-13, the self-financing colleges formed 58 per cent of all colleges in the state. The majority of the self-financing colleges came up in professional and technical education, and least in arts and sciences (Vattilthodi, 2018).

1.7 Engineering Education in Kerala

Over the last two decades Kerala has achieved noticeable progress in the field of professional technical education. A large number of engineers graduated from various engineering colleges in Kerala are well placed in many reputed companies across the world. As per records the first engineering college of the state was started in 1939 by Sree Chithira Thirunal BalaramaVarma, the then Maharaja of Travancore. It offered degree and diploma courses in Mechanical, Electrical and Civil branches. Today this college is known as the College of Engineering Trivandrum (CET). After the independence of India a few more institutes were established at various districts of the state. The growth of engineering education sector till 1990s has not been very encouraging. Till 1990s engineering education institutions in Kerala were owned, controlled and funded by the government. There were three aided Institutions also. This situation changed very much with the economic liberalization of the 1990s. Indian software service industry, as well as other Industrial and Technical sectors, expanded as a result of the liberalisation policy of the government. This has resulted in the increased demand for qualified engineers in the country. However, the intake capacity of government technical educational institutions was not adequate to meet this ever increasing demand of engineering graduates. As a result, liberalisation of technical education in Kerala became inevitable. Since 2001, the liberalization of technical education has significantly increased the number of engineering colleges in Kerala (Mani and Arun, 2012).

A major change occurred in the higher education field of Kerala since 1990s is the tremendous growth of self-financing institutions. More than 90 percent of the engineering colleges in Kerala are now in the self-financing sector. As there is a phenomenal growth in intake, students with very low ranks in the entrance examinations are being admitted to the engineering courses, although, a good number of these engineering colleges do not maintain quality education.

The first private self-financing college of Kerala was MES College of engineering. This was established in 1994 at Kuttippuram, (Malappuram). Institutions were also started under the aegis of government agencies such as Institute of Human Resource Development (IHRD), Co-operative Academy of Professional Education (CAPE) and Kerala State Road Transport Corporation (KSRTC). The number of engineering colleges in Kerala during 1991 was 9, with an intake capacity of about 2,800 students. By the early 2000s, it had grown to 33, with a capacity of 9,000 students (Surekha, 2018). In 2011 there were 142 engineering colleges in Kerala with a sanctioned intake of 45147. Out of these engineering colleges, 128(90.14%) are self-financing colleges, 11 (7.7%) are government colleges and 3 (2.11%) are private aided colleges. (Economic Review, 2011).

Ernakulam is the district with largest number of engineering colleges in Kerala. 26 engineering colleges are there in Ernakulam district. It was followed by Thriuvanathapuram with 24 engineering colleges. There is only one engineering college in Wayanadu district. Kollam, Pathanamthitta, Alappuzha, Ernakulam and Kasargode districts do not have Government engineering colleges. During 2011 the sanctioned intake of government colleges was 2894 (6.4%). While it was 1550 (3.43%) for aided colleges and 40703(90.16%) for unaided colleges. The sanctioned intake of unaided colleges has increased by 21.12% during 2011compared to the previous year (Economic Review, 2011).

1.7.1 B.Tech Degree Courses in Kerala

The most popular B. Tech courses offered by the Engineering Colleges of Kerala are Mechanical Engineering (ME), Electrical and Electronics Engineering (EE), Civil Engineering (CE), Electronics and Communication Engineering (EC), Information Technology Engineering (IT), Applied Electronics and Instrumentation Engineering (AE), Chemical Engineering (CH), Computer Science and Engineering (CS) and Electronics and Instrumentation Engineering (EI).

Apart from these popular courses, some other undergraduate courses are also offered by various technical institutions such as Aeronautical Engineering (AO), Production Engineering (PE), Industrial Engineering (IE), Mechanical (Automobile)

Engineering (MA), Instrumentation and Control Engineering (IC) and Biotechnology (BT).

There are certain institutions which offer some of the rare B.Tech courses. These are Metallurgy (AmalJyothi College of Engineering, Kottayam), Safety and Fire (School of Engineering, CUSAT, Kochi), Instrumentation Technology and Naval Architecture and Ship Building (CUSAT Main Campus,Kochi), Food Technology (T.K.M Institute of Technology, Ezhukone ,Kollam), Polymer Engineering (University College of Engineering, Thodupuzha, Idukki), Printing Technology (Calicut University Institute of Engineering and Technology, Malappuram), Food Engineering (Kelappaji College of Agricultural Engineering and Technology, Tavanur, Malappuram), Dairy Science and Technology (College of Dairy Science and Technology, Mannuthy, Thrissur) and Biomedical Engineering (Model Engineering College, Thrikakkara, Ernakulam and T.K.M Institute of Technology, Ezhukone, Kollam).

1.7.2 Types of Engineering Colleges in Kerala

The numerous engineering colleges in Kerala can be divided into 5 different categories based on their pattern of administration and funding (Surekha 2018). They are;

1. Central government
2. State governments
3. Government aided
4. Government controlled self-financing
5. Private self-financing

Some of the above said categories can be subdivided on the basis of the governing body that administers the institutions. A brief description of these categories is given below.

1. Central Government Engineering Colleges

The National Institute of Technology (NIT) located in Calicut is the only institute that comes under the administration of the Central Government. It was

previously known as REC (Regional Engineering College). Students are selected to B.Tech courses in NIT on the basis of the performance in the national level Joint Entrance Exam Main (JEE Main). While GATE qualification/scores is the basis for admission to M.Tech courses.

2. State Government Engineering Colleges

The institutions under this category are administered by the Directorate of Technical Education (DTE) of Kerala government. The College of Engineering Trivandrum (CET) is the oldest (established in 1930) in this category, while the Govt Engineering College Mananthavady Wayanad is the youngest (established in 2000). As of now there are nine such institutions with the capacity to enrolment about 3,000 students every year for undergraduate courses.

3. Aided engineering colleges

An aided educational institution is a private one but is recognized and financially aided by the government. There are three aided engineering colleges in Kerala with an annual intake capacity of about 1500 students per year for B Tech courses. They are located in Emakulam, Palakkad and Kolam districts.

4. Self-financing engineering colleges under the control of govt.

There are a large number of self-financing engineering institutions that offer B.Tech and M.Tech courses. A few of these institutions are under the control of government agencies. These agencies are:

a. Institute of Human Resource Development (IHRD)
b. Co-operative Academy of Professional Education (CAPE)
c. Kerala, Calicut and Mahatma Gandhi Universities
d. Cochin University of Science and Technology (CUSAT)
e. Kerala State Road Transport Corporation(KSRTC)
f. Center for Continuing Education Kerala (CEEK)
g. Lal Bahadur Sastri Centre for Science and Technology (LBS)
h. Kerala Agricultural University (KAU)

The seat allotment and fee structure followed by the institutions under this category are different from the others. Ranks obtained in Kerala Engineering Agriculture and Medical (KEAM) entrance examination is the basis for getting admission to undergraduate courses of these institutions.

5. Private Self-Financing Engineering Colleges.

These are owned and run by private managements. They can be divided into two broad categories based on the associations that represent them.

a. Kerala Catholic Engineering College Managements Association (KCECMA)

In Kerala 12 Engineering institutions come under Kerala Catholic Engineering College Managements' Association (KCECMA). Performance in the Kerala Engineering Agriculture and Medical (KEAM) Entrance Examination forms the basis for admission to these institutions. Rajagiri School of Engineering Technology is one of the most famous institutions of KCECMA.

b. Kerala self financing Engineering College Management's Association (KSFECMA)

Kerala Self Financing Engineering College Managements' Association (KSFECMA) was introduced in 2001 to represent all the private self financing Engineering colleges in Kerala. Students are admitted to these engineering colleges both on merit and on management quota. 50 % of the seats are filled from the list of the Commissioner for Entrance Examination on merit and reservation. The remaining 50% seats in engineering are filled by respective managements. Out of this 50% management quota seat 35% is filled by management and 15% is allotted to NRI students. These private institutes charge high fees compared to others.

6. Other institutions

Besides the above mentioned institutions, there are also a number of other institutions in Kerala providing engineering courses.

a. Kerala Agricultural University (KAU)

The College of Dairy Science And Technology in Mannuthy, Thrissur and Kelappaji College of Agricultural Engineering and Technology in Malappuram comes under the governance and affiliation of Kerala Agricultural University.

b. B.tech and M.tech courses in the department of CUSAT

Apart from the self-financing B.Tech courses CUSAT provides other B.Tech and M.Tech courses. These courses are provided by the departments situated inside the main campus. Admission to these courses is through CUSAT CAT examination.

c. Indian Institute of Space Science and Technology(IIST)

It is the deemed university for engineering courses in Kerala sponsored by Indian Space Research Organisation (ISRO). It provides B.Tech courses in Aerospace Engineering, Avionics, and Physical Sciences. In addition to these, M.Tech courses, Ph.D. and Post-doctoral facilities are also offered by IIST. Selection to these courses is through Joint Entrance Examination (JEE).

d. Amrita School of Engineering

Amrita Vishwa Vidyapeetham is a multi-disciplinary research university accredited by NAAC. It offers B.Tech programmes at the Amritapuri Campus located in Kollam. Admission is on the basis of the entrance examination conducted by the University.

1.8 Significance of the Study

Indian Muslims are educationally backward compared to other religious groups like Christians and Hindus. However, the educational status of Muslims in Kerala has been much better compared to the educational status of Muslims in other parts of the country. Although there are several reasons for this better educational performance of Kerala Muslims, gulf migration and emergence of private educational institutions are some of the important reasons behind the better performance of Muslims in Kerala. It is a fact that a significant percentage of migrants from Kerala to the gulf regions belongs to the Muslim community. It is also true that bulk of the Muslim migrants from Kerala to the gulf were with poor educational background and the exposure they received in gulf has compelled them to provide better education to their children. It is a reality that a significant percentage of students studying in self financing colleges and especially in self financing engineering colleges in Kerala are from the families of migrants. However, there is a feeling among the different

sections of society that some of the students admitted to these colleges by paying very high fees and other expenses from emigrant families are not intelligent enough to successfully complete their engineering courses. There were evidences that the pass percentage of many self financing engineering colleges in Kerala was very low in the last many decades. In addition, there are also reports that many engineering graduates from these self financing engineering colleges do not possess necessary skill expected from them and hence are not employable. We do not have much information about the Muslim students graduated from these self financing colleges and their present employment status. As such, it is very important to examine the various dimensions of Muslim students studying in self financing engineering colleges in Kerala. It is very significant to study the performance, estimation of the cost of education of Muslim students in the self financing engineering colleges. In addition, it is also important to examine the professional achievements and the effects of academic and soft skill ability of these students on their professional attainments. As such, the findings of this study will through light on the various dimensions of the education of Muslim students in self financing engineering colleges in Kerala and is highly important and useful for taking decisions to the policy makers, governments, managements, parents and students.

1.9 Statement of the Problem

Indian Muslims are one of the most backward sections in terms of educational enrolment and in educational performance (Ansari, 1992). However, the educational status of Muslims in Kerala is drastically different from the educational status of Muslims from the rest of India. It should be noted that there are different reasons behind this better educational enrolment and educational performance of Kerala Muslims. Migration of Muslims to the Gulf and the liberalisation and privatisation policies of the governments has been some of the favourable factors behind the better educational status of Muslims in Kerala. The liberalisation policies of the governments have resulted in the emergence of a number of private self financing colleges including in the engineering sector in Kerala. The costs of education in the self financing engineering colleges are many times higher than that of cost of education in government and government aided engineering colleges. The high costs of education of these self financing engineering colleges are not affordable to many

economically average households in Kerala. There are studies which showed that bulk of the students studying in these self-financing engineering colleges in Kerala are the children of migrated parents particularly from Muslim community (Misiriya 2013). It is a well known fact that many emigrant Muslim parents with very low educational and employment status are very much enthusiastic to send their children to self-financing engineering colleges to make them good engineers. Many parents do not seriously think about the intellectual capacity required for success in their studies and their chances of completing the courses successfully while sending them in to the engineering colleges. As such, there is a chance that some of the Muslim students who are admitted to the self financing engineering colleges may not possess the necessary ability to complete successfully their engineering course and may result in wastage of time and resources. The performance of Muslim students in the self financing engineering colleges in Kerala is not well documented and hence very little is known about their status after completing the course. Hence, there is a need to bring to the light the various dimensions of the education of Muslim students in self financing engineering colleges in Kerala by examining the performance and estimating the costs of their education in the self-financing engineering colleges in Kerala.

1.10 Objectives of the Study

1. To examine the performance of Muslim students in the self-financing engineering colleges in Kerala.
2. To analyse the cost of education of Muslim students in the self-financing engineering colleges in Kerala
3. To trace out the professional achievements of Muslim students graduated from the self-financing engineering colleges in Kerala.
4. To explore the effects of academic and soft skill performance of Muslim students of self-financing engineering colleges in Kerala on their professional attainments.

1.11 Data Source and Sampling Methodology

The study is based on both primary and secondary data. The primary data about the performance of Muslim students were collected from the students with the help of structured questionnaire. The admission details of students including the name

and address, the branch of study and the personal details were collected from the official records of the engineering colleges. The data of the total number of students admitted, pass percentage and class obtained were collected from the University of Calicut. The qualitative data was collected by means of deliberations with the parents, teachers, students and other experts in the domain of self-financing education.

The necessary secondary data was collected from various sources like the Economic review(2011) published by State Planning Board, Government of Kerala, Prospectus for admission to Professional courses (2011) Government of Kerala, Reports and publications of various Departments of Government of Kerala, Census Reports, and working papers of Centre for Development studies. We have also made use of the information available from other published sources like Books, Journals and websites.

1.11.1 Sampling Design

1.11.1.1 Population of the Study: Muslim students studying for the B.Tech Degree programme in the Self-Financing Engineering Colleges in Kerala in the branches of Civil Engineering (CE), Electronics and Communication Engineering (EC), Computer Science and Engineering (CS) and Mechanical Engineering (ME) are taken as the population of the study.

1.11.1.2 Sampling Frame and Sampling Units: -Since the focus groups are the Muslim Students studying in the Self-financing Engineering Colleges, we have selected those districts in which the Muslim population is very high and the number of self-financing colleges is comparatively higher. So the sampling frame of the study is the Muslim students who were admitted in the self-financing engineering colleges from the districts of Malappuram, Kozhikode, Palakkad and Thrissur in the year 2011-12. These self-financing colleges are affiliated to University of Calicut. A uniform set of four common branches of engineering courses including Civil Engineering (CE), Electronics and Communication Engineering (EC), Computer Science Engineering (CS), and Mechanical Engineering (ME) are considered. Sampling unit of the study is an individual student studying in any of the branches in the self-financing engineering colleges mentioned above.

1.11.1.3 Sampling Methodology: The following methods were adopted for sampling. Data of self-financing engineering colleges affiliated to the University of Calicut have been collected from the Economic Review, Government of Kerala (2011) and prospectus of the Government of Kerala for admission to professional courses (2011). The researcher identified those districts where the Muslim population and the number of self-financing engineering colleges are comparatively high. These districts are Malappuram, Kozhikode, Palakkad and Thrissur. A minimum of 25 per cent of colleges are selected from each district. So one out of four colleges from Malappuram district, one from Kozhikode district out of a total of three colleges, two out of six colleges from Palakkad and four out of fourteen colleges from Thrissur district were selected for analysis.

Four important branches, which generally exist in all the colleges were selected for the study. The selected branches are Civil Engineering (CE), Electronics and Communication Engineering (EC), Computer Science Engineering (CS), and Mechanical Engineering (ME). These branches are generic in terms of its demand from students, number of seats and are available in almost all the colleges. However, in the absence of Computer Science Engineering Branch in 3 colleges, we have considered Electrical and Electronics Engineering branch. In this stage, the researcher adopted multi-stage cluster sampling method.

In this study, the researcher has used two sets of structured questionnaires. The first questionnaire is used for collecting sample data from the Muslim students of 2011 admission batch regardless of their employment status whereas, the second questionnaire is used to collect data from the Muslim students of 2011 admission batch who are currently employed.

For collecting data from the students of each college, the researcher obtained the list of students of 2011 admission from the respective colleges. This list contains the name, communication address, phone number and e-mail id of the students of all selected branches. With the help of a sample size determination formula based on pilot study data, the researcher calculated the required sample size and found that the required minimum sample size for the first questionnaire is 392 and the second

questionnaire is 383. The formula and sample size determination procedures are given below.

1.11.1.4 Sample Size Determination for Selecting Respondents From Students.

The sample size was determined using the standard deviation from the pilot study of the sample of 60 respondents and allowed the standard error at the 5% level. The sample size was calculated using the following formula:

Sample size (n) $= (ZS/E)^2$ (Israel, 2009).

Where, Z = Standard Value corresponding to confidence level of 95% = 1.96

S= Sample Standard Deviation from the pilot study of 60 sample = 0.505

E= Acceptable Error = 5% (i.e., 0.05)

Hence, the sample size (n) $= (ZS/E)^2 = (1.96*0.505/0.05)^2 = 391.64$

*The Sample size of the study determined using the formula is **392.***

1.11.1.5 Sample Size Determination for Selecting Respondents From Employed Students

Sample size (n) $= (ZS/E)^2$ (Israel, 2009).

Where, Z= Standard Value corresponding to confidence level of 95% = 1.96

S= Sample Standard Deviation from the pilot study of 60 sample = 0.499

E= Acceptable Error = 5% (i.e., 0.05)

Hence, the sample size (n) $= (ZS/E)^2 = (1.96*0.499/0.05)^2 = 382.59$

*The Sample size of the study determined using the formula is **383.***

As the data analysis of second questionnaire was mainly based on CB- SEM techniques, the researcher also considered the sample size as per CB-SEM requirements. According to Tanaka (1987) Maximum Likelihood Estimation, 5:1 ratio of cases to free parameters are enough for sample size for performing SEM analysis. Therefore, 383samples were enough to run CB-SEM models perfectly.

For collecting the required sample size for both questionnaires, the researcher decided to collect 70 per cent of samples from Muslim students in each selected branch. The following table depicts these details.

Table 1.1
Sample Selection

Districts		Selected Colleges	Selected Branches	Total Number Muslim students	Number of questionnaire distributed	Number of samples collected (filled questionnaire returned)	No. of employed students contained in the samples
Thrissur		College A	CE	20	14	11	10
			EC	19	13	9	8
			CS	23	16	12	9
			ME	25	18	12	11
		College B	CE	8	7	7	5
			EC	4	3	2	2
			CS	14	10	8	7
			ME	20	14	10	7
		College C	CE	5	4	4	3
			EC	7	5	3	3
			CS	3	3	1	1
			ME	6	5	4	2
		College D	CE	12	8	5	4
			EC	2	2	2	1
			EE	9	6	5	4
			ME	10	7	6	5
Palakkad		College E	CE	36	26	20	18
			EC	27	19	16	15
			EE	28	20	18	15
			ME	41	29	24	20
		College F	CE	9	6	5	4
			EC	4	3	3	2
			EE	7	5	5	4
			ME	6	5	3	3
Malappuram		College G	CE	52	36	32	29
			EC	96	67	60	56
			CS	79	55	48	43
			ME	59	41	37	35
Kohikode		College H	CE	40	28	21	17
			EC	40	28	23	21
			CS	32	23	18	16
			ME	41	29	26	22
Total	4 Districts	8 Colleges	32 Branches (4×8=32)	Total 784 Muslim students studied	555 Questionnaires distributed	460 Samples collected	402 employed students

Source: Primary Data

The above table reveals that there were a total number of 784 Muslim students selected from four branches of courses of Self Financing Engineering Colleges. A total of 555 questionnaires were distributed among the students and 460 filled questionnaires were received for analytical purpose. Out of 460 students, 402 students are employed and the second questionnaire was send to these students. As per the sample size determination formula, 392 samples were enough for first questionnaire. But, in order to get more accuracy, researcher used all questionnaires received (N=460).

Along with this survey, the researcher collected data for the second questionnaire which are from the employed students. While contacting with the students for informing about the survey and obtaining permission from them for sending the questionnaire, collected their employment status too and send the second questionnaire also to the employed students and collected data along with the first questionnaire survey.

1.12 Tools and Statistical Packages Used for Data Analysis

For analysis we have used Mean, Standard Deviation, One sample t- test, Independent t- test, Percentage analysis, Quartile deviation and Chi-square tests using IBM SPSS 21 software package. Co-variance Based Confirmatory Factor Analysis (CB-CFA) and Structural Equation Modelling (SEM) techniques were also used with the help of IBM SPSS AMOS 21 software package

1.13 Conceptual Framework

Private cost of education: - Private costs or Individual costs of education are those costs of education incurred by the student or by their parents/guardians or by the family.

Self-Financing Colleges: - Self-financing colleges are institutions established under the auspices of registered societies or trusts with their own resources and without any financial support from the government. The capital for the running of the institution is raised mostly in the form of fees collected from students who opt to get admission there.

Drop out: - A dropout can be defined as a student who was admitted to a course but left before appearing for the final examination for any reason other than death.

Academic Performance:-Academic performance of a student is the achievement across various academic fields. Academic experts usually measure the academic achievement using classroom performance, graduation rates and results from standardized tests. In this study, the academic performance of the engineering students is measured by the Classroom performance, Academic arrear, Course completion status and Final university result. Moreover, their Classroom participation, Academic initiative, Academic up-to-date, Academic scores, Timeliness in study, Concentration in study, Study revisions, Intensive learning for new concept, Hard work and Confidence have also considered.

Soft Skill Performance:-Soft skills are personal attributes that enable someone to interact effectively and harmoniously with other people. In this study, soft skill performance of engineering students is measured on the basis of their Teamwork Skills, Empathetic and Positive attitude, Self-control, Communication skills, Friend circles, Respectful and obedient, Project management skills and Presentation skills.

1.14 Limitations of the Study

The following are the limitations of the study.

- The study focuses the educational status of Muslim students in the self-financing engineering colleges in Kerala. We have not attempted to compare their educational status with other communities or social groups. This is due to the fact that the cost of self-financing education is comparatively higher than other similar engineering education in government or aided institutions. The education in self-financing institutions are therefore, not accessible to all the students across the board regardless of their income status. So a comparison may result in the performance of students belonging to a higher income group which cannot be generalized on the performance of meritorious students studying in all the engineering colleges and belonging to all groups of income.

However, we have compared certain general parameters like total pass percent of Muslim and Non-Muslims students, their course-wise enrolment and branch-wise pass percent.

- The focus group of the study is the students of self-financing engineering colleges in Kerala particularly in those districts where Muslim population is high.
- The study was conducted on those students who were admitted in 2011-12 academic year only because their performance can be evaluated after the completion of their study in the four year period of the course and their three supplementary chances to pass out the examination.
- The respondents were selected only from four branches of engineering course including Civil Engineering (CE), Electronics &Communication (EC), computer science engineering (CS) and Mechanical Engineering (ME).

1.15 Chapter Scheme

The study involves eight chapters. An introduction about the subject matter is included in the first chapter. The second chapter covers the review of literature and theoretical framework. The third chapter is about the educational status of Muslims in Kerala. The fourth chapter analyses the performance of Muslim students in the self financing engineering colleges in Kerala. The evaluation of cost of education incurred by the Muslim students of self financing engineering colleges is included in the fifth chapter. The sixth chapter analyses the professional achievements of graduated Muslim students of self-financing engineering colleges in Kerala. The effect of academic and soft skill performances on the professional achievement of graduated Muslim students of self-financing engineering colleges in Kerala is examined in the seventh chapter. The last chapter includes a summary of findings and conclusion.

Chapter 2

Review of Literature

Literature Review is generally classified as theoretical review and empirical review. Hence, we have made an attempt to review both empirical and theoretical literature in the related topic. This chapter is arranged in two parts; part one is theoretical review and part two is a review of empirical studies. Here, some of the theories behind education developed by experts are depicted as theoretical review. It is followed by an empirical review of studies carried out in the field of education and related subjects.

PART I

2.1 Theoretical Review

Education has been the most important instrument for social and economic change of a society and a well-educated population is a must for rapid economic growth of a country. The role of technical education is all the more important in the accelerated economic development of a developing country like India. For the last many decades in our country, the main focus of higher education has been to train our youth to meet the new challenges of the world with modern knowledge and skill so as to stimulate faster economic growth of our country. Researchers in social sciences are familiar with some theories of education and this can be considered as theories behind education. Hence, here, we have made an attempt to summarise the different views expressed by various scholars about the importance of education. The prominent educational theories can be broadly classified in to eight categories and they are: Functionalist Theory of Education, Liberal Theory of Education, Social Democratic Theory of Education, Symbolic Interactionist Theory of Education, Postmodernist Theory of Education, Feminist Theory of Education, Conflict Theory of Education and Price Discrimination Theory of Education. These theories are briefly reviewed here as it may serve as a theoretical framework for the study.

2.1.1 Functionalist Theory of Education

One of the most important theories of education is known as the functionalist theory of education and according to this theory education satisfies the needs of society. This is through development of skills, encouraging social unity and sorting of students. The proponents of this theory view education as a chief social

institution that helps to satisfy the needs of society and maintain stability. The French sociologist Émile Durkheim (1858–1917), who developed the academic discipline of sociology, considered schools as “socialization agencies that teach children how to get along with others and prepare them for adult economic roles” (Durkheim 1898). Functionalists believe that education serves two kinds of functions and they are the ‘manifest’ functions and 'latent' functions.

The intended purposes of schools are known as manifest functions. In other words, the manifest functions are the functions that institutions are expected to provide and fulfill. There are several manifest functions associated with education and the important ones are socialisation, cultural transmission, career selection, and rational thinking. According to the functionalists, education is the main agent of secondary socialization. It teaches the learners the appropriate behaviors, the acceptable way of functioning in the society and inculcates in them the principles to direct the society. As a result, during the course of education, students are taught age-appropriate topics so as to augment their knowledge. Educational institutions are considered as sources of change and innovation; they become accustomed to meet societal needs, give knowledge, and also act as keepers of knowledge. Educational institutions are accountable for teaching students the things that society values, such as obedience, perseverance, promptness, and discipline. Thus education is a means of social control in which socialisation occurs. Education conveys to students the norms and values of a dominant culture and helps them to assimilate into society and also to accept their roles. Schools and other educational institutions are responsible for preparing students and arranging them for their future roles in society. Education also allocates people to suitable jobs based on their academic performance and their talents. Thus educational institutions are responsible for finding the most deserving people for the highest positions in society (Haralambos& Holborn, 2000).

The latent functions of education are the unintended purposes of school and the most important latent functions of education are social integration, establishing relationships, and conformity to peer norms. According to Emile Durkheim, socializing people into society's mainstream is the main latent function of education. Secondary schools and continuing educational institutions can bring people together. It helps students to form relationships and build social contacts. Thus, the

system of education leads to social networks of students that last for years and help them to find work after completing their education. Forming peer groups teaches them to collaborate on assignments and tasks and they learn skills that the job market values. Students may be taught things that go against their families' beliefs, creating a generational gap. The educational system in universities has traditionally provided students with space to study various social issues. There are plenty of opportunities for social and political debate, along with the ability to develop tolerance for the different perspectives represented in campus.

2.1.2 Liberal Theory of Education

The English philosopher John Locke has popularised the liberal theory of education and he is regarded as the father of modern liberalism. The crux of liberal theory is the concept of freedom and equality. Contemporary Western perspectives demand that education move towards equality in access to and quality of educational experiences (Thompson, 2017). Liberalists believe that all individuals like their peers have an equal right to education, educational resources and educational experiences. They also advocate equality of educational opportunities, believe and support that education can lead to moral, social, or political equality. Tests or other measures of academic ability, proficiency or competencies should be equivalent among those who have received appropriate arrangement of educational resources and experience. It also means that individuals should have equal freedom to make the educational choices that one values. According to the liberalists inequalities in education are acceptable so long as a threshold of adequate educational resources, experiences and outcomes are achieved. Individuals (students, parents, teachers, etc.) should have sovereignty in deciding what gets taught and how. Education is valuable in pursuing one's ability to determine one's actions in a social, political, or economic context. Thus, a liberal education results in a situation of self-ownership, self-possession, and self-mastery of a student. Education is taken to serve as a way of spreading social outcomes for the wider community in which educated individuals or others like them live and interact. Of course, after compulsory education, one may decide to pursue higher education. According to the liberalists, individuals need to receive an education appropriate for their possession of the liberty to attend higher educational

institutions. Through higher education, one can enjoy liberties in various spheres of social life including economic realm (Thompson, 2017).

2.1.3 Social Democratic Theory of Education

Social democrats are of the opinion that governments should invest highly in education and use education as a means to achieve equality of opportunity and economic growth. Social democrats also stated that a genuine meritocratic education system would enable each individual to make best use of their potential and thus contribute maximally to the economic development of the country. According to Theodore W. Schultz skills and knowledge were forms of capital. He also argued that increased spending on education represents an investment in people and the more governments spent on education, the more skilled the workforce would become, and the more productive they should be. Philp Brwon, A.H. Halsey, Hug Lauder and Amy Wells (1997) have explained a 'new consensus' among educationalists and sociologists that there is a growing global economy in which the level of general education of a country's population is essential for economic success. The largest contribution that governments can make to economic success is to make sure that the workers have higher educational qualifications. Due to rapidly changing nature of the global economy, specific vocational qualifications are less important than intellectual capacity development. (Haralambos & Holborn, 2000).

2.1.4 Symbolic Interactionist Theory of Education

According to this theory a teacher's expectation of a student's performance or achievements affects the actual performance or achievement of that student. When teachers expect little of their students, their students tend to learn less. As such the symbolic interactionist perspective focuses on social interaction in the classroom, on the playground, and in other school venues. It was found that social interaction in schools contributes to gender- role socialisation (Harcourt, 2016). Symbolic interactionism sees education as a way of looking at the labelling theory in action. The labelling with which symbolic interactionists concern themselves extends to the very degrees that symbolize completion of education. It is mainly related with credentialism i.e. the emphasis on certificates or degrees to show that an individual has a certain skill, level of education, or certain occupational qualifications. These

certificates or degrees serve as a symbol of what a person has achieved and allows the labelling of that individual (IUMEN, 2014).

2.1.4 Postmodernist Theory of Education

According to postmodernists, the most important goals of education are teaching critical thinking, creation of knowledge, development of individual and social identity and self creation. The major role of teachers, according to postmodernists is to guide students to generate new knowledge. They provide opportunities to discuss about different topics and formulate creative ways. In this situation student learn to listen to the voices of others. They tolerate criticism from others and try to think critically. They learn to respect other cultures and nationalities. Also they emphasize on cooperative learning, independent learning, and dialectic, critical and verbal methods. So it can be said that postmodernism and creativity are inherent in each other (Khalili 2011). In other words, the postmodern philosophers emphasized on creative thinking, individual differences and teacher's role as a guide. As such, there is diversity, democracy, awareness and freedom in educational process. Learning is not a stable program, it is an opportunity to discuss and share ideas. They main focus is on subjectivity, local facts, interdisciplinary practices, individual and cultural differences and creativity (Beheshti, 2005). According to Clive Beck (1993) the purpose of education in the classroom is creation of knowledge. For this scientific methods and researches are needed. Rorty (1989) was of the opinion that self-creation is more practical in high levels of education. The reason is that at this stage individuals are moving from sociability to individuality and individual attitude wake up for new creation. The post modernists also argued that educational curriculum and content should be based on problem-solving. This is because they realised that the foremost need of learners at the present world is the ability to solve problems. As such, there is a need to replace the receptive curriculum with a creative educational curriculum (Khalili 2011).

2.1.5 Feminist Theory of Education

The feminist theory of education strongly believes that educational systems are characterized by unequal treatment and opportunity for women. They tried to emphasize the mechanisms and reasons of gender inequality in education. They

propagate and promote for women's rights to equal education throughout the world. According to them, women experience limited opportunities for education and their ability to achieve equal rights for education is constrained by their financial freedom (IUMEN, 2014). However, the liberal feminists now admit the enormous progress made in girls' education and they strongly believe that at present many girls are doing better than many boys in educational achievements. They also believe that in future more and more women will enter in to politics and other highly paid employment and other managerial tasks. They are of the opinion that in spite of huge progress in girls' education, still subject choices remain heavily gendered and girls do not seem to be 'breaking the glass ceiling' (Thompson, 2016).

2.1.6 Conflict Theory of Education

Karl Marx, Max Weber, and Émile Durkheim were the most important contributors to the development of Conflict theory. According to them schools are not meritocratic; personal skills and hard work do not guarantee success (Chernoff, 2013). According to the Conflict theory conflict is an essential component of the social order, and that schools have a significant role in the creation of social inequality. They conceive that the existing system of education is responsible for the social inequality. As such, they consider education as an important device for protecting the supremacy of those who dominate society. The existing education system maintains the status quo by inspiring a kind of value among the lower classes to become obedient workers. Schools build up those skills, values and attitudes in the working classes in order to admit their place as a lower-class member in society. Conflict theorists argue that the prevailing school curriculum favours the elites. In educational institutions, teachers mainly judge students on the basis of social class, race or ethnic characteristics. This tendency greatly affects the placement of the students irrespective of intellect and talents (Misra, 2013). They are of the opinion that most of the intelligence tests have a cultural bias as they test cultural knowledge rather than intelligence. Hence, the existing system of education and standardized testing leads to social inequality. At present, in many countries, there are mainly two kinds of schools viz., Government schools and Private schools. Private schools are for the affluent elite classes and students who join these schools make significant advantages in gaining admission to the best colleges and universities. They also get high paying jobs whereas students

from government schools are employed in lower paid manual jobs. Schools vary broadly in their funding and learning conditions, and this type of inequality leads to learning inequalities that reinforce social inequality. Thus disparities in access to quality education play an important role in creating conflict between rich and poor students (Misra, 2013).

2.1.7 Price Discrimination Theory of Education

Price discrimination is charging different prices from different consumers for the same product or services. At the university level, the prevalent price discrimination is third-degree price discrimination and educational institutions charge different fees from various students for the same course. Different forms of price discrimination exist at colleges and universities (Vedder, 2004). It may be in the case of tuition fees (different fees charged for various forms of studies – regular, evening or weekend, summer and executive). Private and state universities charge different tuition fees with an emphasis on quality and professionalism. There is also a vague pricing policy behind the provision of scholarships and grants. Many colleges and universities offer some form of financial aid to students. As a result, there exist different fees for various students for the same course. These fee differences are very much related to their family's willingness to pay for their higher education (Sandler, 2006). Colleges and universities, especially the private institutions, can set tuition fees regardless of economic factors, like a) rate of inflation, b) interest costs, or the c) ability of many families to pay the tuition fee (Grundey and Griesiene, 2011) In other words, the price discrimination theory states that students are categorized according to their ability and income by educational institutions and they charge varying tuition fees.

PART II

2.2 Empirical Literature Review

As stated before, education is very important in the all round development of an individual. It is also very important for the family as well as for the society. Education enables individuals to think, feel, and behave in a way that contributes to their success and improves their personal satisfaction which in turn leads to a better

life. It improves the personal life and helps them to better citizens of the society. It provides people the chance to better their lives by improving knowledge and confidence throughout their life. Better education will lead to a better family and will lead to a better community. Among education, technical education is very critical for the faster economic development of a country. As such all countries of the world has given prime importance to education in their attempt to accelerate economic development of their country. However, we know that developing countries are much backward in education compared to the developed countries. Even among developing countries there exists enormous inequality in the level of educational achievements. Even in a developing country, there are glaring inequalities in the level of education among various communities and religious groups owing to the differences in their tradition and other socioeconomic surroundings.

In India, there are wide variations in the educational status of different communities. Scheduled Castes and Scheduled tribes are in the bottom in terms of their educational status followed by other backward communities (OBCs) which include Muslims. There were attempts by governments and other organizations to improve the educational status of these deprived communities. Reservation in admissions to educational institutions has been one of the governmental measures to boost the educational level of SCs/STs OBCs and Muslims. After many decades of reservations, the educational status of some of these backward communities is not on par with other forward communities.

There were several attempts to assess the educational standards and performances of students in the country over the years. These studies examined various dimensions of education including general education covering schools and there are studies which examined various dimensions of higher education. There are also studies about the performances of students in professional colleges especially about engineering colleges in the country. Needless to say that the studies carried out are diverse ranging from educational performance to estimation of educational costs involved in education. There are also studies about the soft skills of the learners and the impact of these skills on getting employment and on their performance while in employment. Hence, we have made an attempt to review the studies available in the literature to clear the ground for the present study and the studies reviewed here are

arranged under six headings. These are review of studies about performance of students followed by review of studies related to cost of education and sources of financing. Next is a review of studies about Muslim education followed by a review of studies about the employment performance. Under the fifth heading contains a review of studies regarding higher education in India and Kerala while the last heading is a review of other related studies in the subject.

2.2.1 Studies related to Performance of Students

Deshmukh and Kamat (1963) has analysed the wastage among Arts and Science students in a college and university in Poona. According to the study about 45% of the college students and 51% of the Poona university Arts students were wasted. The percentage of wastage was lower among science students in the college as well as in the university. Similarly, the percentage of wastage was lower among students belonging to advanced communities and students of professionally employed parents. The authors concluded that the chances of students completing the courses increases with an increase in marks secured in their SSLC examination and the chances of wastage increases with an increase in the age at entry and among males.

Issac (1994) has analysed the extent and causes of dropouts among college students of arts and commerce courses for the period 1982-92. The study found that about 6.9 percent of the students have dropped out from the college. According to the study, the chances to be dropped out were higher among the children of ordinary workers with poor financial background and illiterate parents and also students with low marks in their SSLC. The dropout rates were lower among the children of parents who encouraged their children and whose approach was favourable to studies. According to the study dropouts were lowest among the SC/ST students and highest among forward caste students. A major finding of the study is that excessive involvement of students in domestic work and employment outside family were the most important reasons behind the dropping out of students from the college.

The study by Salim (1999) has examined the determinants of educational development at the micro-level to realize the challenges of decentralised educational planning. The required data for the study was collected from two villages of Malapuram district of Kerala, Edavana (educationally progressive village) and

Nediyirippu (educationally lagged village). The survey covered all schools in the selected villages. According to the study, several factors like socio-religious reform movements, attitudinal changes, local community efforts, government intervention, political pressures, madrassa system, private voluntary efforts, gulf migration and improvement in the economic plight of the people have helped to improve the educational status of the people in Edavana. The low levels of student performance in the educationally backward village was due to factors like poor socio-economic background of the students, lack of interest of the parents, absence of adult members from households and secular schools. However, the major reasons for the relatively poor performance of secondary schools in both the villages include the system of full promotion in schools to the higher class, indifference of teachers, inadequate school facilities and poor education – employment linkage. The study found that dropouts are high among socially and economically backward families and conservative sections of the Muslim community. The cost analysis reveals that both institutional and private cost of education is very low in educationally backward village compared to educationally progressive village.

Sivasankaran (2004) has carried out a study about the failure rates and wastage among the engineering college students in Kerala. This study was conducted during the period August 2003 to April 2004. The study was based on both primary and secondary data. The study was conducted in 3 engineering colleges one each from government, aided and unaided sectors. The study found 9 percent wastage among the students of the three colleges. The study observed that 80 percent of the incompletes and 100 percent of the wastage belong to the quota admissions. According to the author, admission of students with very law marks in mathematics and very low ranks in entrance examination are the most important factors in the failure of engineering college students.

Weisskopf (2004) studied the impact of reservation on admission in higher education in India along with the academic performance of the beneficiaries of reservation policies in these institutions. According to the study, in late 1990s, about one third of the SC and ST students got admission due to reservation. The study also observed that vast majority of the students admitted under reserved category were with a much lower minimum examination scores compared to the scores needed for

the general category applicants. However, the study found that, over the years, the difference between the average examination scores of SC / ST reserved students and the general entry students have been significantly reduced. As per the study the academic performance of SC/ST students were poor compared to the performance of the general entry students. In addition, it was found that SC/ST students have taken more years to qualify for the degree than their general entry counterparts. The study concluded that their poor educational background and other obstacles they experience during the period of study are the major reasons behind their comparatively lower academic performance.

Sansgiry et.al (2006) analysed various factors affecting academic performance of pharmacy students in the University of Houston on the basis of a sample of 198 students. The performance was examined on the basis of academic competence, test competence, time management, strategic studying, and test anxiety. They also examined whether there is any difference among the students in the above mentioned competency factors. They used a cross-sectional study design for measuring previously validated constructs to evaluate the effect of these factors on students with low and high cumulative grade point averages (GPAs). According to them the academic performance was associated with factors such as academic competence and test competence. The study found that students enrolled in their experiential year differed from students enrolled in their second year of curriculum on factors like test anxiety, academic competence, test competence, and time management skills. The authors was of the opinion that factors such as academic competence, test competence, test anxiety and time management improve as students' progress in their experiential year.

Rathnam and Chendraiah (2008) analysed enrolment and dropout positions of BA and B.com SDLCE students belonging to the batches of 2001-02 to 2004-05. The study was based on both primary and secondary data. The primary data was collected from the students of Kakatiya University, Warangal, Andra Pradesh. For the purpose of the study the authors also interviewed one of the joint Directors of the SDLCE. The study found a continuous increase in the enrolment position of undergraduate students. The dropout rate also showed an increasing tendency during the study period.

Schulz (2008) analysed the significance of soft skills in students' lives both at college and after college levels. Soft skills can complement hard skills, which are the technical requirements for a job the student is trained to do. He was of the opinion that students should improve their soft skills using various methods like reading good books, attending class on soft skills, and joining clubs or societies. Teachers have a great influence on the development of soft skills of their students. It is of paramount importance for each student to acquire sufficient skills beyond technical or academic knowledge.

Zachariah (2008) analysed the magnitude and causes of dropouts in Arts and Science Colleges in Kerala. For the purpose of the study he selected 2 colleges, one from Malapuram district and the other from Alappuzha district. One batch each of PG and UG students who appeared for their examinations in March 2003 were selected from these colleges. The study found that the dropout rate was slightly higher in the case of male students. The study also found that the dropout rate among SC/ST students was marginally higher than the total student population. According to the study the proportion of students who dropped out before writing the final examinations was 17.4 percent and the proportion of dropouts after excluding those students who left to join other courses was 5.7 percent. According to the study marriage, employment, joining other courses, family problems, financial difficulties etc are the major reasons behind the dropping out of students.

Shah (2009) examined various causes and effects of dropouts at primary schools. The study was conducted in male primary schools in Takht Bhai city. A sample of 7000 male students and 10 government primary schools was taken for the study. The study found that dropout at primary level is very high and the reasons include low enrolment, corporal punishment, poverty, family background, peer group, lack of facilities for quality primary education, teachers problems, high absentees for both students and teachers, bad social environment, activity less curriculum, incorrect way of evaluation etc.

Chugh (2011) analysed various factors responsible for dropping out of children in secondary education. The study was carried out among children living in slum areas of Delhi. The period of study was from August 2006 to July 2007. The

primary data was collected from a sample of 432 children who had dropped out from 33 schools of Delhi. The study found that both the family and school related factors were responsible for the dropout of children at the secondary level. The study suggested certain preventive and restorative approaches to control the dropout among children living in slum areas.

Roy (2011) examined issues of dropout in primary education in Uttar Dinajpur. The study found low dropout rates among disadvantaged sections like SCs and STs compared to general categories because they have reservation and their job opportunity is high. Dropout rate is high among Muslim minorities because they are giving preference to religious Maktab rather than getting formal education from school. According to the author factors responsible for dropout in the district can be classified into three viz, infrastructure related issues, socio-economic issues and gender specific issues. He suggested that institutes should take necessary steps including reducing students-classroom ratio, providing motivational training to students, changes in teaching-learning methods etc to reduce the dropout problem.

Rajan (2011) analysed the performance and problems of SC/ST students in the Engineering Colleges in Kerala. He also analysed the extend of dropout and wastage among them. The period of study was from June 2009 to May 2010. The study was conducted in 4 engineering colleges in Kerala – one each from government and aided sector and one self –financing college under the co-operative sector and one private self –financing college. Three important subjects were selected for the study viz, electronics and communication, electrical engineering and computer science. The study found that the performance of SC/ST students is clearly worse than that of the general entry students. According to this study, about three fourth of the SC/ST students are wasted owing to several reasons. Another important finding of the study is that there were no dropouts among SC/ST students in the engineering colleges under the study. This is because of various financial incentives provided to them like fee concessions, scholarships, free food in hostels etc.

The study by Pushpangathan (2012) has examined the performance of students in terms of pass percentages of students in engineering colleges on the basis of the religion of students. For this purpose he selected two popular branches – Electronics

and communication and electrical and electronics in 5 engineering colleges affiliated to Mahatma Gandhi University in 2010. According to the study the pass percentage of students belonging to Christian community was 72 while it was 61 percent for Hindu community, 55 percent for Muslim community and 42 percent for SC/STs. Hence, the study concluded that the performance of Christian students were much better when compared to the performance of students belonging to Hindu and Muslim communities.

Jolly (2012) has analysed the importance of developing soft skills for enhancing employability of engineering graduates. The study found that the students were well equipped with technical knowledge although they lack relevant soft skills. Hence, the study has emphasized that graduates should have a balance between technical knowledge and soft skills required in employment. Therefore, the author has emphasized the importance of providing soft skill training to students by including development of soft skills in curriculum. The study also has emphasized the importance of involving students in activities like group discussion, debates, seminar presentations, and training for attending interview are some of the important measures to improve the soft skills of students. The soft skill ability of students will help them to better their chances of getting employment even in the campus placement.

Mushthaq and Khan (2012) in their study examined various factors affecting academic performance of college students on the basis of data collected from a group of private colleges. The study found that performance of students in intermediate examination was related with various factors including students' approach towards communication, learning facilities, proper guidance and family stress.

Nanthini and Uthariraj (2012) have attempted to predict student's success on the basis of their ability in soft skill. The study also examined the success of students in their life beyond academics. The study was on the basis of primary data collected from 974 students. For predicting the success rate of students pursuing skill development courses, emotional intelligence was integrated with communication skills, achievement motivation and narrower version of openness, extraversion and various other personality traits. The study focused on the crucial role of skill development in the overall development of students. The study found that Success through large

domains such as communication skills, achievement motivation, and emotional intelligence not only leads to a higher level of success in life, but also contributes significantly to improving performance accuracy.

Choudary(2014) examined the importance of training engineering students in soft skills in the engineering colleges in Andhra Pradesh based on convenient sampling. The study has focused on various sub areas of soft skills like Communication skills, Presentation skills Selling skills, Proactive skills, Planning skills, Self-understanding skills, Time management skills, Problem solving skills, Stress management skills and Personal effectiveness skills. The study concluded that the role of Management and Faculties of Engineering Institutions are very important in imparting Soft-skill training to students as this will help them to get Placements, Campus recruitment and for further development of their Career in future.

Bashir et.al., (2014) examined major factors influencing female school dropouts in the District Kulgam on the basis of information collected from various schools and homes of the dropouts. The study found that the important personal factors influencing dropouts were priority given to the education of male siblings, early marriage, low academic performance in class, lack of interest in studies and burden of household work. The study also found several school related factors in drop outs like poor accommodation, poor seating facilities, and discrimination based on sex, long distance to school, physical punishment and faulty examination system. Among the family related factors the indifference and low educational status of parents, economic backwardness, looking after siblings, preference given to boys were some of the important factors behind the drop outs. The study concluded that low attendance, poor academic performance, lack of interest in studies were also responsible for the female drop outs.

Ekka and Roy (2014) examined the factors in wastage at primary school in Birbhum district of West Bengal on the basis of a sample of 300 students in the age group of 6-14. According to the study, there are variations in the factors affecting dropouts among different religious groups. Among Hindus, family problems and necessity to work and earn for the family are the major factors whereas among Muslims, in addition to family problems and the need to work and support the family,

early marriage of girls has also resulted in dropouts. Among Christians, the dropouts were comparatively lesser and family problems were reported as the only reason for dropping out. The study concluded that convincing children that better education alone will help them to increase their earnings in future can reduce the dropout rate among school children.

Gouda and Sekher (2014) examined the factors and the extent of school dropouts among different communities in India on the basis of data available from the National Family Health Survey-3 (NFHS). According to the study, 75 percent of the children in the age group of 6 to 16 years were attending School out of which11 percent of them dropped out. Among the factors, apart from low parental education, the large family size and many school going children in the family are the most important reasons behind the school dropouts in India. The dropout rate was much higher among girls, Muslims, Scheduled Castes and Scheduled Tribes.

Rana and Rani (2015) analysed various reasons behind dropouts among girls in Haryana. The study was conducted in Mokalvas village (district Gurgaon) on the basis of a sample of 100 girl students who dropout on various years. The study observed that dropout among girls was higher among Muslims and Rajputs. Among the reasons, conservative attitude, failure, burden of household work and labour activities, uneducated parents, uninterested students were behind the dropping out of girls from schools.

Addison and Djoto (2015) analysed various factors responsible for dropout among Girls in the Public Islamic School in Techiman Municipality. This study was based on the data collected from fifty girls and their parents. The study found various social and academic factors were responsible for the dropping out of girls. An interesting finding of the study was that the parents of these girls have positive attitude towards their child's education.

Rashid et.al., (2015) examined enrolment, dropout and completion trends of students under DCSA programme. The study also analysed various pull factors leading to the enrolment of students in to the programme and also the push factors responsible for their dropout. The study was on the basis of primary as well as secondary data. The findings of the study confirm the unsatisfactory levels of

enrolment and completion trends of students under the programme. The study suggested effective implementation of student support services for lowering the dropout rates.

Sibanda et.al (2015) analysed the factors affecting academic performance of students of Financial Management in a university of technology in South Africa on the basis of sample data collected from second year students. The study found that, regular study, punctuality in school and self-motivation are the major factors influencing academic performance of students. The authors concluded that if students can identify the success and failure factors in their academic performance, they can adjust their behaviour so as to improve their academic performance.

Kibert et.al. (2017) examined the status and causes of secondary school dropouts in East Gojjam Administrative zone selecting six schools collecting data from 175 teachers, 5 principals, 5 supervisors, 5 district education experts, 18 dropout returnee students and 30 Parent-Student-Teacher Association (PSTA) members. According to the study, dropout rate among students showed a declining trend. Among the reasons for drop outs, the authors listed student related, school related and parent related factors. Accordingly they suggested that teachers, principals and school administrators have to play a key role in reducing dropout among students from secondary schools.

Moore (2017) examined the factors behind drop outs among the students at adult high school in East Tennessee on the basis of data collected from 15 students. According to the study, lack of sufficient credits, bullying by teachers, inadequate proficiency in language are the major factors behind the dropping out of students. The study suggested that educators could prevent dropout by using various methods including monitoring progress, providing academic support and creating a safe and encouraging environment to students.

Lee (2018) examined the impact of soft skills on Canadian post-secondary learners and the ways in which soft skills can help students in fostering their personal and social advancements in getting employment. The study employed a meta-synthesis methodology and was based on secondary data sources. The main focus of the study was the role of critical employability skills and the need for intervention

programs like workshops to enhance the overall motivation and employable capacity of students. The study found that the intervention programs have helped the students in enhancing their communication, teamwork and professionalism for getting employment.

2.2.2 Studies related to Costs of Education and Sources of Financing

Shah (1969) examined the private cost of elementary education by dividing it into tuition costs and non-tuition costs. The non-tuition cost includes cost on books, stationery, private tuition, transport and refreshment. Private tuition forms 61 percent of the non-tuition cost for the students of affluent families. He has categorised the parents into high income and low income groups. The study found that, non-tuition costs form an important element of private cost of education and students' fees were not a burden for the relatively wealthy parents. On the other hand, expenditure on books and stationary was the major item of expenditure for the students belonging to low income categories as it constitutes 85 percent of the total non tuition costs of these students.

Tilak and Varghese, (1991) examined the pattern of funding of higher education in India. They also explained the alternative methods of funding higher education including financing higher education from the public exchequer, student loans, graduate tax, student fees and the role of private sector. They suggested that instead of depending on a single form of funding it is better to follow a mode of funding that provides a mix of various methods. They are of the opinion that as higher education benefits comparatively privileged sections of the society, there is a rationale for shifting the financial burden from the social domain to the individual domain.

Tilak (1992) examined the details of national loan scholarship scheme implemented in India in 1964-65. He analysed its strengths and weaknesses and suggested some measures for the betterment of the scheme. The study found that the present student loan scheme is not effective both in terms of efficiency and equity point of view. If student loans are not accompanied by well formulated fee policies it will result in increasing inequalities with the rich getting public subsidies in the form of low levels of fees and the poor students paying back in full of their education costs

through student loans. It will result in declining participation in higher education by minorities.

Salim (1993) examined the private cost of higher education in Kerala. He classified the total private cost in to academic cost and incidental cost. Academic cost mainly includes pre- admission costs, fees paid to the college, private tuition fee, expenditure on books, stationery, project/thesis works, study tours and other instructional costs. On the other hand major items included in the Incidental cost are subscriptions, travel costs, hostel expenses, clothing, entertainment, donations and others. According to the study compared to general education actual cost per student in technical education was only a little higher at the degree level and considerably lesser at the post graduate level.

Salim (1997) analysed private cost of higher education in India in relation to the socio economic background of students. The study clearly showed that there is a positive correlation between private cost of education borne by students and the socio-economic background of their parents. Those students who belonged to socially and economically well off families spend more on education than those coming from low-income families. However, the private cost of engineering education was found to be 21percent higher compared to the private cost of general education. Similarly, the private cost of graduate degree course was higher than that of the postgraduate degree course for the engineering as well as arts and science education. Out of the total private cost of technical education, 50 percent was accounted by incidental items whereas it is much higher (61 percent) in the case of general education. Among incidental costs, expenses on clothing, travel and hostel were found to be important whereas among academic costs, expenses on private tuition, books and college fees were the most important. He found that the total private cost for technical education was Rs 5640 while it was Rs 4645 for general education. The study also found that all students especially the postgraduate engineering students received a considerable amount of money by way of subsidies.

Kumar (2004) studied the private cost of Medical and Para Medical education concentrating on MBBS, BDS, BSc Nursing, and B.Pharm in the year 2000 selecting final year students of 1996 admission batch from 5 government Medical Colleges in

Kerala. The study also analysed non-economic barriers to entry in to these courses. The author used the NCAER classification scheme of 1994 to categories students to various economic groups. As per the study, the average academic expense was higher for MBBS and BDS compared to BSc Nursing and B.Pharm courses. The study found that maintenance cost form major portion of the total private expenditure and academic cost accounts for only about 17 to 29 percent. According to the study, bulk of the MBBS students belonged to the high income and upper middle income groups while majority of the Nursing and B.Pharm students belongs to the low middle income and middle income groups. The major sources of financing private costs of education were from salary and wages, agricultural income, income from business, interest, and dividends. The important non-financial entry barriers were occupational and educational background of parents, ownership of assets, nature of schooling of students and place of origin.

Nampoothiri (2004)examined private and institutional costs of schooling and the nature, size and enrolment pattern of different types of management schools (government, aided and unaided) in Ernakulum district of Kerala for the period 1998-99 on the basis of data collected from 20 schools. The researcher collected details about private costs of education from 400 parents while the necessary information related to institutional costs were collected from the respective institutions. According to the study, the difference in private cost between the government and the aided schools were marginal although these costs in unaided schools were many times more than that in government and aided schools. The author found that institutional costs were least in government schools and highest in aided schools although the unit cost of school education in unaided sector was very much higher compared to other two sectors. However, the study concluded that the facilities and academic performance in unaided schools were much better compared to other two sectors.

The study by Rani (2004) is about the financing of higher education in India and observed that recent policy changes in India has resulted in diversion of resources from higher level of education to primary level of education. Economic reforms have resulted in steep rise in student fees, student loan programs operated by commercial banks and privatisation. These changes have negatively affected the low income groups and the author has suggested that government funding of higher education is

most essential for helping the poor students and for achieving our educational and social objectives.

Narayana (2005) examined the importance of student Loan by commercial banks in financing the budgetary subsidy to general Collegiate Education by Government and private aided colleges in Karnataka state. He observed that the present model schemes of student loan and subsidies is of great relevance to meet the changing needs of other states in India and also to other developing countries.

The report of National Knowledge Commission (2009) explained the different private and public sources of financing of higher education. The report considers financing of higher education as the common responsibility of both public and private sectors. The report suggested several sources of financing such as government support, better asset management, rationalization of fees, philanthropic contributions, private investment, public private partnership and attracting international students to India.

Olakulehin and Panda (2011) analysed comparative private costs of distance and regular University students in Nigeria. For the study, the authors selected a sample of 200 students from B.Sc Computer Science and BA English programs from the University of Lagos, Nigeria and the National Open University of Nigeria. The study found that the private costs of students studying through the distance learning mode were considerably lower when compared to those studying through regular mode of education.

Sanyal and Johnston (2011) studied about trends in the public and private financing of Higher Education around the world. The study confirms the inability of the governments to bear the rising cost of Higher Education. It explained the importance of self financing and private sectors in sharing the enrolment and financial burden. The study provides detailed information on the public-private partnership and of the role of non-profit and for-profit private sectors.

Saruparia and Lodha (2013) studied the private and social cost of several technical and professional courses offered by JNV University, Jodhpur. They found the cost incurred by students for completing B.E, M.E, MBA, LLB and LLM degrees

were Rs 48819, Rs 21400, Rs 72815, Rs 18608 and Rs 10451 respectively. They also found that all types of fees constitute about 13 to 42 percent of the gross private expenditure whereas the proportion of recurring cost forms 91 percent of total social cost for Commerce and Management, 85 percent for engineering and 70 percent for Law. The capital cost constitute 9 percent of social cost for faculty of Engineering, 1.7 percent for Commerce and Management and 4 percent for Law. According to the study the share of fees in recurring cost is the highest (42 percent) in the case of MBA but it is very low in the case of BE, ME, LLB and LLM courses.

Maria and Bleotu (2014) examined new sources of Higher Education funding. According to them state budget (Central and local) is the major source of finance. They also explained other important sources such as sources granted by population, enterprises involved in educational activities (transport, School supplies, uniforms), donation sponsorships, own incomes of educational institutions (research asset, rents, fees etc), self financing in education, student loan for study and other external sources (grants, external loans offered by external financial institutions).

Enaigbe and Olubor (2016) examined the factors affecting private cost of teacher education in South Nigeria in 2014-2015 academic sessions. The sample contained 2030 respondents drawn from twelve out of twenty Federal and state tertiary Institutions offering teacher education programme. According to the study academic cost includes examination charges, books, admission expenses, project / assignment cost, student handbook cost, faculty dues, stationary materials, practical materials and tools. The study also explained incidental cost as cost incurred on feeding, accommodation, transport, entertainment, and snacks, medical, laundry, identity card, replacement of the damages and club / societies. The study shows that factors like place of residence, gender, level of study, program of study, type of Institutions and ownership status of Institution have great influence on private cost of education. The study found that private cost of teacher education was higher in state tertiary institutions compared to their Federal counter parts and the private cost of University students was higher than that of college students.

Gopinath et.al (2019) analysed various factors influencing private cost of University education in Sri Lanka for the academic year 2016/2017. For the purpose

of the study they identified 21 cost categories. They examined the variability of these cost categories based on field of study, gender, programme duration and the socio-economic group of students. The study was on the basis of data collected from a sample of 419 students who have completed their bachelor's degree programme in private higher education institutes in Sri Lanka. The study revealed that 15 cost categories had varied significantly between fields of study undertaken where as gender, the length of the programme and socio-economic class shows considerable difference. Academic costs are mainly affected by the field of study and the length of the programme while non-academic costs are affected by socio-economic groups and field of study.

Ivanova et.al., (2019) studied about modern trends in the field of Higher Education funding. The study analysed various models of funding of higher education. An important trend found was the increase in the cost of training per student. According to them, the increase in the share of world production, globalisation, decentralisation, devolution and deregulation etc also brought changes in education. These changes encouraged the privatization of Higher Education and hence Universities were compelled to optimize their expenses. These universities started measures to expand their income by increasing tuition fees, encouraging philanthropy, democratizing knowledge and access and relying more on the market. They also encouraged foreign students and online education for in distance learning.

2.2.3 Studies related to Education of Muslims

Menon (1981) in her study examined various factors responsible for the educational backwardness of Muslims in Kerala. The study shows that social evils like seclusion of women, divorce, polygamy etc. were the main reasons behind the low educational attainment of Muslims in the state. She was of the opinion that government support in the form of fee concessions and grants are essential for increasing the number of Muslim girls attending vernacular schools.

Kareem (1989) analysed the development implications of educational backwardness of Muslims in India. The study reveals that Muslims were educationally, socially, and politically backward because of their illiteracy, irregular employment, low income and high incidence of poverty. The author was of the

opinion that Muslims were late to enter social transition and their educational backwardness has negatively affected their socioeconomic standards in terms of employment structure, asset ownership and assistance received from financial agencies. The study concluded that Muslims are trapped in a vicious circle of low economic status that leads to their low educational attainment, which in turn holds back Muslims from reaching higher employment categories.

Misiriya (1990) analysed the impact of emigration on the educational status of Muslim community in Kerala. According to her, emigration was a leveller and promoter of education among the educationally backward Muslims of Kerala. The study found that emigration has resulted in the proliferation of English medium schools in the private sector in Kerala. The study also observed high dropout rates among Muslim students at schools and colleges especially among the children of the non emigrant households. Moreover, the study found a direct relation between year of emigration and an increase in educational attainments of the members of the family.

Mondal (1998) analysed the educational status of Muslims in India. According to the study, Muslims constitute a cultural minority and this has resulted in an inferiority complex among them which has adversely affected their educational attainments. According to the author, frequent occurrence of communal riots, non-availability of educational facilities in the rural areas and lack of motivation from social reformers for modern education has all resulted in the educational backwardness of Muslims in India.

Anand (2002) examined the condition of Muslim women in Chungathara Panchayath in Malappuram District. The study revealed that Muslim women in this area are suffering from high levels of ignorance, low educational attainment, early marriage and motherhood and lack of social mobility. However the study shows that there has been some progress in the educational status of Muslims in this region as a result of Gulf migration.

Misiriya (2003) analysed the role of emigration in the educational development of Muslims in Kerala. She also examined the factors influencing higher education among the Muslims. The study was based on both primary and secondary data and the primary data was collected from a sample of 300 households in

Malapuram district of Kerala. According to the study, Muslims in Kerala has achieved rapid progress in the field of education since 1980 and among the factors responsible for the educational progress include institutional reforms, governmental policies, demographic transition and changes in income distribution. The study concluded that emigration of Muslims to the Gulf region has favourably influenced the educational performance of Kerala Muslims.

Nuna (2003) analysed the impact of the area intensive programme on education of Muslim girls in elementary schools. The study also analysed the impact of multi-stream residential higher secondary schools on education of Muslim girls. The study was based on both primary and secondary data. Primary data was collected through personal visit to 67 institutions of 8 states viz., Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Assam, Bihar, West Bengal and Madhya Pradesh. The researcher also collected qualitative information through personal visit to the areas and through observations, meetings and discussions with the concerned officials and beneficiaries of the scheme. According to the study, inspite of state government's attempts to increase enrolment, it could not make a significant impact on enrolment except in Kerala and Karnataka. The governments could not start any multi-stream residential higher secondary school for girls as per the scheme except in Kerala. The scheme was not at all implemented in Bihar and Assam and in other states the grant was diverted for other activities like construction/reconstruction/upgrading toilets, electricity connections, teacher's salaries, etc. The study concluded that the Area Intensive Programme had failed to serve its purpose.

Sachar Committee Report (2006) provides detailed information on the social, economic and educational conditions of Muslims in India. With the support of large-scale empirical data the report proved that the Indian Muslims is one among the economically and educationally backward communities in India. The report shows that in some cases the conditions facing Muslim community was below that of SCs and STs. The report reveals that by most development indicators the Muslim Community is lagging behind other religious groups in India. The committee notes a very high dropout rate among Muslims especially after middle school. In terms of attainment of the higher secondary and graduation levels and also in technical education Muslims lag behind other socio religious communities. The committee had

realised that poverty and social setup existed as the main obstacles for the attainment of education among Muslims. According to the report the worker population ratios of Muslims are very low. This is caused because of lower participation in economic activity by Muslim women. The report reveals that in spite of overall progress in educational status, the rate of progress has been the lowest for Muslim. The committee also made certain suggestions for improving the conditions of Muslims in India.

Nayar (2007) in her study examined the literacy and educational status and various factors responsible for the educational backwardness of Muslim girls and women in India. The study was based on the data from both primary and secondary sources. The study found that women's requirements got much importance in the national policies, plans, programmes, and schemes. However, the study revealed that there are significant variations in the living conditions of women in different socio-economic and religious groups. With regard to the status of education, Muslim girls and women lag behind their male counter parts and women in all other communities. The study concluded that disparities in regional development, poverty, patriarchy, large sized families and burden of domestic work are the most important reasons behind the educational backwardness of Muslim women.

Azeem (2012) analysed major educational problems and the need for guidance to Muslim adolescents of Malabar. The study has chosen1009 students of Malabar in the first phase and 140 students in the second phase. Mooney Problem Check list as used for the study in the first phase while questionnaire was used to collect data in the second phase. The study revealed that the educational guidance programmes in Kerala were deficient and this has adversely affected the education of Muslims. As the study found that majority of the parents of Muslim children is educationally backward both the parents and children require educational guidance. So the researcher has emphasized the need for providing proper guidance to the Muslim adolescents of Malabar.

Siddiqui (2013) examined the problems of school dropouts among minorities with special reference to Muslims in India. He found that dropout rate among Muslims was higher compared to the dropout rates among non-Muslims. According to

him, socio-economic factors, psychological factors, school factors and societal factors are responsible for dropouts among Muslim students.

Khan (2014) analysed the impact of migration in the development of Malabar region and on Muslims. For this purpose he has examined some of the socio-economic indicators and secondary data sets. He found that out of the three regions – Malabar, Travancore and Cochin, Malabar is under developed in terms of many socio-economic indicators like health, education, employment, per capita income etc. According to him, Kerala Muslims in general and Malabar Muslims in particular are one of the most economically and educationally backward communities and they are more backward even in comparison with the scheduled caste communities of the state. He concluded that Gulf migration could not bring any significant improvement in the life of people in Malabar and among the Muslims in the region.

Hafeez (2015) assessed the system of educational development among the Muslims in Kerala. According to him, Kerala Muslims has achieved remarkable progress in the field of education in the last 4 decades and behind these achievements, the dominant role was played by Muslim leaders in Kerala, Muslim league and the Indian National Congress. Similarly, the role played by educational institutions managed by Muslim managements like Muslim Educational Society (MES), Muslim Service Society (MSS), KMCT, Muslim Association Trivandrum, Kollam, Alappuzha are significant in the educational upliftment of the Muslim community in Kerala.

Shazil and Asma (2015) examined the educational vision of Muslims in India. The study also examined the problems of Muslim education in India along with an attempt to provide measures to solve these problems. According to the study, Muslims in India has not shown any interest in providing modern education to their children and they are averse to higher education especially to the girls. Some of the major problems in educating Muslims are their poverty, illiteracy of parents, large sized families, existence of early marriages, negative attitude towards girl's education, traditional teaching pattern of Madrasas and Maktabs. The authors suggested massive awareness programmes to the parents and the community as a whole about the importance of education in general and girls education in particular, about the need for modernisation of Madrasa education, about the benefits of small family. They also

recommended implementation of financial incentives like scholarships to the deserving eligible students as some of the measures to improve the educational status of Muslims in India.

Mueen (2016) examined the socio-economic transformation of Muslim women concentrating on the performance of Muslim girls of Malapuram district at school and higher levels of education for the last century. The study was based on primary and secondary data and provides information about women teachers in Malabar called 'Pen Usthad'or 'Mollachis'. The study reported that modern education by British has brought a favourable attitude among Muslim towards education although absence of leaders among them at the beginning was a big hurdle in the educational development of Muslims. According to the study, the imitative taken by government of Kerala, Migration to Gulf countries, the educational advancement of Christian and Hindu women, all have helped Muslims in Malabar to improve their educational status. As a result of all these factors, there has been a rapid increase in the rate of participation of Muslim girls in higher education. Increasing participation of Muslim women in politics, public spheres and in local bodies all are the result of the improvements in their educational status. However, the study found that representation of educated Muslim women in employment is very low and inadequacy of educational institutions and the possibility of unemployment are other obstacles in the way of educational attainment of Muslim women.

Vattilhodi (2018) analysed the impact of privatisation of higher education in India and the consequent emergence of self-financing educational institutions under Muslim management in Malappuram. The study was confined to 19 Muslim managed self-financing professional colleges and the required data was collected from 20 final year students from each of these colleges. According to the study, increased demand for professional courses has resulted in the mushrooming of self- financing private colleges in all parts of India and the proportion of female students in these colleges are much more than that of males. The study found that bulk of the students studying in these institutions are from well to do families and the motto of most of these colleges are profit maximization without any concern for improving the quality of education. However, the study concluded that emergence of self-financing colleges

under Muslim management has resulted in an increased participation of Muslims in higher education in Malappuram.

2.2.4 Studies about Professional achievements

Dennerstein et.al. (1989) examined the factors influencing the career success of Medical graduates on the basis of data collected from 1987 graduates of the University of Melbourne. The study found that the most important negative factor affecting career success was commitment to family whereas gender (being female) had a strong negative impact on career success, professional activities and income. According to the study men are motivated by professional factors while women are motivated by social factors in choosing a career.

Gracia and Ibanez (2006) examined the professional excellence among those who succeeded to get employment according to their education among the university graduates in Spain. The study was based on a survey conducted in 2003, among graduates of 11 university degrees. The authors have taken salary, professional category, labour stability, skills acquired on-the-job and job satisfaction as indicators for labour attainments. The study used regression models for finding the relation between these variables and indicated the necessity to differentiate among divergent classes of matching, as the labour achievements associated with the education-employment match differ considerably according to the indicator considered. The study also shows the involvement of structural and individual factors in the matching processes and in the related labour attainments.

Saravanan (2009) analysed the various employability skills for engineering professionals on the basis of data collected from 15 students as well as 15 placement officers. The study found that ability to identify and analyze problems in difficult situations, ability to expand and improve thinking skills such as explanation, analysis and evaluate discussion, ability to build a good rapport, and interact and work effectively with others are important attributes sustaining employability. According to the author soft skills such as communicative skills, teamwork skills, management skills, entrepreneurship skills, ethics, moral and professional values, leadership skills, critical thinking and problem-solving skills could help students to get employment in campus placements.

Truong et.al (2013) analysed the effects of educating students in soft skills in the success in their career development. The study was conducted among the graduates at universities of Economics and Business Administration in Vietnam and the study was on the basis of secondary data. The study has emphasized the importance of improving the skill composition of human resources and the need of revising the curriculum to serve the changing needs of the market demand. The study found that team skills, communication skills, leadership skills, customer service skills, and problem-solving skills were considered to be imperative in achieving a good career and job position. The study observed that acquiring technical skills alone does not guarantee a student to be a good employee or a good leader and that Communication skills, teamwork capabilities and leadership skills are very important in determining success in the workplace. The study concluded that it is very important to integrate soft skills in to the curriculum so that they could cultivate a professional dispositional habit that reflects the importance of such skills not only in business, but in life generally.

Cimatti (2016) examined the significance of soft skills in enhancing the quality of organisations and enterprises. According to the author it is essential to include development of soft skills in every discipline and the study emphasised the need for exploring new technologies for training students in soft skills. The study suggested that collaboration between educational institutions and industrial enterprises can play a vital role in the development of soft skills among students. Joint ventures, projects and programs between colleges and industries can help them to improve the competencies of students.

Ibrahim, et.al (2017) studied the effect of soft skill training on employee performance in a Malaysian company concentrating on managers and supervisors who had undergone a soft skill training programme. The study was on the basis of a sample of 260 trainees and they applied regression analysis to examine the relationship between soft skill acquisition and work performance. The findings showed that employees with training in soft skills exhibited greater performance with decision making and problem-solving skills. The study concluded that training in soft skills can improve performance of employees.

Ahmad et.al (2019) analysed the effectiveness of Entrepreneurship Education on the performance of Industrial Professionals on the basis of primary data collected from a sample of 204 graduated engineers working in the oil and gas industry of East Malaysia. They examined the influence of CTLI skills-Communication, teamwork, leadership and innovativeness on the job performances of the engineering students while in employment. For this purpose, the authors used coefficient of correlation to find the relationship between soft skills and performance of engineers. According to the study, there is a strong correlation of CTLI skills on the overall performances of the engineers. However, the study concluded that among the four skills, innovativeness had a higher impact on the job performance of workers.

Ergun and Sesen (2021) analysed the personal and contextual determinants affecting the employability perception of university students. The study also compared the effects of personal and contextual determinants affecting the employability perception of students. The sample consists of 463 university students from Turkish University in Isthambul. They applied Explanatory and confirmatory analysis and the variables were tested using hierarchical regression analysis. The study found that generic skills, personal circumstances, academic performance and external labour market had significant positive effects on the perception of employability. However, the work experience of students and consultancy has no effect on the student's perception of employability. Contextual factors were found to have a stronger influence than personal ones and the external labour market has been recognized as the strongest determinant of employability.

2.2.5 Studies about higher education in India and Kerala

Tilak (2001) examined the relationship between higher education and development and the problems of higher education in Kerala. He found a positive relation between higher education and economic growth and an inverse relation between higher education and poverty. According to the study, the expansion of higher education sector in Kerala is inadequate and the neglect of higher education has been the major obstacle in the rapid economic growth of the state. According to him, the most important problems in the higher education sector are inadequate public expenditure on higher education and hence raising funds from industry and

community, introduction of self-financing colleges and courses and he concluded that these problems will adversely affect the quality of higher education in the state. He attributed the high level of educated unemployment in the state to the defective system of higher education followed in Kerala.

Tilak (2004) reviewed the current education policies in India. According to him, although the number of higher educational institutions and number of students have increased significantly in India, higher education still is unattainable to the poorest sections of the population. He has emphasized that governments have started privatisation of Higher Education since 1990s and this has resulted in drastic cut in government expenditures on higher education. The government subsidies on higher education has been reduced by several universities in India and these educational institutions were asked to meet the cost by other sources like cost recovery measures, creating resources from student fees and to find fund from other non-governmental sources. The author concluded that these types of policies in higher education will lead to the uncontrolled growth of private higher education sector and result in laissez-faireism in higher education in India.

Salim (2004) analysed various entry barriers to higher education with special reference to medical and engineering courses in Kozhikode District. He conducted a census survey among the students who appeared for the entrance examination for Medical and Engineering courses during the year 1998-99. According to him, level of income, occupation of parents, caste, location of residence, financial resources for attending coaching for entrance examinations are some of the important factors influencing the chances of getting in to professional courses. The study also found that nearly 84 percent of the students who got admission belonged to the middle and rich sections of the society. The study concluded that professional education in Kerala was biased against the rural population and socially and economically backward sections of the society.

Azam and Blom (2008) evaluated the changes in attainment, enrolment and access to tertiary education in India from 1983 to 2005 on the basis of the nationally representative household surveys. The study found large disparities in enrolment between genders, between social groups and between different states in India. The

study also found that the disparities in tertiary education between states and between different categories of population are the outcome of disparities in completion of higher secondary education.

Nair and Nair (2008) analysed the situation of higher education in Kerala in terms of access, equity and quality. The study was on the basis of various studies conducted by different scholars during the period 2000-2004. According to the study there was a significant increase in the number of seats available for several professional courses owing to the emergence of a large number of private self-financing institutions in the state. The study also found that access to professional education is highly concentrated among the richer sections of society who reside in urban and semi urban areas and there were high rates of wastage in professional courses like Engineering. The study also reported that students from rural areas and mostly from poorer segments of the society are the beneficiaries of distance education system.

Kumar and George (2009) analysed the changes taking place in Kerala's education system from an inclusive one to an exclusive one and the major forces behind these changes along with the long term impact of such changes on Kerala's economy. According to them, Kerala's education system has shifted from a highly subsidized and state supported system to a largely self-financing system. Increase in private costs, growth of student financed institutions, strengthening of non-financial entry barriers and inadequate attention to the problems of the disadvantaged groups are the major contributory factors behind this change. Changes in disposable income, fiscal crises, declining share of government expenditure on education and many social and political factors are also responsible for the current exclusionary trend. They also reported that commercialisation, communalization and politicisation are now getting importance in Kerala's educational system. The study also found that the pass percentage and performance of students in various self-financing Engineering colleges in Kerala has been very low compared to the pass percentage and performance of students in government and aided colleges.

Kodoth (2010) analysed the important constraints facing the under graduate arts and science education in Kerala concentrating on government and government

aided colleges collecting data from 115 colleges. According to the study, the insufficient publicly funded colleges were a major barrier to access to higher education for students from marginalized sections of society. The study also found a greater preference among students towards courses in commerce, economics and business, low proportion of SC/ST students compared to their quota, higher proportion of girls compared to boys in arts and science colleges.

Zachariah (2010) analysed the changes in demand for higher education along with the changes in socio economic and academic profile of students in Arts and science colleges in Kerala. The details of students admitted in 1999 and 2006 batches were collected from six regular colleges and three self-financing colleges which were affiliated to Kerala, Calicut and Mahatma Gandhi Universities. According to the study, there was a three percent increase in student strength in 2006 compared to the student strength of 1999. Among the increases, the increase in the number of students belonging to SC/ST and OBC/OEC communities were remarkable. In addition, the study also revealed that bulk of the students studying in these universities is from poor socio-economic background.

George (2011) examined the inclusiveness of higher education concentrating on the trends in Gross Enrolment Ratio (GER) of different social groups (SC's, ST's, and others) and the various factors responsible for exclusion in post higher secondary education between 1993 – 94, 1999 – 2000 and 2004 – 05. The study found large disparities between SC's/ ST's and other social groups and SC's/ ST's lag behind other social groups in terms of gross enrolment ratio, access to employment opportunities, participation in technical and professional education, access to self-financing stream and pass percent in various examinations in higher education. Increase in private cost of education, withdrawal of government from education, emergence of self-financing institutions, non-financial entry barriers and inadequate attention to the problems of disadvantaged groups are some of the reasons behind the exclusion of certain communities from getting education.

Mani and Arun (2012) analysed the impact of liberalization on technical education and its consequences on both the quantity and quality of engineers in Kerala on the basis of secondary data. The study observed that actual out turn rates

have been steadily declining since 2004. This decline is witnessed both at the aggregate level, across different branches and across different colleges. The study revealed that the policy of liberalisation has resulted in the decline in the quality of engineers produced within the country.

Nithya (2013) examined exclusionary trends in self-financing education in Kerala on the basis of primary and secondary data. According to the author, SC/STs have been excluded from the higher education sector in Kerala because of several socio- economic, cultural and political reasons. One of the main reasons for this exclusionary trend is the proliferation of self-financing institutions in the state. The study found that the number of SC/ST students is woefully low in self-financing professional colleges owing to their low level of income as they cannot afford the huge fees charged by these institutions. The study concluded that the poor, Adivasies and Dalits are the victims of commercialization of professional education in the state.

Venkatesh and Pillai (2013) examined the satisfaction level of the engineering college students in Kerala on the basis of both primary and secondary data. The primary data was collected from 930 students of 31 Engineering Colleges in Kerala while secondary data was collected from the report published by the state planning board. The study found that many students are dissatisfied with the services provided by these colleges. The study suggested that the institutions need to develop a culture that places the utmost importance on students at all levels and ensure good discipline.

Basant and Sen (2014) examined the importance of socio – religious affiliations as a determinant of participation in higher education in India. The study was based on three rounds of the NSS data. For this, the authors formed seven Socio Religious Communities (SRCs)- Hindu SC, Hindu ST, Hindu OBC, Hindu Upper caste (UC), Muslim, Muslim OBC, Muslim general and other minorities. The study found that participation among all SRCs and also among all age groups in higher education has increased over the last decade. The study also highlighted the importance of various supply side factors in determining participation in higher education.

Rajasenan (2014) examined the gender bias and caste exclusion in engineering admission in Kerala. The study was on the basis of data collected from the Nodal

Centre of Kerala and also from the Centralised Allotment process. The study found that social status and economic affordability to quality education are the two important factors affecting the performance of students in the Kerala Engineering entrance examinations. The study also found wide gender disparity in high ranking levels of entrance examination.

Pramanik (2015) studied the effect of family income, parental education, gender, caste and religion on attaining higher education by an individual in India on the basis of secondary data. The study found that parental education and family income are the important factors affecting an individual's educational attainment. According to him, the chances of getting higher education to people from lower social groups are very much limited. The study also found that the participation of Muslims in higher education is very much lower across India. The study also found a decline in gender inequality in higher education in urban areas although similar trend was not seen in rural areas. The study confirms the importance of family background in the educational participation of an individual.

Rajasenan et.al. (2016) analysed educational exclusion in a social- class framework with reference to professional self-financing sector comprising engineering, medicine and management in Kerala on the basis primary data. According to the study, the growth of self financing institutions in the state has resulted in widening social inequality and in the exclusion of the marginalized social classes from higher education. Educational level of parents and family income are the important factors influencing the attainment of professional education. The study concluded that SC/ST students find it difficult to complete the courses successfully owing to their poor educational background and results in social exclusion.

Choudhary (2016) studied the expansion of engineering education in India concentrating on institutional expansion, enrolment pattern and patterns of public expenditure during the post-reform period on the basis of secondary data. According to the study, engineering education has attained large expansion in terms of the number of Institutions and student enrolments especially in the private sector as a result of uncontrolled growth of private Engineering institutions in the country. The study also found that engineering institutions are unequally distributed among various

States and about two-thirds of these institutions are in Tamil Nadu, Karnataka, Andhra Pradesh and Maharashtra. As per the study, public expenditure in the field of Engineering education has not increased in accordance with the increase in enrolment of students and the disadvantaged groups like women, SCs and STs lag behind other categories in terms of access to engineering education.

2.2.6 Other studies related to the topic

Mathew and Nair (1978) analysed the socio-economic characteristics of emigrants and their family. The study was conducted in two panchayat wards, of Thiruvananthapuram district. Perumathura in Chirayinkil panchayat and Puthukurichi in Kathinamkulam. The sample cnsisted 91 households of Perumathura and 34 households of Puthukkurichi. The study found that the education level of the parents of most of the emigrants was low and the level of education of the emigrants was also low but higher than that of their parents. According to the study about 96% of the migrants in the integrated sample were in Gulf countries. About 80% went abroad for the first time since 1970s, and 13% in the second half of the 1960s. The study found a positive correlation between emigration and growth of educational infrastructure in the centres of migration. As a result of emigration, educational institutions have emerged and progressed in many fields like motor and machine operations, welding, tailoring and construction related courses.

Jaleel (1982) examined the role of education in the development of Malappuram district. The study revealed that the economic backwardness of the people in the Malabar region is the major factor behind their educational backwardness and this in turn has resulted in their economic backwardness. According to the study, the recent educational development of Malappuram district is largely due to the inflow of foreign remittances by the emigrants in the region.

Prakash (1998) examined the impact of Gulf migration in Kerala and according to the study there are two major trends in the field of education in the migration centered areas in the state since 1980s. The first was the emergence of a large number of vocational training centers offering courses like lift operation, machine operation, motor operation, fire and safety, aluminium fabrication, tailoring, welding, plumbing, and other paramedical courses as these courses were helpful to the

emigrants to find jobs in the Gulf countries. The second trend was the mushrooming of unaided English medium schools and self- financing higher educational institutions under the management of the emigrants. The author concluded that there occurred a qualitative change in the vocational educational system in Kerala owing to emigration and these are on account of the changing employment opportunities in the Gulf countries.

Zachariah, et.al, (1999) analysed the impact of migration on Kerala's economy. According to the study the most important effect of migration is the progress in the field of education. They found wide variations in the educational expenditure between migrant and non-migrant families. Migrants spend a major part of the remittances for their children's education. However, the study shows that the average years of schooling of the members of non-migrants is higher than that of the members of emigrant households.

An examination of the studies reviewed above shows that bulk of these studies are about performance of students in general education which examined the student performance in terms of pass percentage, drop outs and wastage. There are some studies about the performance of students in the engineering colleges in Kerala (Sivasankaran 2004, Rajan 2011, Pushpangathan 2012). However, the study by Sivasankaran and Rajan are about the drop outs and wastage and they have not attempted to assess the performance of Muslim students. Although, the study by Pushpangathan covered the performance of Muslim students also, there is no specific attempt to examine the performance of Muslim students in the self financing engineering colleges. There are some studies about the education of Muslims in Kerala (Menon 1981, Kareem 1989, Misiriya 2003, Azeem 2012 , Khan 2014). However, these studies are about educational status of Muslims in general and none of these studies examined the performance of Muslim students in professional colleges in Kerala. Similarly, some of the studies reviewed also examined the private costs of higher education (Salim 1993; 1997) in Kerala. There is a study (Kumar 2004) about the private cost of medical and para- medical courses in Kerala. However, it also failed to examine the private costs of education of Muslim students in the self financing engineering colleges in Kerala. Likewise, there is a study (Choudary 2014) about the importance of training engineering students in soft skills, it is about the

engineering colleges in Andhra Pradesh and hence, the findings of this study may not be applicable to Kerala as the socio-economic and educational characteristics of Kerala is different from that of Andhrapradesh.

Hence, it is very clear from the examination of the above review of studies that there is no study that examined the performance of Muslims students in the self financing engineering colleges in Kerala. Similarly, there is no specific attempt to identify the costs of education of Muslim students studying in the self financing engineering colleges in Kerala. Hence, there is a need for examining the performance of Muslim students in Self financing engineering Colleges in Kerala assessing their educational costs and the effects of academic and soft skill performances on their professional achievements. Therefore, the present study is an attempt to fill the research gap existing in studies about Muslim students in self financing engineering colleges in Kerala.

Chapter-3

Educational Status of Muslims in Kerala

Kerala is a small state situated in the south west coast of India. It occupies only 1.18 percent of the total area of India and 3.4 percent of the Indian population. The state has made remarkable achievements in different fields of human development including family welfare, education, health, and overseas employment. But the progress it has made in different fields is not uniform especially in the fields of education and employment. The inequality along with backwardness is mostly seen in certain communities like Muslims, who have lived in the State for the past 14 centuries along with other communities (Muhammed, 2007).

Muslims always occupies a significant place in Kerala. Kerala accounts for 25.5 per cent of Muslims as one of the largest population concentrations among the Indian states after the state of Assam (Khan, 2014). The total Muslim population of the state as per 2011 census is 88.57 million which constitute 26.5 percent of the total population. This made them the first major minority community in Kerala and the second largest religious group after the Hindus.

Table 3.1
District-Wise Distribution of Muslim Population in Kerala 2001 and 2011

SI. NO	Name of District	2001			2011		
		Total Population	Muslim Population	Percentage of Muslim Population	Total Population	Muslim Population	Percentage of Muslim Population
1	Trivandrum	3234707	420512	13.34	3307284	397170	12.1
2	Kollam	2584118	473927	18.34	2629703	522804	19.9
3	Pathamthitta	1231577	56406	4.58	1195537	27124	2.3
4	Alappuzha	2105349	207507	9.86	2121943	389023	18.3
5	Kottayam	1952901	116588	5.97	1979384	57359	2.9
6	Idukki	1128605	81147	7.19	1107453	86893	7.8
7	Ernamkulam	3098378	450504	14.54	3279860	454401	13.8
8	Thrissur	2975440	488865	16.43	31103327	547838	17.7
9	Palakkad	2617072	703469	26.88	2810892	895857	31.8
10	Malappuram	3629640	2487392	68.53	4141956	2971927	70.9
11	Kozhikode	2878498	1078573	37.47	3089543	1093027	35.4
12	Waynad	786627	211367	26.87	816558	268880	32.9
13	Kannur	2412365	666536	27.63	2525637	656824	26.0
14	Kasargode	1203342	412867	34.31	1302600	547651	42.0
Total	Kerala	31838619	7641268	24.0	33387677	8856778	26.5

Source: Census of India 2001 and 2011

In Kerala,Muslim population is mainly concentrated in the Malabar region (71.97 percent). According to 2011 census Malappuram is the district with the largest Muslim population in Kerala in which the number of Muslim populations is more than 29 million (29.72 million). The districts of Kerala where the percentage of Muslims surpassed the state average of 26.5 percent is Malappuram (70.9 percent), Kasaragode (42.0 percent), Kozhikode (35.4 percent), waynad (32.9 percent) and Palakkad (31.8 percent). In Malappuram district, Muslims constitute70.9 percent of total population while in Pathanamthitta, Muslim population was least in number 27124 (2.3 percent) (Census, 2011).

3.1 Spread of Islam in Kerala

Arabia had trade relations with Indian ports long before the formation of the Roman Empire (Nadwi, 1962). These trade relations helped enormously for the mutual co-operation between the two subcontinents. These relations are the major factor which led to the introduction of Islam in Indian coasts.Some of the navigators and tradesmen came from Arabian shores settled in the coastal areas marrying local women. The native rulers provided all the needed facilities and help to them because their presence was necessary for the prosperity of the Rajas. Kerala was one among the important areas that Arabs have chosen for their trade activities(Hussain, 2007).The community formed in Kerala as a result of the Arab contact, is termed as Mappila. Mappilas are either the descendants' Arab traders or of Hindu converts to Islam. The spread of Islam was very fast in Kerala. The major reason behind this is the universal brotherhood of man preached and practised by Islam. It became a new experience to the vast mass of the low and down-trodden communities in Kerala like Cherumas, Pulayas, Pariahs, Mukkuvas etc. More over many other reasons are also responsible for the spread of Islam in Kerala like the existence of Arab colonies and geographical features of the area, the huge contribution of Muslim traders to the treasury and the cruelties of caste systems, political and religious factors in the region and the positive attitude of the native rulers (Muhammed, 2007).The major ports of Kerala like Ponnani of Malappuram district, Kodungallur of Trissur district and Kozhikode of Kozhikode district were the important centres of Muslims in Kerala.Majority of the Muslims were socially, economically and educationally backward. A sizeable portion of the community was fishermen, agricultural labourers,

peddlers and daily wage earners (Misiriya, 2013). The present-day Kerala was formed in 1956 by combining the Travancore Cochin regions with Malabar. Malabar region accounted for about 72% of Muslim population in Kerala. (Sebastian, 2019).

3.2 Kerala Muslims: The pre- colonial period

Muslims entered Kerala as traders and not as competitors. As such the arrival of Muslims and their expansion in Kerala was through peaceful ways. They are historically, socially and culturally different from Muslims residing in other parts of India. Their contributions to the development of trade and commerce as well as to the agricultural sector of Kerala were significant.They occupied an important place in the field of trade.They also got important place in regional markets and commercial centres, and also able to attain favours and support from local rulers (Manickam, 1974).

"The Muslim settlers in Kerala came from different strata of society and maintained their traditional customs and habits. Muslim education is in a sense as old as their faith in religion. The importance and stress given to education in the Prophetic sayings was recognized by all the true Muslims" (Vattilthodi, 2018). Muslim educational institutions might have started from the early days of Islam in Kerala.In the early days they provided religious education through mosques. They considered education as an important part of their religion and provided training to scholars in the field of Islamic religion and law. The Muslim leaders and Managers of Mosques gave utmost importance to the setting up of religious educational institutions for achieving prosperity and social transformation of the community (Misiriya, 2013). In Kerala there prevailed different categories of Muslim religious educational system like, Dars, Othupalli (maktabs) and Madrasas.Dars is an Arabic word meaning class. In Dars system Masjids are used for providing education. The imam or musliar of the Musjid provides free education to Muslim boys in Arabic and Islamic Sciences. It was recognised as higher religious education centres in early periods. One of the exceptional features of Dars system is that it will take ten to fifteen years to complete the course. Those students who passed from the Dars system are considered as eligible for getting admissions for higher studies in various premier Madrasas such as Darul Ulum, Deoband, Nadvathul Ulama, Lucknow etc.

The word Othupalli, was generally used to mean the single teacher primary schools where fundamentals of religious and Arabic education were imparted to Muslim boys and girls. It is also known as Pallidars or maktabs. The Imam of the mosque was the teacher who imparted education among learners.Generally Muslim children of four years were admitted to Makthab where they were taught recitation of small surahs of the Quran and the duas of prayers and certain dhikrs (enchanting hymns). They also be taught how to pray and can gain knowledge of other basic Islamic teachings. The medium of instruction was Arabic and method of teaching is oral. The students were required to memorize whatever they taught.There was neither any predetermined syllabus nor any central board or authority for regulating the functions. This educational system now performs the role of centres of Islamic education for school going students where they study modern subjects. Class time of Othupallies is arranged as either before or after regular school hours to accommodate school going children. Othupallies did not get any support from the side of the government. Instead, local people supported these institutions.

The word, Madrasa means the “place of study. Madrasa denotes a place where a sermon or lecture is delivered, and hence it applied to old-style schools where importanceis given to memory and discipline. In modern Arabic, “Madrasa” generally denotes any educational institution from preschool to high school. The term “Madrasa” can also be used to mean a modern school, college, or academy where lessons and lectures on various subjects are delivered to students. Madrassas were generally attached with the mosques. These institutions are meant for providing higher education to Muslim students. Higher education was imparted through the supervision of Imams. Such institutions were very few in numbers and located mainly in towns and cities. (Misiriya, 2013). They used Arabi Malayalam for teaching in Madrassas..

The practice of religious education in Malabar must have started at the same period as the first few Masjids were established in Malabar. This system evolved over a thousand-year period and even though for a century there was great emphasis on modern education, the religious education system survived and with the addition of some new trends it continues to thrive.

3.3 Muslim Education during colonial period

Islam spread in Kerala maintaining its own culture and style. They have several peculiarities which distinguished them from others. They followed a policy of give and take to expand their business and also kept a secular outlook in life. The Muslims of Travancore and Cochin under the rule of native princess enjoyed greater freedom. As a result of this they have been able to achieve better education compared to their counterparts in Malabar. They led a peaceful life on the coast in harmony with the sister communities and occupying a leading role in the trade and commerce of the land both within and outside Kerala (Muhammed 2007).

But the situation changed with the arrival of the Portuguese in 1498 A.D who considered Muslims as their enemies on the commercial as well as religious front. As a result Muslims lost their supremacy in trade and commerce and they withdrew to inlands (Panicker, 1981). During the last part of the sixteenth century Dutch sailors came to India. After the Dutch, many European powers invaded India. These invasions have resulted in the political and economic demolition of Muslims of Malabar and they became a society of landless labours, small traders and poor fishermen. After that Malabar Muslims got a recovery during the period of Hyderali and Tippu who invaded Malabar in the eighteenth century.

Through the land reforms implemented by Tipu Sultan Muslims of Malabar got jenmom rights on the land. This made their life safer. But this became a major reason for increasing antagonism between Hindus and Muslims (Dale, 1980). But the English East India Company altered the existing agrarian relations and gave the property rights to Hindu land lords. This resulted in the communal divergence between Hindu landlords and landless Muslims and the British utilised the situation by adopting the Divide and Rule policy (Innes, 1951).

From early periods onwards, the British government had started oriental learning in Kerala. But the Muslims followed a policy of non-cooperation in order to show their unabated hatred to English and maintained a negative attitude towards modern and western education brought by the British government. The relations of Muslims with the Christian community were also not satisfactory because they believed that Christian missionaries were promoting English education as a means for

propagating Christianity in India. Moreover, some of the textbooks used in schools contained hostile and scornful references to Islam and that produced hatred in the minds of Muslims. Because of all these Muslims were reluctant to receive English education (khan, 2008).

As a part of the policy of rejecting western education, they gave importance even to the study of Malayalam. From very early periods onwards Muslims of Kerala used Arabic language for their religious studies. They were biased against Malayalam because they considered it as Hindu language. Their affection for Arabic and opposition to Malayalam led to the introduction of a new script called Arabic Malayalam in which Arabic script is used to transcribe Malayalam (Sebastian, 2019). It is a fact that Mappila denial to study English and Malayalam only contributed to their marginalization.

Because of their negative approach, the whole community lacked opportunity to get any type of education other than religious education when all other sections of people received western education and obtained employment opportunities. It took great effort and time to change theirnegative attitude towards western education, at least partially. The religious reformers took a vigilant and sceptical attitude towards opening the community to western education. At a time, they realised the importance of education but did not trust western education (Nazeer, 2011).

During the British period, Kerala had remained as a region separated into three administrative entities, namely the princely states of Travancore and Cochin and the Malabar district of the Malabar Presidency which was directly under the British rule. However, there existed wide differences between these regions in terms of educational achievements. Malabar was far behind Travancore and Cochin during the whole period of British rule. At that time the Travancore and Cochin areas had faced several drastic changes in the social, economic and political spheres. Because of these changes these regions were able to make remarkable progress in the field of education. But during this period Malabar region remained educationally backward because of numerous factors such as the mutual hostility between the British and the Muslims, unwillingness on the part of the Muslims to attend schools opened for Hindus, the existence of defective system of land ownership, insufficient economic

development of the region and above all the frequent Mappila Riots and their brutal suppression in 1921.

From the first half of the 19th century onwards the Travancore Government took initiatives for starting educational institutions for common people. During this period Protestant missionaries also worked hard for the betterment of the education of the people. They took initiative to improve literacy of the people mainly for spreading Christianity among them. They thought that basic knowledge of reading and writing is essential for spreading Christianity. By the end of the 19th century, government itself implemented various programmes targeting the educational upliftment of Muslim community of Travancore region. Special schools were opened for Muslim students at primary and secondary levels and they were availed special fee concession. Government also provided full salary grants to Muhammaden Primary schools. Arabic classes were started in the ordinary schools and Arabic Munshis were appointed to teach Arabic as a second language in the elementary schools in 1915-16. In 1923-24 six Mohammaden Vernacular schools for girls were started. Even after these initiatives Muslim community lagged behind other communities in terms of literacy levels.

Table 3.2
Literacy Levels for Different Communities in 1933

Communities	Literacy in Percentage		
	Male	Female	Total
Hindu	39.9	14.2	27.5
Christian	46.0	25.1	35.7
Muslim	25.3	3.0	14.4

Source: Government of Travancore, Report of Travancore. Educational Reforms Committee,1933.

To overcome this miserable condition Government of Cochin implemented several programmes. The government provided a monthly stipend of Rs. 2 to every Muslim girl in primary classes of English schools. The stipend amount was Rs. 3 for upper secondary and Rs.4.5 for college classes. A monthly stipend of Rs. 3 was provided to the Muslim boys of upper secondary and college classes. A fee reduction

and special scholarship were also allowed to the eligible Muslim students during that time (Misiriya, 2013).

In Malabar the British government made necessary arrangements to spread modern education among Muslim community. As a part of this, government took initiative to teach Malayalam and Arithmetic in Othupallis with the help of Mullas (Priests). The government also started special schools known as Mappila Primary Schools in Malabar (Salim and Nair, 2002). But the outbreak of Mappila Rebellion of 1921 and its brutal suppression of by the British stood at the way of development of modern education among Mappilas of Malabar region.A general hatred is developed among Mappila Muslims towards everything connected with British rule including western culture and western education. After the rebellion the government appointed a committee in July 1922 to look in to the matters of Muslim education. The important recommendations of the committee included compulsory elementary education for Muslims particularly in Taluks affected by the Mappila rebellion and appointment of qualified Arabic teachers to impart religious education to Mappila students. Because of these measures the number of Mappila schools increased from 557 in 1921-22 to 1598 in 1931-32. The total student strength also recorded considerable increase. Inspite of all these measures Malabar region remained educationally backward compared to Travancore and Cochin (Sebastian, 2019).

Table 3.3
Education in Malabar District in 1871

	No. of Literates		Literates per 1000 of population		Literates in English	
	Males	Females	Males	Females	Males	Females
Total	3,16,307	78728	209	50	26740	5171
Hindus	2,44,081	66,529	247	63	21,349	2286
Musalman	58,820	3565	119	7	1198	29
Christians	12,994	8567	451	293	4128	2813
Others	142	67	516	234	65	43

Source: C.A Innes, Madras District Gazetteers, Malabar, p.108 as reported in Mathew(1987)

Table 3.4
Progress in literacy rates in Malabar: 1901–1931.

Year	Hindus		Muslims	
	Male	Female	Male	Female
1901	20.2	3.7	9.2	0.4
1911	22.2	4.4	11.0	0.5
1921	24.7	6.3	11.8	0.8
1931	26.2	8.2	14.2	1.2

Note: Literacy rates pertain to population of all ages and are expressed in percentages.
Source: (Alam, 2021).

The above table reveals that in the first quarter of the twentieth century the literacy rate of Muslim males was half that of Hindu males in the Malabar area and the literacy rate of Muslim females were negligible.

3.4 Kerala Muslims after Independence

At the time of the formation of Kerala state, wide disparities existed in the pace of progress of education between Travancore-cochin and Malabar regions. So, since 1956 high priority was given to fill the gap between Malabar and other regions of Kerala. Both the governments and the private agencies worked together for the promotion of education and for the upliftment of the backward and minority communities. They placed special emphasis on reducing the gender gap in literacy and educational levels, and reducing regional disparities in educational achievements. For achieving these objectives, they implemented various policy packages of educational incentives, concessions and reservations. Special attention was given to universalisation of primary education, promotion of education of girls and children of the depressed communities, integration of the private sector in to mainstream of educational efforts through liberal grants-in-aid and allocation of adequate resources for education (Salim and Nair, 2002). Government of Kerala began to spend a substantial part of its revenue on education. This has resulted in a significant progress in the educational achievements particularly in the general literacy level of the people in the state. The literacy rate of Kerala has increased by 29.39 percent within a period of 20 years from 1971 to 1991.During 1951 the literacy rate of Kerala was only 50.2 percent and which has increased to 93.91 percent in 2011 (Misiriya 2013).

Table 3.5
Literacy rates in India and Kerala. (in per cent)

India				Kerala		
Year	Male	Female	Total	Male	Female	Total
1901	9.83	0.60	5.35	19.15	3.15	11.14
1911	10.56	1.05	5.92	22.25	4.43	13.31
1921	12.21	1.81	7.16	27.88	10.26	19.20
1931	15.59	2.93	9.50	30.09	11.00	21.34
1941	24.90	7.30	16.10	NA*	NA*	NA*
1951	24.9	7.90	16.7	50.2	31.5	40.7
1961	34.5	13.0	24.0	55.0	38.9	46.8
1971	39.5	18.4	29.3	66.5	53.9	60.42
1981	46.62	25.44	36.03	80.9	75.4	78.15
1991	65.23	39.19	52.21	93.62	86.17	89.81
2001	76.56	54.20	65.38	94.2	87.64	90.92
2011	82.14	65.94	74.04	96.02	91.98	93.91

Source: 1. Government of India, Selected Educational and Related Statistics at a Glance, (Education Division) Planning Commission, New Delhi, 1969, P.89.
2. Census of India, 1971, 1981, 1991, 2001 and 2011.
NA* - Not available.

After Independence the Muslim community in Kerala had to face many problems. They remained economically and educationally backward compared to other communities. During British period the educational system was controlled mainly by the government. However, as a part of their revolt against British Government Muslims were hesitant to attain English education. Consequently, after the independence also Muslims remained educationally backward. Incidence of poverty was also comparatively high among them. Labour force participation rates among them are very low and they suffered from high levels of unemployment. Majority of workers among the Muslims are self employed or engaged in the activities like small trades, petty business, and daily wage earners (Misiriya, 2013).

Table 3.6
Occupational Distribution of Various Communities in 1968

Community	Coolies	Salaried	Employers	Self Employed	Total
Brahmins	7.1	52.37	11.73	28.80	100.0
Nair	30.16	24.75	8.07	37.02	100.0
Ezhavas	60.43	9.75	3.08	27.73	100.0
Other Hindus	56.83	4.83	15.16	23.19	100.0
SC	83.88	3.98	0.16	12.30	100.0
Christians	36.26	16.5	4.74	42.48	100.0
Muslims	47.16	7.22	5.14	40.95	100.0
Converted Christians	82.11	4.70	0.32	11.87	100.0

Source: Bureau of Economics and Statistics (1970), p.84

During 1960s Muslim representation was very low in high paying jobs. Their participation in government services was also very low. According to the Nettur Commission Report 1970 even though Muslims constitute 19.12 percent of population in Kerala their representation in the gazetted posts was only 6.3 percent and in non-gazetted posts was only 9.09 percent.

Table 3.7
Posts held by the Muslims in Various Government Departments in 1960

Departments	Total Post	Held by Muslims	
		Number	Percentage
Government Secretariat	1476	73	4.94
Public Service Commission	182	9	7.03
Judiciary	4866	284	5.83
Revenue	11076	652	5.88
Medical Department	887	57	6.42
Transport	6056	307	5.07

Source: Mohammed, (1962).p.80.

In spite of various measures taken by the Government to improve the conditions of Muslims in Kerala they remained socially and economically backward. Muslims particularly Mappila Muslims of Malabar were much backward compared to the other two communities during the period of formation of Kerala state. In terms of educational attainment Muslim community in Kerala was lagging. During 1940s only 42.5 percent of school-age Muslim boys and 23.3 percent of school-age Muslim girls are enrolled in schools. The Kumara Pillai Commission appointed to analyse the social and educational conditions of people of Kerala in 1960s found that among those students who have not completed their primary education, majority were the Muslim students. Only 2.83 Muslims per 1000 population were enrolled in 10^{th} standard. The Bureau of Economics and Statistics conducted a study about the literacy level of different communities in Kerala and came to the conclusion that the percentage of illiterates was much higher among the Muslims (44.68 percent) than other communities like Ezhavas (31.03 percent) and Syrian Catholic (21.73 percent)

Table 3.8
Percentage of Illiterates in Different Communities in 1970

Communities	Percentage of Illiterates
Muslims	44.68
Ezhavas	31.03
Syrian Catholic	21.73

Source: Bureau of Economics and Statistics, 1970, p. 51.

Studies show that the participation of Muslims in the field of higher education is also very low. During the period from 1954 to 1964, out of 100 seats available for MBBS in Kerala, Muslims occupied only less than 10 seats (University of Calicut, 2005). Even if Muslims constitute 19.12 percent of population of Kerala, they accounted for only 11.46 percent of Medical graduates, 3.33 percent of B.D.S graduates, 9.36 percent of Engineering graduates and 6.5 percent of Veterinary graduates (The Nettur Commission Report, 1970).

Table 3.9

Educational Attainment of each Group of Citizens, 1968-69

Group of citizens	Percentage of population	Graduate in Arts and Science	Degree in engineering	Degree in Dental Surgery	Veterinary	Ayurveda	Agriculture	Law	Medicine
SC	7.8	2.6	1.7	0.0	4.4	1.9	3.85	7.57	3.11
ST	1.8	0.2	0.0	0.0	0.0	0.0	0	0	0
Group1	22.2	13.3	15.6	0.0	10.9	31.7	17.31	13.65	10.81
Group11	19.1	6.6	9.3	3.3	6.5	5.8	11.54	7.90	11.46
Group111	16.0	33.2	28.6	30.0	23.9	6.7	23.07	20.72	26.60
Others	33.1	44.1	44.8	66.7	54.3	53.9	44.26	50.16	48.02
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Nettur Commission Report, 1970.

Note: Group1- Billava, Budhist, Ezhava, Idiya, Illuvan, Ishuwan. Izhawan, Thiyya

Group11- Muslims (all denomination following Islam)

Group111- Christians (all denominations)

In the year 1961-62 out of 4,405 seats available in the polytechnics in Kerala, Muslims occupied only 352 seats i.e. about 8.0 percent (Buereau of Economics and Statistics, 1970). An analysis of community wise enrolment of students in various colleges of different universities of Kerala in1984-85 (Table 3.10) reveals that enrolment of Muslim students in these colleges were much less than that of the enrolment of other communities (Directorate of Collegiate Education, 1984 - 85).

Table 3.10
Community wise Enrolment of Students in Colleges in Kerala during 1984-85.
(District wise analysis)

District	Total Population (according 1981 Census)	Percentage Distribution of Population by Religion			Total Number of College Students	Percentage Distribution of college students by Religion			Total
		Hindu	Muslim	Christian		Hindu	Muslim	Christian	
Trivandrum	2596112	70.0	12.5	17.5	28581	68.9	8.9	22.2	100
Quilon	2813650	63.3	14.0	22.7	34605	69.9	11.6	18.5	100
Kottayam	1697442	47.5	5.0	47.5	53077	32.7	3.7	63.6	100
Alleppey	2350146	65.5	7.5	27.1	18477	67.1	4.51	28.4	100
Ernakulam	2535294	46.3	13.4	40.2	25778	56.7	7.0	36.3	100
Trichur	2439543	60.0	14.9	25.1	27213	56.2	6.7	38.2	100
Idukki	971636	50.3	6.5	43.2	6592	29.3	8.1	62.6	100
Palghat	2044399	73.1	23.1	3.75	12951	85.7	6.5	7.8	100
Wynad	554026	50.6	24.5	24.5	2482	47.4	8.9	43.7	100
Malappuram	2402701	32.1	65.5	2.4	13420	51.1	42.9	6.0	100
Calicut	2245265	61.2	33.9	4.8	20643	69.2	20.8	10.1	100
Cannanore	2803467	64.8	25.7	9.6	16505	78.6	9.5	11.9	100
Pathanamthitta	-	-	-	-	4950	55.9	5.7	38.4	100
Kasargode	-	-	-	-	4094	83.9	10.5	5.6	100
Total	25453680				260324				

Source: Census of India, Household Tables, 1981 and Directorate of Collegiate Education Trivandrum, 1984-85.

Note: Pathanamthitta district and Kasargode district were formed after 1981.

However, by 1990s school participation rate of Muslims had shown phenomenal progress. (Table 3.11).The participation of both boys and girls has greatly improved. They were able to gain a foothold with other communities. This is a great achievement in the field of education for Muslims. Since 1990s they have made further progress in education. Almost all Muslim children in Kerala in the age group of 5–19 years are now attending educational institutions. These achievements of Muslims indicate that they have established an important place in the field of education in Kerala (Alam, 2021).

Table 3.11
Proportion of Children Attending Educational Institutions in 1990s.

Religion	Kerala			All India		
	Total	Boys	girls	Total	Boys	girls
All	82.7	83.6	81.7	59.5	65.7	52.3
Hindus	82.7	82.1	83.2	59.9	66.5	52.2
Muslims	81.4	85.4	77.5	52.3	54.7	46.5
Others	84.5	86.0	83.2	70.2	73.1	67.0

Note: Thefigures pertain to population aged 5–19.
Source: (Alam, 2021).

3.5 Factors Contributing to the Educational Progress of Muslims in Kerala

Compared to the Muslims of the other Indian states, Muslims of Kerala have achieved higher socio-economic and educational development. This is reflected in various indicators of socio economic development of the Muslims in the state (Khan 2014). Several socio economic and political factors contributed to the advantage of Muslims in this sphere.

3.5.1 The efforts of scholars

Many scholars took initiative for the educational upliftment of Muslims. Sayyid Sanaulla MaktiT hangal(AD 1847-1912), Shaik Muhammed Hamadani Thangal (d.AD.1922), Vakkom Muhammed Abdul Qadir Moulavi (1873-1932),Calilakatt Kunhammed Haji (d AD.1919) and K. M Moulavi were the most important among them. Sayyid Sanaulla MaktiThangal popularised the use of teaching tools and employment of new techniques in teaching. He made significant contributions in reforming Arabic-Malayalam script. Shaik Muhammed Hamadani Thangalwrote articles in journals like ‘The Muslim’ calling upon Muslims to work towards the spread of education. He pressurized the government to make provision for teaching Arabic along with Malayalam and English. He along with Sayed Muhammed Thangal prepared an Arabic – Sanskrit – Malayalam dictionary. Vakkom Muhammed Abdul Qadir Moulavi used the columns of his journals to generate awareness among the community as well as among the policy makers about the sheer backwardness of Muslims in education. As a consequence of his constant efforts government took steps to appoint Arabic Munshis in schools, and inspectors to supervise Arabic teaching. Scholarships and teaching grants were provided to help Muslim students. Local

committees were formed to persuade Muslim parents to send their children to schools. Calilakatt Kunhammed Haji restructured the traditional Dars system of his time and initiated new methods and techniques in the teaching of Arabic, Quran, traditions and Islamic History. The text book he wrote, the renewed Arabic Malayalam he established and the modern method he introduced in teaching language paved the way for educational expansion among Muslim community. Moulavi fought against all types of Shirk (polytheism) which had prevailed among Muslims of Kerala at that time. He made notable contributions in the establishment of educational institutions to spread religious and modern education among the Muslim community of Kerala (Muhammed, 2007) .

3.5.2 The Indian Union Muslim League.

The Indian Union Muslim League (IUML) came in to existence on 10th March 1948. It was formed mainly to safeguard the rights of Muslims and to ensure their political mainstreaming and has played an important role in spreading literacy among Muslims of Kerala. IUML has been a main constituent of the two coalition fronts ie, Left Democratic Front(LDF) and United Democratic Front(UDF) which have been alternating since 1980. IUML handled the Education portfolio in the majority of the coalition governments since 1967. In 1968 Calicut University was established in Malabar. Shri. C.H MuhammedKoya held the Education portfolio during this period. One of the major contributions of IUML to the Muslim community is in the education sector. It took initiative to start educational intuitions both in government and aided sectors (Sebastian, 2019).

3.5.3 Community Organizations

During the first half of twentieth century, many community organizations come in to existence in several parts of the state. These organisations have greatly contributed to the educational renaissance of the Muslim community.

3.5.3.1 Kerala Muslim Aikya Sangham

In 1922, Kerala Muslim AikyaSangham was launched under the leadership of Kottappurath Seethe Muhammed Haji.It was the first socio-religious organisation of Muslims of Kerala. Its main objective is to promote education and unity among Muslims and gave much importance to the promotion of women education among Muslims. In 1934 , it dissolved and merged in to Kerala Muslim Majlis (Mohammed, 2007).

3.5.3.2 The Mujahid/Salafi Movement

The Mujahid/Salafi Movement played a vital role in the reformist activities of the state. By getting inspiration from the activities of Muslim AikyaSangam, the Ulama in Malabar wanted to follow up this mission. K.M. Moulavi and MCC Abdu-RahimanMoulavi were the important leaders of the movement. They tried to reactivate the Kerala JamiyyathulUlama. Through public lectures and writings in journals they worked for the revitalization of the community. The movement gave maximum encouragement to the expansion of religious as well as secular education among Muslims (Mohammed, 2007).

3.5.3.3 Jama'at-e-Islami Hind (Kerala)

AbulA'laMawdudi, a famous Islamic thinker and scholar who established Jama'at-e-Islami Hind in 1941. This organisation made notable contributions in the field of Muslim education.It introduced an eleven year Arts and Islamic Course (AIC). Its syllabus contained, subjects like economics, politics, history, commerce etc along with religious topics. Apart from this, the jama'at has started several Madrasas, Schools and Arabic Colleges for the educational development of Muslims (Mohammed, 2007).

3.5.3.4 The Sunnis

The word Sunni means those who follow the Sunnath. Samastha Kerala Jam'iyyatul Ulama was formed by the Sunni Ulama in 1934 as a counter part of the Kerala Jam'iyyatul Ulama. The Samastha has a large network of Madrasas under its 'Vidhyabhyasa Board'. They have implemented several reforms in the mode of running Madrasas and also decentralized them into various ranges. The board has also established a number of Arabic colleges in different parts of the state (Mohammed, 2007).

3.5.3.5 Rouzathul Uloom Association and Farook College

The Rouzathul Uloom Association, the parent body of all educational and cultural institutions in the Farook College campus, was established in 1942. Its first president was Moulana Abussabah Ahmed Ali who was an Al- Azhar educated scholar and a social reformer. The association has been responsible for the establishment of the following important institutions: (Muhammed 2007).

- RouzathulUloom Arabic College (1942)
- Farook College(1948)

- Farook Higher Secondary School (1954)
- Farook Training College (1961)
- Al- Farook Educational Centre (1991)
- Al- Farook (English- Medium) Residential School (1991)
- MasjidulAzhar with a capacity of 2500where prayers are offered by students of all campus institutions.

3.5.3.6 Muslim Educational Society

The Muslim Educational Society was established in 1964 by a group of young Muslim professionals. They operate educational institutions in different parts of Kerala specializing in science, medicine, arts, humanities, commerce etc. They have 150 educational institutions in the state including 28 colleges, 12 secondary schools and 36 CBSE schools and have over 100,000 students. Their activities helped not only the Muslims but also people from other communities in acquiring good quality education (Sebastian, 2019).

The following table (Table 3.12) reveals the significant place of Muslims in the school and college level education sectors of Kerala. .

Table 3.12
Region- wise and community-wise ownership of aided educational institutions.

	Malabar		**Travancore-Cochin**		**Kerala**	
	Aided schools (No.)	Aided colleges# (No)	Aided schools (No.)	Aided colleges# (No)	Aided schools (No.)	Aided colleges# (No)
Christians	387(5.42)	11(5.39)	2209(31.84)	84(41.17)	2596(36.36)	95(46.57)
Muslims	1174(16.44)	29(14.22)	210(2.94)	9(4.41)	1384(19.38)	38(18.63)
Hindus	1866(26.13)	15(7.35)	1091(15.28)	48(23.53)	2957(41.41)	63(30.88)
Others@	77(1.08)	7(3.43)	126(1.76)	1(0.49)	203(2.84)	8(3.92)
Total	3504(49.08)	62(30.39)	3636(50.92)	142(69.61)	7140(100.0)	204(100.00)

Source: Sebastian, J. (2019). Under representation of Muslims in Higher Education: How and Why the Kerala Story is Somewhat Different?. Research paper submitted to Vikas Anvesh Foundation

Aided colleges include arts and science, engineering, polytechnic and homeoand ayurveda colleges. @ 'Others' include secular institutions run by co-operatives and trusts whose members are drawn from all communities.

Figures in the bracket are percentages to total aided schools and aided colleges in Kerala.

3.5.4 Gulf Remittances

The rapid increase in oil prices in 1970s, and the consequent increase in employment opportunities in the Gulf countries resulted in the large scale migration of people from Kerala to these countries. Most of the emigrants from Kerala were Muslims. The socio economicconditions that prevailed during 1960s, 1970s and 1980s and also the high incidence of poverty and unemployment among the Kerala Muslims compelled them to emigrate to the Gulf countries mainly to Soudi Arabia (Khan 2019). The Gulf Migration and the consequent inflow of remittances led to the economic and social upliftment of the Muslim community of Kerala. It has considerably improved their educational status. They used remittances to provide better education to their children (Misiriya 2013). Because of growing importance of English language, parents preferred English medium schools for the education of their children. Many educational institutions were established under Muslim management using remittances from Gulf. Thus the Gulf migration and the consequent socio economic changes helped the Muslim community to provide good education to their children and hence to overcome their economic and educational backwardness. As a result of Gulf migration, the participation of Muslims in higher education has increased significantly (Misiriya, 2013).

3.5.5 Liberalisation and privatisation of education

The liberal policies of the government since 1990s paved the way for the educational expansion of Muslims in Kerala. Because of the liberalisation of education there occurred explosion of unaided schools and self-financing educational institutions in Kerala (Shihabudheen, 2014).

The Muslim community effectively utilized the situation and new schools and higher education institutions came into being under Muslim management. In 1994 first Self-Financing Engineering College under the Muslim management was established in Kerala. After that a large number of reputed Professional institutions came in to being under Muslim management. The emergence of self-financing educational institutions and starting of job oriented professional and technical courses under the private sector during the liberalisation period has paved the way for the

development of educational achievements and skill of the members of the Muslim community (Misiriya 2013).

Table 3.13
Growth of Higher Education Institutions, 1991- 2011

Type of Institution	1991				2001				2011			
	Govt	Aided	Unaided	Total	Govt	Aided	Unaided	Total	Govt	Aided	Unaided	Total
Arts& Science College	40	132	0	172	40	150	160	350	58	152	234	444
Engineering Colleges	5	3	0	8	9	3	130	142	9	3	163	175
Medical/Nursing/Dental/ pharmacy/ Ayurveda/ Homeo	21	11	1	33	25	18	139	182	48	36	163	247
B.Ed Colleges	4	17	40	61	4	17	147	168	-	-	-	170
Polytechnics	26	6	0	32	43	6	9	58	-	-	-	66
Total	96	169	41	306	124	216	560	900	-	-	-	1102

Source: Devi, V. N. (2020). A study on regional disparities in higher education in kerala. *Journal of Critical Reviews*, *7*(10), 1926-1929.

Table 3.14

Muslim Presence in the self-financing education sector of Kerala

Discipline	Total number of institutions in the self financing sector	Institutions owned by Muslims	Muslim institutions as a percentage to total number of institutions
Arts and Science	391	78	19.95
Management	45	5	11.11
Law	19	4	21.05
Training	130	28	21.54
Engineering	131	20	15.27
Modern medicine	23	4	17.39
Ayurveda	14	1	7.14
Nursing	117	9	7.69
Dental	20	5	25.00
Total	890	154	17.30

Source: Sebastian, J. (2019). Under representation of Muslims in Higher Education: How and Why the Kerala Story is Somewhat Different? Research paper submitted to Vikas Anvesh Foundation

The above table (Table 3.14) provides detailed information on the participation of Muslims in the self-financing education sector of Kerala. It reveals that Muslim managed self financing educational institutions constitute more than 17 percent of the state's total self-financing educational institutions. Commencement of Muslim managed self-financing educational institutions, as a part of privatization of higher education has played a crucial role in providing increased opportunities for higher education particularly for Muslims. Moreover these institutions also increased occupational opportunities in the field of higher education, especially to Muslims. So it is evident that Muslim managed educational institutions are inevitable for the upliftment of marginalised communities in general and Muslims in particular. (Vattilhodi, 2018).

Conclusion.

Kerala is a state which gives utmost importance to education. Kerala tops other states in the case of literacy and education. But the educational and employment status of Muslims in Kerala was abysmal due to various social, economic and political factors. They remained one among the most marginalised communities in the state. Either they had little access to new educational facilities or they kept themselves away from modern education.But since 1970's they have able to achieve fast progress in different walks of life especially in the field of education. Even though less than proportionate to their share in population they have made knowntheir strong presence both in general and higher education sectors. Many factors contributed to this great achievement of Muslims. Continuous efforts of famous Muslim leaders and Muslim organisations, liberalisation policy of the government and the resultant emergence of self financing educational institutions are important among them. Migration of Muslims especially to the gulf region also pawed the way for the expansion of education among them.

Chapter 4

Performance of Muslim Students in The Self Financing Engineering Colleges in Kerala

Academic performance of students is affected by several factors which include individual, social and institutional characteristics. Among these, we can make them as student factors, teacher factors, parent factors, college or institutional factors. Student factors that affect performance are students' learning skills, daily study hours or time they devote for study etc (Rajan 2011) Teacher factors are vital in the academic performance of students and they include quality of teacher's, motivation and relationships between teachers and students. College or institutional factors like learning infrastructure in the institution including the availability of books, teaching learning materials, laboratories and equipments for practical sessions are vital factors that influence the academic performance of students (Rajan 2011). Parental factors like the socio-economic background of parents including their level of education, economic status including employment and income, their concern in their children's academics and providing them their academic needs can also have an effect on the student's performance. Factors like the family background, educational environment and financial conditions of the learners may also affect the performance of students (Rajan 2011). Other factors like gender, age, residential area, medium of instruction, private tuition and accommodation etc can have their effect on the performance of students (Rajan 2011). As such, in this chapter we have made an attempt to assess the performance of students on the basis of several indicators. Before going to analyze the performance of students in the engineering colleges, we have examined the socio-economic background of the students in terms of their parental education, occupation etc along with their performance in secondary, higher secondary and entrance examinations for getting admission in to engineering courses.

4.1 The Socio-Economic Background of Muslim Students

We have examined the educational background of the students in terms of the level of parental education which is depicted in the table 4.1. It can be seen from the table that about 53 percent of fathers and 50 percent of mothers have an educational level of 10^{th} or below 10^{th}. About 34 percent of fathers and 27 percent of mothers have an education of graduation and above. Thus the educational background of the students reveals that bulk of the parents have school education and have average educational background.

The employment and activity status of parents are given in table 4.2. It shows that vast majority of students fathers are employed in private sector or they are self employed (73 percent). Only 8.91 percent among fathers are employed in government service. It is found that, out of the total employed fathers; about 65.2 percent are working within India whereas about 31.5 percent are employed abroad. Hence, it can mean that about one third of the families are very rich families as the income from abroad is generally much higher than that earned inside the country. It is noteworthy that majority of the mothers (84 percent) are housewives. Only 16 percent of them are employed and all of them are employed in Kerala. Only about 5.43 percent of mothers are employed in government service. The monthly family income of about 31.53 percent of the students ranges between Rs. 40,000 and Rs. 100000 and about 14 percent of the families have a monthly income above one lakh. This shows that most of the students studying in the self financing engineering colleges are really from very rich families (table 4.3). Thus our study is in conformity with the findings of Salim (2008) who found that the opportunities for professional education are mostly limited to students with high economic background. Among the students about 55 percent of the students are males and females accounts for only about 45 percent which shows that girls among the Muslim community may have a hesitation for higher studies (Table 4.4).

Table 4.1.

Classification of Students on the basis of Parental Education

Educational Level	Father	Mother
Below 10th Standard	100 (21.7)	105 (22.8)
10th Standard	145 (31.5)	125 (27.2)
Higher Secondary	60 (13.0)	105 (22.8)
Graduation	140 (30.5)	90 (19.6)
Post-Graduation and Above	15 (3.3)	35 (7.6)

Source: Primary Data. Figures in parenthesis represent percentages to the total

Table 4.2.

Classification of Students on the basis of Parental Occupation and Place of Employment

Employment Category	Father	Mother	Place of employment	Father	Mother
Government service	41 (8.91)	25 (5.43)	Kerala	290 (63.04)	75 (16.3)
Private sector job	120 (26.08)	35 (7.61)	Within India	10 (2.17)	-
Self-employed	215 (46.74)	10 (2.17)	Abroad	145 (31.52)	-
Agriculture	69 (15)	5 (1.09)	Others	15 (3.26)	385 (83.7)
Others	15 (3.26)	385 (83.7)	-	-	-

Source: Primary Data. Figures in parenthesis represent percentages to the total

Note: Others include those who are not employed or expired.

Table 4.3.

Classification of Students on the basis of Monthly Family Income

Below Rs 20000	140 (30.43)
Rs 20000- Rs 40000	110 (23.91)
Rs 40000- Rs 60000	105 (22.83)
Rs 60000- Rs 100000	40 (8.70)
Above 100000	65 (14.13)
Not disclosed	10 (2.2)

Source: Primary Data. Figures in parenthesis represent percentages to the total

Table.4.4

Classification of Students According to Gender

Male	252 (54.8)
Female	208 (45.2)

Source: Primary Data. Figures in parenthesis represent percentages to the total

4.2 Muslims Students Performance in Schools and in Entrance Examination

4.2.1 Performance of Muslims Students in Schools

The performance of students in schools are analysed in terms of their marks in 10th and plus two. We have also examined the medium of instruction, the syllabus (state or CBSE) and type of schools (Government or Unaided) at 10th and plus two to get information about their school education. These are depicted in the following paragraphs.

Table 4.5

Classification of Students according to School and Plus Two they studied

Type of School	High School	Plus two
Govt. and Aided	313 (68)	368 (80.0)
Unaided (Self Financing)	147 (32.0)	92 (20.0)
Medium of Instruction		
Malayalam	200 (43.5)	--
English	260 (56.5)	460 (100)
Syllabus		
Kerala State	312 (67.8)	363 (78.9)
CBSE	148 (32.2)	82 (17.8)
Others (ICSE and other States)	--	15 (8.3)

Source: Primary Data. Figures in parenthesis represent percentages to total

About 68 percent of the students have studied in government or government aided schools with Kerala state syllabus (67.8 percent) although the medium of instruction of more than 56 percent were English (Table 4.5). In the case of Higher Secondary education (Plus two), bulk of them have studied in Government or government aided (80 percent) schools with state syllabus which means that there is a tendency among the students to switch over to the state syllabus after 10th. This is due to the feeling among the students and parents that there are better chances of scoring a higher percentage of marks in state syllabus compared to CBSE for plus two. Higher percentages of marks at plus two may help them to get admission in to the engineering courses as plus two marks are considered as one of the components of engineering admission.

Table 4.6
Classification of Students according to their 10th and 12th Marks

Marks	10th Marks				12th Marks			
	Total Marks	Physics	Chemistry	Maths	**Total Marks**	Physics	Chemistry	Maths
Below 50%	12 (2.6)	12 (2.6)	12 (2.6)	13 ((2.8)	–	--	--	--
50 - 60%	12 (2.6)	13 (2.8)	13 ((2.8)	12 (2.6)	32 (6.9)	26 (5.6)	30 (6.5)	35 (7.6)
60 - 70%	39 (8.5)	42 (9.1)	35 (7.6)	40 (8.7)	35 (7.6)	81 (17.6)	56 (12.2)	60 (13.0)
70 - 80%	86 (18.7)	55 (12)	65 (14.1)	87 (18.9)	118 (25.7)	110 (23.9)	146 (31.7)	120 (26.1)
80 - 90%	145 (31.5)	164 (35.7)	171 (37.2)	144 (31.3)	184 (40.0)	171 (37.2)	141 (30.7)	150 (32.6)
Above 90%	166 (36.1)	174 (37.8)	164 (35.7)	164 (35.7)	91 (19.8)	72 (15.7)	87 (18.9)	95 (20.7)

Source: Primary Data. Figures in parenthesis represent percentages to total

The performance of students in their Secondary and Higher Secondary levels have been examined in terms of their total marks as well as marks obtained in Mathematics, Physics and Chemistry. It can be seen from table 4.6 that about 95 percent of the students have secured more than 60% and 67.6 percent have scored more than 80 percent marks at their 10th standard final examinations. There are only 2.6 percent who have scored less than 50 percent marks in their 10th standard examination. As such, it is very clear that the performance of the students at their 10th standard was very good. A similar pattern is seen in their performance in the core subjects like mathematics, physics and chemistry as about 94.6 percent of the students have scored more than 60% marks in these subjects in their 10th examinations.

Students performance in their plus two (12th standard) shows that about 20 percent of them have secured more than 90% marks whereas nearly 60 percent of the students have secured 80 percent and above in their plus two final examination. There are only 7 percent who got less than 60 percent. The performance of students in Physics, Chemistry and Mathematics shows that more than 50 percent of them have scored above 80 percent and only about 6 to 8 percent of them have less than 60 percent marks in these subjects. Hence, it is very clear that the performance of students in core subjects like Physics, Chemistry and Mathematics are much better than their aggregate result (total marks).

4.2.2 Performance of Students in the Entrance Examination

In Kerala, students are admitted to Engineering courses through the Centralized Admission Process (CAP) on the basis of their rank in the entrance examination. The Commissioner for Entrance Examinations (CEE) conducts entrance examinations in Kerala every year. Hence, most of the aspirants for engineering courses will attend coaching for getting a better rank in the entrance examinations so as to get into a preferred branch and college for engineering. There are a large number of coaching centers and institutions in the state offering pre-entrance coaching even from the high school onwards although vast majority of students join entrance coaching only from their higher secondary level (plus two). Here, we have made an attempt to assess the performance of students in the state level entrance examinations along with the details of the duration of the coaching they have undergone and the number of chances they have taken to get admission in to the engineering courses in the college.

Table 4.7
Classification of Students According to the Details of Entrance Coaching and Examination

Attended Coaching	258 (56.1)	Chances in which got Admission		Rank in the Entrance Examination	
Not attended	202 (43.9)	1st Chance	390 (84.8)	Below 10,000	79 (18.1)
Attended Less than a Year	170 (65.9)	2nd Chance	70 (15.2)	10,000 -20000	190 (43.6)
One Year	78 (30.2)	-	-	20,000 - 30,000	120 (27.5)
Two Years	10 (3.9)	--	--	Above 30,000	47 (10.8)

Source: Primary Data. Figures in parenthesis represent percentages

More than 56% of the Muslim students of the Self-financing Engineering Colleges have attended coaching classes for Entrance Examination and among those who have attended entrance coaching about 66 percent have attended for a period of less than one year whereas about 30 percent of them have attended classes for 1 year (table 4.7). Students who appear for entrance examination have the option to appear it again and again to upgrade their rank position and seek admission according to their higher choices. Our data shows that vast majority (84.8 percent) of the Muslim

students have got admission to the Self-financing Engineering Course in their first attempt.

Generally for getting a favorite branch and a preferred college requires a very good rank in the engineering entrance examination. A good rank means a rank close to one. As the rank number goes up to higher and higher values, their chances of getting admission to preferred branch and colleges declines. It should be noted that in spite of very good academic performance of the students in their qualifying examination (12^{th}), the rank obtained by many students in the engineering entrance examination is really surprising. About 18 percent of the students have got comparatively better rank position (less than 10000) in the entrance examination whereas more than 43 percent are in the range of 10,000 and 20,000 (table 4.7). There are 39 percent whose rank is between the range of 20,000 - 30,000 and the rank of about 11 percent is above 30,000.

4.3 Academic and Soft Skills of Students in the College

4.3.1 Academic Performance of the Students

Academic performance, a generally used measure of success in educational institutions, is defined as the extent to which a student accomplishes his/ her studies and related tasks (Sharm, 2012). Academic Performance can also be defined in terms of students' persistence, which can be understood as progression of the students on academic grounds, to attain completion of degree, regardless of institution related contexts and issues (York et al. (2015).

To evaluate the academic performance of students during their course of study in the college, we have considered their attention in the class, punctuality in the class, participation in the class room activities, academic initiatives, their attempts to up-to-date knowledge in the academic domain, their scores, timeliness and concentration in the study, revision of the study as per the curriculum, intensive and deep learning, hard work and finally, their level of confidence. For this, we have made the following hypothesis to know their academic performance in the college during their period of study.

H0: Academic performance of Muslim students in the self financing engineering colleges in Kerala is equal to the avearge level

Since the P value is less than 0.01 for the attributes of classroom listening, class room participation, academic initiative, academic scores, timeliness in study,

concentration in study, intensive learning for new concept and confidence, the null hypothesis is rejected at 1% significant level. Since the P value is less than 0.05 for the components of study revision and hardworking, the null hypothesis is rejected at 5% significant level. Since the P value is higher than 0.05, the null hypothesis is accepted for the factor of academic up to date knowledge.

The mean scores show that academic performance factors such as classroom listening, class room participation, academic initiative, academic scores, intensive learning for new concept, hardworking and confidence are higher than average level (>3, 3 is the test value). The mean score of timeliness in study, concentration in study and study revision are below the average level (<3, 3 is the test value). The mean score of the factor academic up to date is equal to the average level.

Table 4.8
Mean Score and One Sample t Test for Measuring the Academic Performance of Muslim Students in the Self Financing Engineering Colleges in Kerala

SI No	Factors of Academic performance	Mean	Standard Deviation	Mean difference	t value	p Value	Rank based on mean
1	Classroom listening	3.46	0.98	0.44	9.13	<0.001**	III
2	Classroom participation	3.49	1.02	0.49	9.59	<0.001**	II
3	Academic initiative	3.51	0.95	0.49	10.35	<0.001**	I
4	Academically up-to-date	3.07	1.17	0.07	1.27	0.204^{NS}	VIII
5	Academic scores	3.44	1.02	0.44	8.73	<0.001**	IV
6	Timeliness in study	2.73	1.19	0.26	4.51	<0.001**	XI
7	Concentration in study	2.77	1.17	0.22	3.83	<0.001**	X
8	Study revisions	2.86	1.10	0.13	2.43	0.015*	IX
9	Intensive learning for new concept	3.31	1.08	0.31	5.80	<0.001**	V
10	Hardworking	3.11	1.11	0.11	2.14	0.032*	VII
11	Confidence	3.23	1.17	0.23	4.07	<0.001**	VI

Test value: 3

The results of one sample t test indicate that the Muslim students of self-financing engineering colleges in Kerala were very attentive, participative and initiative in their classes. Also they have good score in exams, showing critical attitude towards new concepts during the course, good in hardworking and had enough confidence.

The students were below average for timeliness in study, concentrating in studies and study revisions. Their position is at the average level for being up to date in their studies.

Based on mean score, the attributes have got rank in the following order. They were better in academic initiative (3.51) followed by class room participation (3.49), class room listening (3.46), obtaining academic scores (3.44), intensive learning for new concept (3.31), confidence (3.23), hardworking (3.11), up to date in the academic domain (3.07), study revision (2.86), concentrating in study (2.77) and maintaining timeliness in study (2.73).

It shows that the students were very initiative, participative and listening in their classes and they had obtained good grades in their examinations. The students were not well in fixing proper time schedule, fully concentrating in their studies and study revisions. And they were average in being up to date in their studies.

4.3.1.1 Level of Academic Performance of the Students

To analyse the level of performance across students, the eleven academic attributes (Classroom listening, Classroom participation, Academic initiative, Academic up-to-date, Academic scores, Timeliness in study, Concentration in study, Study revisions, Intensive learning for new concept, Hardworking and Confidence) have been classified in a three point likert scale – low level, moderate level and high level. Chi-square test is applied to estimate the statistical significance.

H0: Proportions of the level of academic performance factor of Muslim students in Kerala is equally distributed

Table 4.9
Level of Academic Performance Factor of Muslim Students

Attribute	Low level (Q1)	Moderate level (Q2)	High level (Q3)	Total	Chi-Square value	p-value
Level of academic performance factor	**110 (23.9%)**	**220 (47.8%)**	**130 (28.3%)**	**460 (100%)**	7.87	<0.001**

*** indicates significant at 1% level*

Since the P value is <0.01, the proportions of academic performance factor of Muslim engineering students of self-financing engineering colleges in Kerala is not equally distributed. It indicates that there is significant difference regarding the level of academic performance factor among the students. From the above table, it can be observed that 23.9 percent students show low level academic performance. 47.8 percent Muslim students show moderate level academic performance factor. 28.3 percent Muslim students show high level academic performance. So, it can be inferred that majority of the students of these engineering colleges in Kerala show moderate level academic performance.

4.3.2 Soft Skill Ability of Students

Soft skills' are the additional skills required by the 21st century Engineers. It plays an important role in the overall personality development and thereby increasing the employment opportunities of the students. Some of the 'soft skills' that are necessary for being successful are leadership quality, team work, conflict management skills, interpersonal skills, self-management skills, decision making capacity, futuristic thinking, continuous learning capacity, empathy, persuasion, negotiation, presentation skills, personal effectiveness, diplomacy, orientation towards goal, flexibility, good customer service, written and oral communication skills, creativity/ innovation, and problem solving capacity (Balaji and Somashekar, 2009).

In our study, we have taken up nine attributes of soft skill that include, teamwork skill, empathetic nature, positive attitude, self-control, communication

skills, friendliness, respect and obedience, project management and presentation skills. One sample t-test is used to estimate its statistical significance and its rank of preference.

H0: Soft skill performance of Muslim students in the self financing engineering colleges in Kerala is equal to the avearge level

Table 4.10
One Sample t Test for Measuring the Softskills of the Students

SI No	Factors of soft skills	Mean	Standard Deviation	Mean difference	t value	p- value	Rank based on mean
1	Teamwork Skills	3.68	1.16	0.68	11.83	<0.001**	VI
2	Empathetic	3.74	0.95	0.74	15.70	<0.001**	V
3	Positive attitude	3.83	1.01	0.83	16.47	<0.001**	II
4	Self-control	3.80	0.99	0.80	16.20	<0.001**	III
5	Communication skills	3.61	1.03	0.59	11.52	<0.001**	VII
6	Friendliness	4.00	1.17	1.00	17.08	<0.001**	I
7	Respect and obedience	3.78	1.08	0.74	13.79	<0.001**	IV
8	Project management skills	3.59	1.00	0.59	11.85	<0.001**	VIII
9	Presentation skills	3.49	1.02	0.49	9.59	<0.001**	IX

Test value: 3, ** denotes significance at 1% level

Since the P value is less than 0.01 for all the attributes, the null hypothesis is rejected at 1% significant level.

The mean scores show that soft skill factors such as teamwork skills, empathetic, positive attitude, self-control, communication skills, friendliness, respect and obedience, project management skills and presentation skill are higher than average level (>3, 3 is the test value).

The results of one sample t-test indicate that the Muslim students of self-financing engineering colleges in Kerala were good in doing team works; they were empathetic towards others and maintained a positive attitude. Also they had good self-control and ability to speak the subject matter clearly. Beyond these the Muslim students of self-financing engineering colleges have good friendliness and they were

respectful and obedient to teachers. And they had good project management skills and presentation skills.

Based on mean score, it can also be inferred that in the soft skill factors of the students, they were better in 'friendliness (4.00)' followed by 'positive attitude (3.83)', 'self-control (3.80)', 'respectful and obedient (3.78)', 'empathetic (3.74)', 'team work skill (3.68)', 'communication skill (3.61)', 'project management skills (3.59)' and 'presentation skills' (3.49). It shows that the students were very social in keeping good friendship; they have positive attitude and self-control.

4.3.2.1 Level of Soft Skill Performance of Students

To estimate the level of soft skill performance across 460 students, the information about the selected attributes were compiled in a three point LIKERT scale. Its statistical significance is computed using Chi-square test.

H0: Proportions of the level of soft skill performance among students is equally distributed

Table 4.11
Level of Soft Skill Performance among the Students

Attribute	Low level (Q1)	Moderate level (Q2)	High level (Q3)	Total	Chi-Square value	p-value
Level of soft skill performance	117 (25.4%)	199 (43.3%)	144 (31.3%)	460 (100%)	7.87	<0.001**

*** indicates significant at 1% level*

Since the P value is less than 0.01, the proportion of soft skill performance among the students of self-financing engineering colleges is not equally distributed. It indicates that there is significant difference regarding the level of soft skill performance in students. The table shows that 25.4 percent Muslim students have low level soft skill performance,43.3 percent Muslim students show moderate level of soft skill and 31.3 percent students show high level soft skill in the attributes taken into account. So, it can be inferred that Muslim students of self-financing engineering colleges in Kerala show moderate level soft skill performance in the nine attributes we have considered.

4.4 Overall Performance of Muslim Students in the Self-financing Engineering Colleges

Here, we have considered the number of students who have successfully completed the engineering degree course, their percentage of marks, their performance in the campus interview and campus placements, the involvement in seminars, quizzes and extra-curricular activities, their current job status and their self-evaluation about the engineering course they have undergone.

4.4.1 Participation of Students in College Level Seminars

Participation of students in the college level seminars in the concerned topic within the academic curriculum is considered as an activity of academic excellence (Rajan, 2011). This helps to extrapolate the potential for high quality technology that leads to the emergence of new products. Such technological contributions are the incubation process that finally results in the metamorphosis of high technological advancement.

Table 4.12
Classification of Students According to Participation in Seminars

Seminar participation	Frequency	Percentage
Yes	354	77.0
No	106	23.0
Total	460	100

Source: Primary Data

Participation and presentation of papers in the college level seminars is an indication of good performance. As per our study majority (77 percent) of the respondents had participated in the college level seminars. Whereas 23 percent of them reported that they had not participated in the college level seminars. Hence the performance of Muslim students in terms of participation in seminars is good.

4.4.2 Participation of Students in Extra-Curricular Activities

Participation in extra-curricular activities is inevitable to develop mental and physical growth, social awareness, dedication and civic consciousness among the students. It helps to develop self-confidence and joint efforts. Leadership qualities and managerial skill are fundamental qualities for entrepreneurial development. The

initiation of start-ups comes out of ideas and joint efforts. Here, we have considered the participation of students in extra-curricular activities that include; sports, fine arts and quizzes.

Table 4.13
Classification of Students According to Participation in Extra-Curricular Activities

Participation in sports/arts/quizzes.	Frequency	Percentage
Yes	304	66.1
No	156	33.9
Total	460	100

Source: Primary data

Above 66 percent of the students have reported that they had participated in extracurricular activities like sports /arts/quizzes etc. while 33.9 percent of them did not participate in extra-curricular activities. This indicates that majority of the students are able to involve in extra-curricular activities

4.4.3 Performance of Muslims Students in the Final University Examination

The outcome in the final year examination after the 8th semester or after completing the four years of engineering degree course is an indicator of the performance of the students during the study period in the engineering undergraduate course. The final academic outcome is depicted in the table below (table 4.14). We have classified students into course completed (students who completed the course but not eligible for the engineering degree as they have at least one back paper in the university examination) and students who successfully completed (who have passed all the examinations and are eligible for the engineering degree). 'Discontinued midway' is dropout.

Table 4.14
Final Performance of Muslim Students

Status of Students	Frequency	Percentage
Successfully completed	410	89.1
Completed the course with some back papers	47	10.2
Discontinued midway	3	0.7
Total	460	100

Source: Primary Data

More than 89 percent of the students have successfully completed the course without any academic arrears although about 10 percent of the students have completed the course with some back papers (academic arrears) and drop outs (who has not completed the course) constitute only 0.7 percent as they discontinued the course before completion. So it can be stated that most of the Muslim students who joined Self-financing Engineering Colleges in Kerala have successfully completed the course on time although about 11 percent are not eligible for engineering degree.

4.4.4 Academic Arrears of Muslim Students due to Back Papers during their Course of Study

Long back in the past students in the engineering colleges were not promoted to the next semester without clearing all the papers of previous semesters. For example if a student of second semester has not passed all the papers in the university examinations he is not eligible to be promoted to the third semester. Hence, in the absence of the year out rule it is possible for the students in the engineering colleges to complete the course (8 semesters and 4 years) without passing any of the papers of the previous semesters due to lack of year out rule. As such it is common in the colleges that several students will have arrears (back papers) of previous semesters. There is no doubt that talented students will definitely be able to achieve high performance in each of their semesters. Higher learning skills, technical skills and intelligence are the desirable qualities that engineering students should possess. However, there may be chances that other forms of external influences may cause academic arrears during the course of study. Here, we have examined the academic performance of the Muslim students in the self-financing engineering colleges in terms of back papers (arrears in semesters) during their period of study.

Table 4.15

Classification of Students according to Back Papers

Status	Frequency	Percentage
Students having back papers	243	52.8
Students not having back papers	217	47.2
Total	460	100

Source: Primary data

Among the 460 Muslim students of Self- financing Engineering Colleges in Kerala considered for study 52.8 percent of the students have back papers and 47.2 percent of them do not have any back papers in any semester during the course.

4.4.5 Self Evaluation of Performance by Students

Self-evaluation of students' performance is the best evaluation of their performance and hence we have asked the students how they evaluate their performance in the engineering colleges in terms of very good, good, poor and very poor as students themselves are the best to judge their performance.

Table 4.16

Self Performance Evaluation of the Engineering College Students

Self-performance evaluation	Frequency	Percentage
Very poor	12	2.6
Poor	100	21.7
Good	275	59.8
Very good	73	15.9
Total	460	100

Source: Primary Data

Approximately 76 percent the students ranked their performance as either good or very good although 24 percent regarded their performance as poor or very poor (table 4.24).

4.4.6 Students Participation in Campus Interview and Placement

Campus interview and campus placement to various companies with attractive salary packages is a direct index of students' academic excellence and institution's reputation. (Rajan 2011). Universities and institutions facilitate the placement drive for the final year graduates in blue-chip companies across India and the world. The participation of students in the campus interview of self-financing engineering colleges has been shown below.

Table 4.17

Classification of Students according to the Participation in Campus Interview

Status of attending campus interview	Frequency	Percentage
Attended	194	42.2
Not attended	266	57.8
Total	460	100

Source: Primary Data

It has been observed that more than 42percent of the Muslim students of these Colleges in Kerala have attended campus interview and 57.8 percent of the Muslim students have not attended campus interview. It points out that majority of the students were not able to attended campus interview.

Table 4.18

Classification of Students according to Campus placement

Campus placement	Frequency	Percentage
Yes	75	38.7
No	119	61.3
Total	194	100

Source: Primary data

Out of 194 respondents who attended campus interview, 38.7 percent of the students got placement. At the same time 61.3 percent of the respondents did not get placement in the campus interview. This brings out the fact that majority of the Muslim students were not able to get placement in campus interview.

4.4.7 Current status of Muslim students

Current status of the students who have completed the engineering degree course is an indicator of their performance in the qualifying degree course, since the academic aspirants may seek higher education and the professionally skilled might have secured job in reputed institutions.

Table 4.19
Classification of Students according to Current Status

Current status	Frequency	Percentage
Pursuing higher studies	5	1.1
Employed	402	87.4
Unemployed	53	11.5
Total	**460**	**100**

Source: Primary Data

According to our study 87.4 percent of them are employed and 11.5 percent of them are unemployed. So it can be concluded that majority of the Muslim students who have completed their degree from Self-financing Engineering Colleges in Kerala are employed (table 4.19).

4.5 Comparison of the Performance of Muslim students with the total and non-Muslim students

After examining the performance of Muslim students in the self financing engineering colleges in Kerala, we have made an attempt to compare the performance of Muslim students with the performance of total and non-Muslim students in the self financing engineering colleges. For this, we have taken all the 2101students (Muslim and Non-Muslim) from all the eight colleges under the University of Calicut. Here, we have analyzed the performance of total students (Muslim and Non-Muslim) who appeared their final year examination in the year 2014-15 in the University of Calicut. The performance of students has been examined in terms of their pass percentage and the grade/class they secured in the final examination.

Out of the total 2101 students, 37.31 percent are Muslim and 62.68 are non-Muslim students (table 4.20). Out of these total students, about 78.82 percent of them have passed their B.Tech examination in the first attempt (first chance) whereas about 83.55 percent of them have passed the final examination within their fourth chance (fourth attempt). However, the pass percentage among the Muslim students in their first attempt is comparatively lesser (71.30 percent) compared to the overall pass percentage (78.82 percent) and to the pass percentage with non-Muslim students (82.84 percent). The pass percentage of Muslim students in five colleges is lower than

the overall pass percentage (78.82 percent) of students in their first chance whereas it was higher in six colleges in the case of non-Muslim students. However, if we include the number of students who passed the final examination within four successive attempts, the pass percentage among Muslim students increases to 77.55 percent. However, this pass percentage within their fourth attempt is also much lower when compared to the pass percentage of non- Muslim students (87.17 percent) with in their fourth attempt. So we can conclude that the performance of Muslim students in terms of pass percentage (77.55percent) was much lower compared to the pass percentage of non-Muslim students (87.17 percent) and the overall pass percentage (83.58 percent). Further, the pass percentage of Muslim students in five colleges are lower than the overall pass percentage of students after four successive attempts in the University examination whereas, it was higher in five colleges in the case of non-Muslim students.

Table 4.20

Performance of Students in the Self Financing Engineering Colleges

Particulars	College A	College B	College C	College D	College E	College F	College G	College H	Total
Total students	233	318	329	154	235	173	380	279	2101
Total Muslim students	87 (37.33)	46 (14.46)	21 (6.38)	33 (21.42)	132 (56.17)	26 (15.02)	286 (75.26)	153 (54.83)	784 (37.31)
Total Non-Muslim students	146 (62.66)	272 (85.53)	308 (93.61)	121 (78.57)	103 (43.83)	147 (84.97)	94 (24.73)	126 (45.16)	1317 (62.68)
Total students passed in first chance	181 (77.68)	274 (86.16)	296 (89.97)	125 (81.17)	172 (73.19)	128 (73.99)	298 (78.42)	182 (65.23)	1656 (78.82)
Total students passed within 4 chances	197 (84.55)	283 (88.99)	307 (93.31)	130 (84.42)	191 (81.28)	137 (79.19)	314 (82.63)	197 (70.61)	1756 (83.58)
Total Muslim students passed in first chance	61 (70.11)	32 (69.56)	19 (90.48)	28 (84.85)	87 (66.41)	19 (79.17)	221 (77.27)	92 (60.13)	559 (71.30)
Total Muslim students passed within 4 chances	71 (81.61)	35 (76.09)	19 (90.48)	29 (87.88)	99 (75)	22 (84.62)	233 (81.47)	100 (65.36)	608 (77.55)
Total non-Muslim students passed in first chance	120 (82.19)	242 (88.97)	277 (89.93)	97 (80.16)	85 (81.73)	109 (73.15)	77 (81.91)	90 (71.43)	1091 (82.84)
Total non-Muslim students passed within 4 chances	126 (86.30)	248 (91.18)	288 (93.51)	101 (77.69)	92 (89.32)	115 (78.23)	81 (86.17)	97 (76.98)	1148 (87.17)

Source: Official data of the University of Calicut, Pareekhsa Bhavan

Values in parenthesis are percentages of the total in the corresponding columns

Out of 784 total Muslim students, 608 students (77.6 percent) have passed B.Tech examination (within four chances). Among these, 4.76 percent have secured First class with honours (above 70 percent), 77.13 percent have got First Class (60 – 70 percent) and18.09 percent have secured Second Class (50 to 60 percent. As such it is clear that bulk of the students who successfully completed the B.Tech examination has obtained First class (table. 4.21).

Table 4.21
Grade/ Class Obtained by Muslim Students in the University Examination 2014-15

	College A	College B	College C	College D	College E	College F	College G	College H	Total
First Class with Honours	5	2	5	0	2	4	11	0	29 (4.76)
First Class	53	28	13	25	66	15	193	76	469 (77.13)
Second Class	13	5	1	4	31	3	29	24	110 (18.09)
Total	71	35	19	29	99	22	233	100	608

Source: Official data of the University of Calicut
Values in parenthesis are percentages of the total in the corresponding columns

4.6 Comparison of Students performance on the basis of Branches

Although students are admitted to a variety of programmes (courses) in the Engineering colleges, we have chosen four general programmes viz., Civil, Electronics and Communications, Computer Science and Mechanical. The proportion of total Muslim and Non-Muslim students admitted in the four branches of engineering course are given in the table. The pass percentage of Muslim students and non-Muslim students were also computed. The pass percentage of Muslim students in all the four branches is lower than non-Muslim students. The pass percentage of Muslim students lies in between 72.31% to 81.25 percent whereas it ranges between 86.71 percent to 87.77 percent among non-Muslim students (table 4.22).

Table 4.22
Students performance according to Branches of Engineering

Particulars	Branch wise performance details				
	Civil Engineering	Electronics and communications Engineering	Computer science Engineering	Mechanical Engineering	Total
Total students	453 (21.56)	627 (29.84)	453 (21.56)	568 (27.03)	2101 (100)
Total students passed	382 (84.32)	523 (83.41)	366 (80.79)	485 (85.38)	1756 (83.58)
Total Muslim students	182 (40.18)	199 (31.74)	195 (43.05)	208 (36.62)	784 (37.32)
Total Muslim students passed	147 (80.76)	151 (75.87)	141 (72.31)	169 (81.25)	608 (77.55)
Total Non-Muslim students	271 (59.82)	428 (68.26)	258 (56.95)	360 (63.38)	1317 (62.68)
Total Non-Muslim students passed	235 (86.71)	372 (86.91)	225 (87.21)	316 (87.77)	1148 (87.16)

Source: Official data of the University of Calicut
Values in parenthesis are percentages of the total in the corresponding columns

4.7. Factors Affecting Performance of Muslim Students

As we have seen the performance of Muslim students in the self Financing Engineering Colleges has been poor in comparison with the performance of total students in general and non-Muslim students in particular in the colleges, we have made an attempt to analyze some of the major reasons behind the poor performance of Muslim students in the self financing engineering colleges. We know that student performance will be influenced by a large number of factors including their socio economic background. It is a fact that Muslims remained socially and economically backward for a long period and this may be one of the important reasons for their comparatively less performance at the engineering colleges. Hence, we have made an attempt to examine the family environment of the students (socioeconomic back ground) in terms of their parental educational and economic conditions along with the educational surroundings of these students in schools. These are briefly described in the following paragraphs.

4.7.1. Parental Factors

Among parental factors we have included parental education, parental occupation (Occupation of father and Mother), economic status of the family etc. Parental education is a crucial factor affecting the performance of students. It is generally seen that children of highly educated parents will usually perform well in their studies (Khandekar, 1979). We found that the educational level of students parents (Father and Mother) are only average as vast majority of them have only school education (Table 4.1). Hence, it may be safely concluded that one of the reasons for the poor performance of Muslim students in self financing engineering colleges may be their parent's average educational background and these students may be persuaded to go for engineering in accordance with the desire of their parents which may have resulted in average performance in their studies.

An examination of Parental occupation shows that almost three fourth of the fathers are employed in private sector or self employed (table 4.2) out of which one third of them are working abroad. Among mothers, only about eighteen percent are employed and the rest are house wives. As fathers of many are employed abroad would mean that the economic background of many students is very good and this is the reason that parents are able to send their children to self financing engineering colleges where the fee is extremely high. We have seen that the economic status of the family was very good and bulk of them hails from very rich families (table 4.3). This indicates that majority of the Muslim students of self-financing engineering colleges are coming from financially sound families and hence, the poorer performance of Muslim students cannot be attributed to their economic condition.

4.7.2. Parental Attitude towards Studies

As stated before, the parental attitude is critical in the performance of students (Rajan 2011). The approach may be encouraging or unfavorable for studies. By encouraging approach we mean, the time availability for academic activities at home, the facility for getting academic support from experts within family, adequate financial support for purchasing books and other equipments related to studies in engineering, conveyance and hostel facilities, generating appropriate mindset for good result and for higher studies and above all a peaceful atmosphere at home. A favorable approach from the family and home surroundings are very important

factors affecting the performance of students. Support and encouragement from the family members will help the children to achieve success. Out of 460 students 91.3 percent of them opined that the approach of the family to their studies is encouraging and only 8.7 percent of the students have reported that the approach of the family to their studies is not much encouraging (table.4.23).

Table 4. 23
Classification of Students According to Some Details Related to their Study

Family background has Adversely affected Performance	207 (45.0)
Family background has not Adversely affected Performance	253 (55.0)
Encouraging approach from family	420 (91.3)
No Encouraging approach from family	40 (8.7)

Source: Primary data. Parenthesis represent percentage to the total

4.7.3. Family Background of Students and their Studies

Family background is an important factor that affects the performance of students (Rajan 2011). To a question whether family background has adversely affected their performance about 45 percent of the Muslim students have reported that their peculiar socio cultural background has prevented them from getting sufficient incentive to achieve higher goals in the field of education where as 55.0 percent of them reported that their family background has no adverse impact on their studies (table. 4.23).

4.7.4. School Related Factors

The institution where students study is very important because reputed schools maintain high standerds and hence students easily reach very high positions in their career. We have seen that a vast majority of Muslim students were from Government or Government aided schools and from state syllabus (Table 4.5). We have examined the student performances at 10^{th} and 12^{th} as there are evidences that there is a positive relationship between marks scored in 10^{th} standard and student's achievements in higher studies (Deshmukh and Kamath, 1963). It was found that the marks scored by Muslim students in their 10^{th} and 12^{th} in general and the score in mathematics, physics and chemistry in particular were good although a very small percentage of students scored average marks of less than 60 percent (Table 4.6).

In recent years owing to the liberalization and privatization of education in Kerala, there emerged a large number of self financing professional colleges including engineering colleges and as a result the availability of seats in private self-financing engineering colleges has gone up significantly. This has enabled candidates with low rank and marks in the entrance examination to get admission to engineering courses and this has been a major reason for the failure of engineering college students (Sivasankaran, 2004). We have seen that students whose rank in the entrance examination was above thirty thousand (Table 4.7) were also able to get admission to engineering courses. Among these there may be some who are not at all interested in engineering and have resulted in the poor performance in the examinations.

4.7.5. Individual and Student Related Factors

4.7.5.1. Attendance in Semesters

Attendance in classes is an important factor affecting the performance of students and shortage of attendance may result in poor performance in the examination (Rajan 2011). The average attendances of 25.4 percent students are less than 75 percent whereas about 30.0 percent has 76- 80 percentage of attendance and 12.6 percent of them have attendance between 81- 85 percent. There are about 21.3 percent students who secured attendance between 85 to 90 percent whereas 10.7 percent of the students have above 90 percentage average attendance in semesters. It is clear from the study that about 74.6 percent of the Muslim students do not have attendance shortage in any semester, while the remaining 25.4 percent have attendance shortage in some of the semesters (table 4.24).

Table 4.24
Details of Average Percentage of Attendance in Semesters

Average percentage of attendance	Frequency	Percentage
Below 75%	117	25.4
75% – 80%	138	30.0
81% – 85%	58	12.6
86% – 90%	98	21.3
Above 90%	49	10.7
Total	**460**	**100**

Source : Primary Data.

4.7.5.2. Class cut or Abstaining from Classes

Students may abstain or boycott (class cut) classes because of several reasons like monotonous presentation and teaching methods and influence of

friends. This may also result in the poor performance and failure of students (Rajan 2011). Student's absence in attending classes will certainly affect their performance adversely. About 73.7 percent of the students reported that they have cut classes whereas 26.3 percent of the students never abstain from classes (table 4.25). Hence, cutting classes or absence in classes has resulted in missing some of the important aspects of the syllabus and may have resulted in the poor performance of some of the less intelligent students.

4.7.5.3. Private Tuition for Engineering Subjects

Private tuition helps to get more insight in to the subject and hence many students prefer to attend private tuition to clear their doubts and improve their knowledge and understanding in the subjects so as to increase their chances of getting better grade. Private tuition will also improve the performance of students and increase the chances of their success (Rajan 2011). According to the available data, about 45.7 percent of the Muslim students have attended private tuition and the remaining 54.3 percent did not attend private tuition (table 4.25).

Table 4. 25
Classification of Students according to the Details Related to their Study

Student Particulars	
Day scholar	337 (73.3)
Hosteller	123 (26.7)
Attended Private Tuition	210 (45.7)
Not Attended Private Tuition	250 (54.3))
Difficulties in following the lectures in English	97 (21.1)
No Difficulties in following the lectures in English	363 (78.9)
Home sickness affected studies	43 (35.0)*
Home sickness not affected studies	80 (65.0) *
Abstained from classes	339 (73.7)
Not Abstained from classes	121 (26.3)
Health problems affected studies	61 (13.3)
Health problems not affected studies	399 (86.7)
Attended Student Counseling	300 (65.2)
Not Attended Student Counseling	160 (34.8)
Delay to conduct examinations by University adversely affected performance	293 (63.7)
Delay to conduct examinations by University not adversely affected performance	167 (36.3)

Source: Primary Data, Parenthesis represent percentages to the total
*Percentage to the corresponding total

4.7.5.4. Average Daily Hours of Study at Home

Hours spend on study or educational preparation is yet another factor which affects the performance of students (Rajan 2011). Lack of adequate educational preparation may adversely affect student's performance in examinations. So in order to know about their educational preparation we have classified students on the basis of their daily average hours of study. As per our data about 69.1 percent of the students study only less than 2 hours daily on an average after their classes. However, 24.1 percent of the students study 2 to 4 hours daily on an average. There are about 6.7 percent who study more than 4 hours daily after classes on an average. As a whole, the average study time of the Muslim students are less than 2 hours after the routine classes at the college (table 4.26). Hence, it is very clear that the time devoted to study may not be adequate and many students are not very serious about their studies which may have resulted in their poor performance.

Table 4.26
Classification of Students According to Average Daily Hours of Study at Home

Study hours	Frequency	Percentage
Less than 2 hours	318	69.1
Between 2 and 4 hours	111	24.1
More than 4 hours	31	6.7
Total	460	100

Source: Primary Data

4.7.5.5. Travel Distance of Day Scholars and its Effect on Studies

Day scholars commute from their home to the institution on working days. Long journey by passenger bus and train may have an adverse impact on their academic performance (Rajan 2011). The time taken for journey and distance travelled are the factors taken into account to examine the effect of travelling time on their studies. About 20.8 percent of the students have travelled below 15 kms to reach the college whereas 59.9 percent of them have traveled 16- 30 kms. It is significant to note that about 19.3 percent of them have traveled above 30kms to reach their college (table 4. 27). Of the total students, about 73.9 percent reported that travel has not affected their studies at all.

Table 4. 27
Students According to Travelling Distance and its Effect on Studies

Distance from house to the college	**Frequency**	Adversely affected studies
Below 15 K m	70 (20.8) *	120 (26.1)
16 Km - 30 Km	202 (59.9) *	Not adversely affected studies
Above 30 Km	65 (19.3) *	340 (73.9)
Total	**337**	**460**

Source: Primary Data, Parenthesis represent percentages to the total *Percentage to the corresponding total

4.7.5.6. Hostel life and Homesickness

Hostel life may affect student's performance in several ways. Enough time for academic activities, free from long commutation from home, accessibility for library for more hours, consultation with the teachers are the positive factors of hostel stay which may enhance the capability of students in their performance whereas, unwanted friendship, indulging in recreational activities, nostalgic feelings are the negative part of hostel life which may adversely affect student performance.. Moreover, students residing in hotels away from home will feel homesick for various reasons and hence staying in hostels may sometimes adversely affect the performance of students (Rajan, 2011). According to our study majority (73.3 percent) of the students are day scholars and the remaining 26.7 percent are hostellers (table 4.25). To our question, about 65 percent of the students who stayed in the hostels have opined that that home sickness has not adversely affected their performance. However, about 35 percent of the hostlers reported that home sickness has adversely affected their performance.

4.7.5.7. Lack of self interest

In many cases students take admission in to engineering courses because of the pressure from the parents or relatives. Admission to the engineering course against the wishes of the student concerned may make them uninterested and it will definitely result in the poor performance and failure in the examination (Rajan 2011, Sivasanaran 2004). In our study about 13.6 percent of the students reported that lack of interest in studies is the reason behind their poor performance.

4.7.5.8. Students Health and their Performance

Health is the state of being free from illness. Students who are unhealthy are at a higher risk for low performance than students who are in good health. Students suffering from ill health will have a higher probability of poor academic performance including failure in the examination and dropout (Rajan 2011). As per the student's opinion, about 13.3 percent of the students under study reported that health problems have affected their studies adversely whereas vast majority (86.7 percent) of the Muslim students reported that health problems have not affected their studies in any way. So it can be concluded that health problems cannot be attributed to the poorer performance of most of the Muslim students (Table 4.25).

4.7.5.9 Communication Skill in English

Students who are from Malayalam medium schools are not conversant in English, which may result in the poor performance at the engineering colleges and may result in their poor performance (Rajan, 2011). We found that the medium of instruction of 43.5 percent of the students at school were Malayalam (Table 4.10). It is difficult for these students to comprehend the lectures in English or they face difficulties in communicating in English. Among the 460 Muslim students of Self-financing Engineering Colleges in Kerala 21.1 percent of the students reported that they experienced difficulty in following the lectures in English while the remaining 78.9 percent do not have any difficulty in following the classes in English (table 4.25).

4.7.6 College and University Related Factors

4.7.6.1 Infrastructure Facilities of the Institution

Many self financing engineering colleges are marked for poor infrastructural facilities including laboratory facilities for practical as they lack modern equipments to conduct experiments in addition to low profile teachers. In certain colleges, the infrastructural facilities including computer labs and library facilities are far from satisfactory. Students enrolled in such institutions would suffer a lot to get through the examinations and may lead to their poor performance (Rajan, 2011). Fortunately, majority of the students (79.1 percent) has reported that the library facility and availability of books, computer and lab facilities and other facilities for doing

practical experiments were adequate (table 4.28) although about 20.9 percent of them have opined that books in the library were not sufficient for their studies. More than 90 percent of the students reported that computer facilities in the college were adequate although about 9.8 percent of them believe that computer facilities in their college were inadequate (table 4.28). Similarly vast majority of students (82.4 percent) reported that they have adequate facilities in the laboratory for doing practicals and other experiments related to their study although about 17.6 percent of them believe that laboratory facilities in the college were insufficient (table 4.28).

Table 4. 28

Infrastructural Facilities Available in the College

Infrastructural Facilities	Adequate	Inadequate
Availability of Library books	364 (79.1)	96 (20.9)
Computer facilities	415 (90.2)	45 (9.8)
Laboratory Facilities	379 (82.4)	81 (17.6)

Source: Primary Data, Parenthesis represent percentages to the total

4.7.6. 2. System of Student Counseling

Student counseling helps to remove mental stress and strain during the period of study. This enhances the psychological capacity and mental ability of students to face unfavorable situation which indirectly promotes their performance. Staff adviser or counselor can solve the academic and non-academic problems through counseling and advice (Rajan 2011). As per our study 65.2 percent of the Muslim students of Self- financing Engineering Colleges reported that they have attended Student Counseling in the college whereas 34.8 percent of the students reported that they have not attended Student Counseling in the college (table 4.25).

4.7.6.3. Delay in Conducting University Examinations

Among other factors which may affect student performance include factors related to the University involving conduct of examinations in time and in accordance with the convenience of the students. Untimely, inconvenient and overlapping of University examinations with unusual delay in publication of results is another reason for the poor performance of students (Sivasankaran 2004, Rajan 2011). Unjustifiable delay in conducting examinations after the completion of the

semesters, simultaneous examinations and classes, inadequate study leave for preparing examinations etc will definitely adversely affect both the student performance in examinations and semester classes of the students. To corroborate this, about 63.7 percent of the students have reported that inability of the university to conduct the examinations on time has adversely affected their performance although 36.3 percent students have opined that the university related factors have not affected their performance. So it can be safely concluded that inability of the university to conduct the examinations in time has adversely affected the performance of majority of the students (table 4.25).

4.8. Gender Wise Difference among Muslim Students with Regard to Performance

There is a feeling among the general public that among Muslim community girls are not encouraged to go for higher studies. Generally it is also found that Muslim girls are lagging behind boys in higher education (Sengupta and Rooj, 2018, Shinde and John, 2012). So we have made an attempt to analyze the gender wise difference among students with regard to their performance in self financing engineering colleges in Kerala.

4.8.1. Gender Wise Difference among Students Related to Academic Performance.

To know whether there is any inequality between Muslim boys and girls, we have tried to find whether there is any difference between boys and girls in their academic performance. For this, we have made the following hypothesis;

H0: There is no significant difference between male and female students with respect to academic performance factors of Muslim students of self-financing engineering colleges in Kerala.

Since P value is less than 0.01, null hypothesis is rejected at 1% level with regard to academic performance factors such as academic initiative, academic up-to-date, timeliness in study, concentration in study, study revision, intensive learning for new concept, hard working and confidence. For this reason, there is a significant difference between male and female students regarding academic performance factors such as academic initiative, academic up-to-date, timeliness in study, concentration in study, study revision, intensive learning for new concept, hard working and confidence.

Table 4.29
t Test for Significant Difference between Male and Female Students with Respect to Academic Performance Factors

Academic Performance Factors	Gender of the students				t Value	p Value
	Male		Female			
	Mean	SD	Mean	SD		
Classroom listening	3.46	0.86	3.42	1.07	0.409	0.683^{NS}
Classroom participation	3.43	1.00	3.54	1.05	-1.026	0.306^{NS}
Academic initiative	3.31	0.88	3.65	0.98	-3.676	<0.001**
Academic up-to-date	2.78	1.11	3.34	1.17	-4.914	<0.001**
Academic scores	3.50	1.03	3.40	1.02	0.975	0.330^{NS}
Timeliness in study	2.46	1.09	2.97	1.23	-4.310	<0.001**
Concentration in study	2.50	1.12	3.02	1.16	-4.635	<0.001**
Study revisions	2.65	1.13	3.05	1.04	-3.686	<0.001**
Intensive learning for new concept	3.06	1.11	3.54	0.99	-4.549	<0.001**
Hardworking	2.93	1.11	3.28	1.08	-3.163	0.002**
Confidence	2.96	1.28	3.48	0.99	-4.514	<0.001**

Note: 1. ** denotes significant at 1% level.
2. NS denotes non-significant.

Mean score displays, compared with male students, female students show more academic performance in terms of academic initiative, academic up-to-date, timeliness in study, concentration in study, study revision, intensive learning for new concept, hard working and confidence.

Since P value is greater than 0.05, the null hypothesis is accepted with regard to the academic performance factors that classroom listening, classroom participation and academic scores. As a result, there is no significance difference between male and female students regarding the factors classroom listening, classroom participation and academic scores.

Based on mean score it can be inferred that, female students considered academic initiative (3.65) as the most important academic performance factor in the engineering courses followed by classroom participation (3.54) and intensive learning for new concept (3.54) equally, then confidence (3.48), classroom listening (3.42), academic scores (3.40), academic up-to-date (3.34), hard working (3.28), study revision (3.05), concentration in study (3.02) and timeliness in study (2.97).

On the basis of mean score, it is understood that, in case of male students, academic scores (3.50) is the most important academic performance factor followed by classroom listening (3.46), classroom participation (3.43), academic initiative (3.31), intensive learning for new concept (3.06), confidence (2.96), hard working (2.93), academic up-to-date (2.78), study revision (2.65), concentration in study (2.50) and timeliness in study (2.46).

4.8.2. GenderWise Difference among the Students Regarding Level of Academic Performance

For analyzing the difference between Muslim boys and girls with regard to the level of academic performance we have used chi square test of association between the two.

H0: There is no significant association between gender and level of academic performance

Table 4.30
Chi-Square Test for Association between Gender and Level of Academic Performance

Gender	Level of Academic performance			Total	Chi-square Value	P value
	Low	Moderate	High			
Male	82 (32.2%)	122 (48.4%)	49 (19.4%)	252 (100%)	38.634	<0.001**
Female	34 (16.3%)	99 (47.6%)	75 (36.1%)	208 (100%)		
Total	115 (25%)	221 (48%)	124 (27%)	460 (100%)		

Note: 1. The value within Parenthesis refers to Row Percentage
2. ** denotes 1% level Significance

Since P value is less than 0.01, the null hypothesis is rejected at 1% level. Hence, it can be concluded that, there is association between gender and level of academic performance of Muslim students of self-financing engineering colleges in Kerala. Based on the row percentage, among male students, 32.2% students show low level academic performance. 48.4% students show moderate level academic performance and 19.4% students show high level academic performance. In case of female students, 16.3% students show low level academic performance, 47.6%

students show moderate level academic performance and 36.1% students show high level academic performance. Therefore, the 'high' level performances of male students are lower than female students.

4.8.3. Gender wise difference among the Muslim students with regard to Academic Arrears

To study whether there is any significant difference between male and female students with regard to academic arrears during the course of study, we have used Chi-square test.

H0: There is no significant association between gender and students having and not having back papers

Table 4.31
Chi-Square Test for Association between Gender and Students having and not having Back Papers

Gender	Back paper status		Total	Chi-square Value	p- value
	Students having back papers	Students having no back papers			
Male	185 (76.1%)	67 (30.9%)	252 (100%)	99.378	<0.001**
Female	58 (23.9%)	150 (69.1%)	208 (100%)		
Total	243 (52.8%)	217 (47.2%)	460 (100%)		

Note: 1. Row Percentages are given in brackets
2. ** denotes 1% level significance

Since P value is less than 0.01, the null hypothesis is rejected. Hence, it can be concluded that, there is association between gender and students having and not having back papers during the course of study. The row percentage corresponding to male students indicates that, more than 76% students have back papers and 31% students do not have back papers. In the case of female students, 24% students have back papers and 69% students do not have back papers. Therefore, it can be interpreted that, the academic arrears due to back papers were less in female students compared to male students during the course of study.

4.8.4. Gender Wise Difference among the Muslim Students Regarding Soft Skills

We have also analyzed the difference between male and female students with respect to their soft skills. For this we have used one sample t test.

H0: There is no significant difference between male and female students with respect to soft skill of outgoing Muslim students of self-financing engineering colleges in Kerala

Table 4.32
t Test for Significant Difference between Male and Female Students with Respect to Soft Skill

Soft skill factors	Gender of the students				t-Value	p-Value
	Male		Female			
	Mean	SD	Mean	SD		
Teamwork Skills	3.85	1.12	3.50	1.17	3.108	0.002**
Empathetic	3.80	1.03	3.68	0.84	1.183	0.238^{NS}
Positive attitude	4.05	0.82	3.59	1.14	4.678	<0.001**
Self-control	3.77	1.12	3.84	0.83	-0.726	0.468^{NS}
Communication skill	3.68	0.95	3.50	1.12	1.795	0.073^{NS}
Friend circles	4.20	0.92	3.78	1.36	3.628	<0.001**
Respectful and obedient	3.88	1.09	3.59	1.05	2.716	0.007**
Project management skills	3.45	1.02	3.53	1.03	-0.721	0.471^{NS}
Presentation skills	3.07	1.01	3.05	1.02	0.804	0.578^{NS}

Note : 1. ** denotes significant at 1% level.
2. NS denotes non-significant.

Since P value is less than 0.01, null hypothesis is rejected at 1% level with regard to team work skills, positive attitude, friends circle and respectful and obedient nature showing that there is a significant difference between male and female students in these soft skills.

Mean score displays, compared with female students, male students are better in soft skills such as team work skills, positive attitude, friend circles and respectful and obedient.

Since P value is greater than 0.05, the null hypothesis is accepted with regard to the soft skill factors that empathetic, self-control, communication skill, project

management skill and presentation skill. So, there is no significance difference between male and female students regarding these soft skills.

Based on mean score it can be inferred that, male students give more importance in friend circles (4.20) followed by positive attitude (4.05) being respectful and obedient (3.88), team work skills (3.85), showing empathetic (3.80), having self-control (3.77), communication skill (3.68), project management skill (3.45) and 'Presentation skills (3.35)'.

On the basis of mean score, it is understood that, female students had good self-control (3.84) followed by having friend circles (3.78), showing empathetic (3.68), having positive attitude (3.59) and being respectful and obedient (3.59) equally, then having project management skill (3.53), team work skills (3.50) and communication skill (3.50) equally and then 'Presentation skills (3.30)'.

4.8.5. Gender Wise Difference among the Students Regarding *Level of Soft Skills*

We have analysed the difference between male and female students regarding the level of soft skills using Chi-square test.

H0: There is no significant association between gender and level of soft skills

Table 4.33
Chi-Square Test for Association between Gender and Level of Soft Skills

Gender	Level of Soft skills			Total	Chi-square Value	p value
	Low	Moderate	High			
Male	64 (25.4%)	85 (33.7%)	103 (40.9%)	**252 (100%)**	48.964	<0.001**
Female	53 (25.5%)	114 (54.8%)	41 (19.7%)	**208 (100%)**		
Total	**117 (25.4%)**	**199 (43.3%)**	**144 (31.3%)**	**460 (100%)**		

Note: 1. The value within Parenthesis refers to Row Percentage
2. ** denotes 1% level Significance

Since P value is less than 0.01, the null hypothesis is rejected at 1% level. Hence, it can be concluded that, there is association between gender and level of soft skills of Muslim students of self-financing engineering colleges in Kerala. Based on the row percentage, among male students, 25.4% students show low level soft skills, 33.7% students show moderate level soft skills and 40.9% students show high level soft skills. In case of female students, 25.5% students show low level soft skills. 54.8% students show moderate level soft skills and 19.7% students show high level soft skills. Therefore, it is understood that male students show low level soft skills than female students. And female students show moderate level soft skills than male students. In the category of high level soft skills male students are more compared to female students.

4.8.6. Gender Wise Difference among the Students in the participation of campus interview

To see whether there is any gender distinction in the participation of students in campus interview, we have used Chi-square test.

H0: There is no significant association between gender and attending of campus interview by the students

Table 4.34

Chi-Square Test for Association between Gender and attending of Campus Interview by the Students

Gender	Attending campus interview		Total	Chi-square Value	p- value
	Yes	No			
Male	106 (42.1%)	146 (57.9%)	252 (100%)	0.003	0.958^{NS}
Female	88 (42.3%)	120 (57.7%)	208 (100%)		
Total	194 (42.2%)	266 (57.8%)	460 (100%)		

Note: 1. The values within parenthesis refers to Row Percentage
2. NS denotes Non- significance

Since P value is greater than 0.05, the null hypothesis is accepted. Hence, it can be concluded that, there is no association between gender and students attending campus interview.

4.8.7. Association between Gender and Campus Placement of students

To see whether there is any association between gender and campus placement of students, we have used Chi-square test of association between the two.

H0: There is no significant association between gender and placement in campus interview

Table 4.35
Chi-Square Test for Association between Gender and Placement in Campus Interview

Gender	Placement in campus interview		Total	Chi-square Value	p- value
	Yes	No			
Male	30 (31.6%)	65 (68.4%)	95 (100%)	8.547	<0.001**
Female	45 (45.4%)	54 (54.6%)	99 (100%)		
Total	75 (38.7%)	119 (61.3%)	194 (100%)		

Note: 1. The values within parenthesis refers to Row Percentage
2. ** denotes 1% level significance

Since P value is less than 0.01, the null hypothesis is rejected at 1% level of significance. Hence, it can be concluded that, there is association between gender and the placement of students in campus interview. On the basis of row percentage, among male students, 31.6% students got placement in campus interview and, 68.4% of the students did not get placement in campus interview. In the case of female students, 45.4% students got placement in campus interview. And 54.6% students did not get placement in campus interview. Therefore, it can be concluded that, more female students have got placement in campus interview.

4.8.8. Association between Gender and Status of Engineering Course Completion

To look into the gender wise disparities in the status of engineering course completion, we have used Chi-square test of association between the two. The null hypothesis is;

H0: There is no significant association between gender and status of completion of engineering degree course by Muslim students of self-financing engineering colleges in Kerala

Table 4.36
Chi-Square Test for Association between Gender and Status of Completion of Engineering Course

Gender	Status of course completion			Total	Chi-square Value	p-value
	Successfully completed	Completed the course with some back papers	Discontinued midway			
Male	212 (84.1%)	39 (15.5%)	1 (0.4%)	252 (100%)	75.526	<0.001**
Female	198 (95.2%)	8 (3.8%)	2 (1.0%)	208 (100%)		
Total	410 (89.1%)	47 (9.8%)	3 (0.70%)	460 (100%)		

Note 1. The values in parenthesis shows row percentage
2. ** denotes 1% level Significance

Since P value is less than 0.01, the null hypothesis is rejected at 1% level. That is, there is association between gender and status of completion of engineering course. Row percentage corresponding to male students bring out that, 84.1% have successfully completed the course without academic arrears whereas the corresponding figures of female students are much higher ie, 95.2%. Similarly, male students completed the course with back papers are 15.5% against 3.8% of female students. At the same time the percentage of dropout is higher among the female students. Therefore, it has been inferred that, the performance of female students in the final year engineering degree examination was better than male students.

The above analysis of difference between male and female students with regard to their performances in self financing engineering colleges in Kerala shows that in terms of academic performance, campus placement and successful completion of the course, female students are better than male students. But in the case of soft skills, the performance of male students are better than that of female students.

Conclusion

In this chapter we have examined the performance of Muslim students in the Self Financing Engineering colleges in Kerala. For this purpose we have analysed different dimensions of students including the socio-economic characteristics of students in terms of their parental education, employment and their economic status. We have also examined student's background in terms of their performance at their 10th and 12th standard examinations specifically concentrating on their performance in major subjects like mathematics, physics and chemistry. In addition, we have examined their performance in the engineering entrance examinations, the college level academic including their capability in soft skills during their period of study in the college.

Our study has revealed that majority of the parents have school education and have average educational background. Vast majority of students fathers were employed and about one third of them are employed abroad although the proportion of employed mothers are comparatively much lesser. An examination of the economic status of the students showed that the average monthly income of the family was very high indicating that bulk of them are from financially well off families.

Our analysis of student performance at 10th and 12th showed that the performance of these students is excellent except a small percentage of students including in the core subjects like mathematics, physics and chemistry. Their performances in the college in terms of academic and in the area of soft skill are also good.

Majority of the Muslim students participated in college level seminars and co-curricular activities during the course of their engineering study although majority of them could not attend campus interview.

The performance of Muslim students in the university examinations is also very good although it is comparatively poor in comparison with the performance of total and non-Muslim students. This may be due to the neglect of studies by some of the Muslim students in the College. The poorer performance of some of the Muslim

students in the university examination may also be due to their poor performance in their 10^{th} and 12^{th} and in the engineering entrance examinations. We have seen that the performance of some of the students in their tenth, twelfth and in the engineering entrance examinations are not very good. It may also be due to the average educational background of some of the students hailing from not highly educated parents.

The performance of Muslim students in engineering colleges was affected by various factors such as parental factors, individual and student related factors, college and university related factors. Some favourable parental factors like better economic condition of the family and encouraging parental attitude towards studies have helped to improve the student performance in the engineering colleges. Several individual and student related factors including higher percentage of marks in 10_{th} and 12_{th} especially in Physics, Chemistry and Mathematics, regular attendance in classes and average hours of regular study have also helped to improve the performance of students. Among the college and university related factors, student counselling system and better infrastructural facilities of the colleges in terms of library, computers and other lab facilities have favourably affected the performance of students. However, the factors such as poor family background, lower entrance rank, bunking classes, poor proficiency in English, inability of the university to conduct the examinations in time and lack of interest in studies have adversely affected the student performance.

Chapter 5

Muslim Students' Cost for Engineering Education in Self Financing Engineering Colleges in Kerala

Liberalization and privatization have led to a significant reduction in public expenditures on health and education in India. The governments have been withdrawing from providing health and educational services especially during the post reform period as part of liberalization and privatisation. The withdrawal of governments from higher education has resulted in the emergence of private self financing educational institutions throughout India. This has resulted in the commercialization of education or education became a business for many to make huge profit. As such, the emergence of private self financing colleges especially in professional education has resulted in an increase in the private cost of educations for those who pursue studies in these institutions. This is because, private educational providers' primary aim is maximum profit and they will sacrifice quality in education so as to maximize their profit.

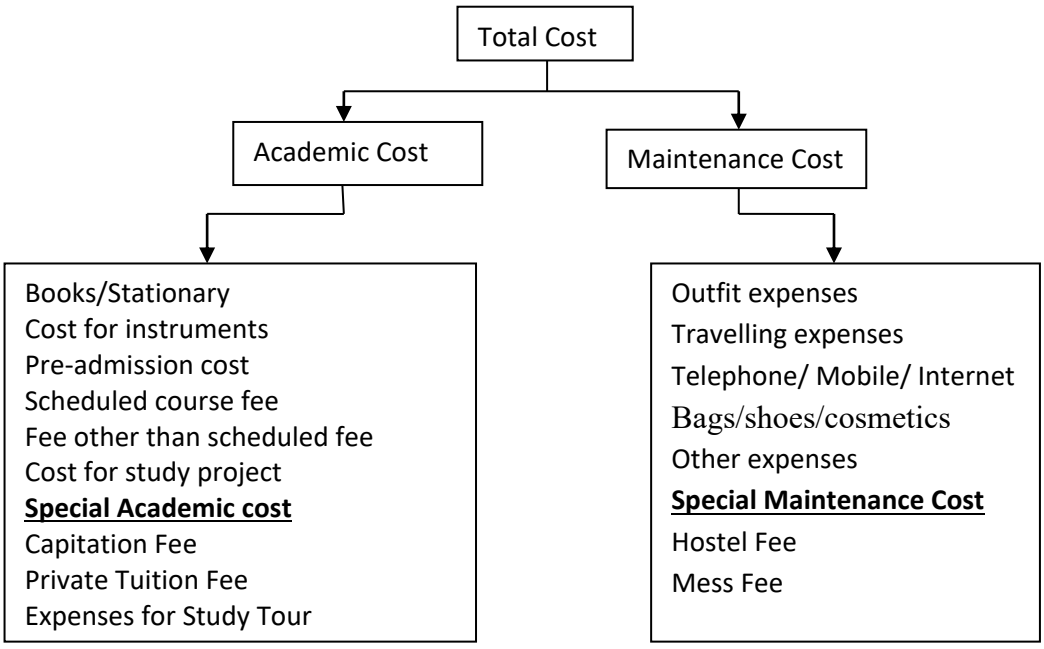
We know that a self financing engineering college is a college which does not receive any financial aid either from the government or from UGC. It is self funded and managed by the fees paid by students themselves. Hence, it is needless to say that the fee for studying in a self financing engineering college will be very high. Private cost of getting education, when paid wholly by the students or their parents, is very high in the case of higher professional courses (Kalia 2010). Those staying in hostels have to bear more costs in the form of hostel fees and mess fees. Not only the fees and other charges paid by the students are very high, but also beyond the paying capacity of students belonging to the weaker sections of society (Kalia, 2010). In this context, it is very important to analyse the cost of education incurred by students in self financing engineering college in Kerala.

Educational costs generally may mean expenses related to educational programs and other associated expenditures like costs on hostels, on conveyance, on tuition, on books, on computers, on software, on equipments, on dress and other items essential for completion of the course. In other words, cost of education is the cost incurred by the government and the household sector on education (Saruparia and Lodha, 2013). It is divided in to two parts: public cost and private cost. Public cost is the expenses incurred by the government or public institutions. On the other hand, private cost refers to those expenditures which are incurred either by the parents or students or both (Kumar, 2004). Private cost of education may be further divided

into two categories; (i) academic cost and (ii) maintenance cost. Academic cost refers to expenses which are directly related to getting oneself formally educated. It mainly includes expenses on the items such as fees and funds paid to the institution (i.e. tuition fees, examination fees, library fees, laboratory fees, etc.), payments made for getting private coaching, books, stationery, instruments, etc (Kumar, 2004). On the other hand, maintenance costs refer to those expenses which are not directly related to one's education. Maintenance cost includes expenses incurred on clothing, transport, boarding and lodging and other sundry expenses (Kumar, 2004).

The present study tries to analyze both academic and maintenance costs incurred by Muslim students in the Self-financing Engineering Colleges in Kerala. Academic costs mainly include expenses on Books and Stationary, Cost for instruments, Pre-admission cost, Scheduled course fee, Fee other than scheduled fee, Cost for study project, Capitation fee, Private tuition fee and expenses for study tour. In these costs, capitation fee, expenses for study tour and private tuition are taken as special academic costs because only a few students are exposed to these costs. In the maintenance cost category, there are, outfit expenses, travelling expenses, expenses on Telephone/ Mobile/ Internet, Bags/shoes/cosmetics, hostel fee, Mess fee and other expenses. Hostel fee and mess fee are considered as special maintenance costs.

Figure 5.1 Cost Structure



Source: compiled by the researcher from various studies

The pre-admission costs include the expenditure incurred on application form and prospectus, registration fee, attending coaching classes, cost of books and other study materials for the entrance examination. This component is included in the present study because admissions to Engineering Courses are on the basis of entrance examination which requires special coaching. Therefore, pre-admission costs are an essential part of private cost especially in the case of technical and professional courses like Engineering (Saruparia and Lodha, 2013). Total course fee (scheduled fee) includes admission fee, tuition fee, examination fee and special fee. Fee charged by the institution other than scheduled fee mainly includes building fee, library fee, PTA fund etc. Cost for clothing and dress is included in outfit expenses. Other expenses includes expenses for medicine, expenses related to sports, cultural and dance programmes and entertainments. The remaining items of private cost are self-explanatory.

5.1 Average cost of education incurred by the students

In this section, the average cost of engineering education incurred by the Muslim students in Self-Financing engineering colleges is analyzed. It includes the average cost incurred on different heads by the students for the entire period of their Engineering course in 4 years. Though the scheduled fees prescribed by the government for admission to engineering courses under open merit (CEE) and the fee limit fixed for Management and NRI quota seats are the main source of data for estimating the expenses on scheduled fee, here the researcher has collected data directly from the students with a view to compute the actual expenses borne by them. Students who have secured admission under different quota have to pay different amounts as scheduled fee. The differences in fees between the colleges in management and NRI quota admissions and the actual cost differences due to the benefits available to students based on the different scholarships for different semesters of study were also taken into account.

Table 5.1

The Average cost for Engineering Education in Self-financing Engineering Colleges

SI. No.	Cost of Education	Average cost (Rs)
Academic Costs		
1	Books/stationary	38145
2	Cost on instruments	25608
3	Pre admission cost	19193
4	Total fee (scheduled fee) paid for the course	334786
5	Fee other than scheduled fee	55392
6	Cost for doing study project	6516
Special Academic Costs		
1	Capitation fee	181247
2	Private tuition fee	95238
3	Expenditure on study tour	8048
Maintenance Costs		
1	Outfit expenses	59524
2	Travelling expenses	46990
3	Telephone/Mobile/Internet	25291
4	Bags/shoes/cosmetics	24296
5	Other expenses	4743
Special Maintenance Costs		
1	Hostel fee	96287
2	Mess fee	119534

Source: Primary Data based on 2011-15 period

The above table reveals that, for the entire course, the average total cost (including Academic Cost, Special Academic Cost, Maintenance Cost and Special Maintenance Cost) was Rs. 11,40,838. In which the average total academic cost (academic cost + special academic cost) forms 67 percent and the remaining 33percent is the average total maintenance cost (maintenance cost + special maintenance cost). In the total academic cost (academic cost + special academic cost),

the special academic cost comes around 37 percent and in total maintenance cost (maintenance cost + special maintenance cost), the special maintenance cost is more than 57 percent. The average total cost without including Special Academic Cost and Special Maintenance Cost was Rs. 6,40,484, out of which the share of academic cost alone constitutes 75 percent and the rest is maintenance cost.

It can be further seen that, in total academic cost, the scheduled fee including tuition and examination fee is the major item of expenses which occupies 70 percent and in special academic cost, about 64 percent is capitation fees. In maintenance cost, more than 66 percent goes to travelling and outfit expenses. In special maintenance cost, the major item is mess fees (55 percent).

5.2 Cost of Education - An Analysis of Gender Disparity

A more detailed analysis of the cost of education for students has been shown below. In this section students are classified in to different groups on the basis of their expenditure on various items. The summary results of expenses on various components of academic and special academic costs are shown below.

Table 5.2
Summary results of association between Gender and the components of Academic and Special Academic Costs

No	Academic Costs	Male	Female	Chi-square value	p-value
1	Monthly expense on books/stationary	252	208	12.310	0.006**
2	Monthly expense on instruments	252	208	23.127	0.001**
3	Pre admission cost	252	208	8.647	0.527^{NS}
4	Scheduled course fee	252	208	12.310	0.054^{NS}
5	Fees other than scheduled fee	252	208	12.310	0.054^{NS}
6	Study project	252	208	12.310	0.054^{NS}
Special Academic Costs					
1	Capitation Fees	97	80	12.310	0.054^{NS}
2	Private Tuition Fees	115	95	12.310	0.054^{NS}
3	Study Tour	224	186	12.310	0.054^{NS}

Source: Primary data, ** shows significance at 1percent level, NS shows not significant

5.2.1 Books/Stationery and Instruments

In Academic Cost, the first two components are the cost for books/stationary and for instruments. Here, the students are grouped on the basis of their monthly expenditure for books/ stationary and instruments. The monthly expenses of male, female and total students coming under four groups have been shown in the table (Annexure No. 5.1). Chi-square test for association between gender and monthly expenditure incurred on books/stationery and instruments is estimated based on the null hypothesis that "there is no significant association between gender and monthly expenditure incurred for books/stationery and instruments.

Since P value is less than 0.01, the null hypothesis is significant at 1percent level. Hence, it can be concluded that, there is association between gender and monthly expenditure for books/stationery and instruments by students. On the basis of row percentage, among male students, 56.3 percent students spent below Rs 500 for monthly expenditure on books, 23.8 percent students spend between Rs 500 to Rs 1000, 15.9 percent students spend between Rs 1001-Rs 2000 and 4 percent students incur monthly expenditure of above Rs.2000 on books/ stationary. In the case of female students, 41.8 percent students spent below Rs 500 for monthly expenditure on books/ stationary, 31.3 percent students spend between Rs 500 to Rs 1000, 24.5 percent students spend between Rs 1001-Rs 2000 and 2.4 percent students incur monthly expenditure of above Rs.2000 on books/ stationary. Therefore, it can be concluded that, majority of both male and female students incur a monthly expenditure below Rs 500 on books/ stationary. Comparatively, male students incur monthly expenditure below Rs 500 which is more than that of female students. On the other hand, female students spend a higher amount ranging between Rs 500 - Rs 1000 on books. For the monthly expenditure range of Rs 10001-2000 with respect to books and stationary, it is evident that female students spend more on books/ stationary than the male students. When considering the monthly expenditure range of above 2000 in the category of books and stationary, male students tend to spend more than that of female students.

Similarly, the results of the association between gender and monthly expenses on instruments shows that the null hypothesis is significant at 1percent level i.e. there exist an association between gender and monthly expenditure on instruments by

students. On the basis of row percentage, among male students, 64.7 percent students spend below Rs 500 for monthly expenditure on instruments, 27.4 percent students spend between Rs 500-Rs 1000, 2.0 percent students spend between Rs 1001-Rs 2000 and 6 percent students incur monthly expenditure above Rs.2000 on instruments . When the monthly expenditure on instruments with respect to female students is considered, 58.7 percent students incur a monthly expenditure which is below Rs 500. 31.7 percent students spend between Rs 500-Rs 1000, 7.2 percent students spend between Rs 1001-Rs 2000 and 2.4percent students spend above Rs.2000.

Hence we can conclude that majority of the Muslim students incur a monthly expenditure below Rs 500 for purchasing instruments, out of which it is evident that expenditure incurred on instruments by male students is more than the female students (Annexure 5.1).

5.2.2 Pre-Admission Cost

Pre-admission cost is the total expense incurred for entrance training for admission to the engineering courses. It has been classified in five groups. The null hypothesis is that there is no significant association between gender and pre-admission cost. The Chi-square result of association between gender and pre-admission cost has is shown in the table 5.2. Since p value is greater than 0.05, null hypothesis is accepted. Hence, there is no significant association between male and female students regarding pre admission cost. It means that the pre admission costs incurred by both male and female students are almost same (Annexure 5.2).

5.2.3 Scheduled Fee

Scheduled fees and other than scheduled fees are computed on yearly basis. To test the association between gender and scheduled fees, the null hypothesis has been set up as, “There is no significant association between gender and scheduled fee paid for the course, per academic year”. The Chi-square test for association between gender and scheduled fees reveals that there is no association between male and female students regarding total fee paid for the course per academic year. The total fee charged from both male and female students are equal (Annexure 5.2).

5.2.4 Fees Other than Scheduled Fee

Similarly, to estimate the association between gender and fees paid other than scheduled fees, the null hypothesis has been taken as "there is no significant association between gender and money paid to the institution other than scheduled fee". Chi-square test for association between these two showed that, there is no association between gender and the fees paid for the course other than scheduled fees. These are exhibited in the above table (Annexure 5.3).

5.2.5 Expense for Study Project

There are six groups in this component. The Chi-square test for association between gender and money spend for doing study project during Engineering Education indicates that there is no association between male and female students with respect to the cost for study project for engineering education. Both male and female students spend equal amount of money on study project (Annexure 5.4).

5.2.6 The Special Academic Costs

5.2.6.1 Capitation Fee

Capitation fee, private tuition fee and expense for study tour have been taken as special academic costs. To study the gender disparity in special academic costs, Chi-square test was applied. The null hypothesis in the case of capitation fee is that, there is no significant association between gender and capitation fee charged. The Chi-square test showed that, the p-value is greater than 0.05, the null hypothesis is accepted at 5percent level. Hence, there is no association between male and female students with respect to the amount of capitation fee charged by institution at the time of admission for management/paid seat (per seat). The capitation fee charged from both male and female students are equal (Annexure 5.5).

5.2.6.2 Cost of Private Tuition

The null hypothesis set up for the examination of the association between gender and private tuition fee is that there is no significant association between gender and money spend by students on private tuition facility. Here also, the p-value is greater than 0.05; null hypothesis is accepted. Hence, it has been concluded that there is no association between male and female students with respect to money spend on private tuition facility (Annexure 5.6).

5.2.6.3 Expense for Study Tour

The association between gender and the cost for study tour also exhibited same result. The Chi-square test on the basis of the null hypothesis that there is no significant association between gender and student's expenditure on study tour showed that there is no association between male and female students regarding money spend on study tour. The Chi-square value and p-value of all these tests have been shown in the table (Annexure 5.7).

A detailed analysis of maintenance costs and special maintenance costs have been carried out using Chi-square test.

Table5.3
Summary result of association between Gender and the components of Maintenance and Special Maintenance Costs.

No	Maintenance Costs	Male	Female	Chi-square value	p-value
1	Outfit expenses	252	208	11.257	<0.031*
2	Travelling expenses	252	208	37.214	<0.001**
3	Telephone/Mobile/Internet expenses	252	208	11.237	0.004*
4	Bag/Shoes/Cosmetics	252	208	20.589	<0.001**
5	Other expenses	252	208	5.245	0.412^{NS}
Special Maintenance Costs					
1	Hostel Fees	69	54	11.374	0.098^{NS}
2	Mess Fees	197	163	12.310	0.045*

Note: * shows significance at 5 percent level, **shows significance at 1 percent level

5.2.7 Outfit Expenses

The null hypothesis has been taken as; there is no significant association between gender and monthly outfit expenses of students. Since P value is less than 0.05, the null hypothesis is rejected at 5 percent level. Hence, it can be concluded that, there exist an association between gender and monthly outfit expenses by students. On the basis of the row percentages, among male students, 59.5 percent students spend below Rs 1000 per month on clothing. 27.8 percent students spend between Rs

1000 to Rs 2000, 7.9percent students spend between Rs 2001-Rs 3000, 2.8 percent students incur monthly expenditure between Rs 3001-Rs 4000 and 2.0 percent of them incur above Rs 4000 on clothing. In the case of female students, 45.7 percent of students spend below Rs 1000 as monthly outfit expenses. 33.7 percent students spend between Rs 1000 to Rs 2000, 9.6 percent students spend between Rs 2001-Rs 3000, 8.6 percent students incur monthly expenditure between Rs 3001-Rs 4000 and 2.4 percent of them incur above Rs 4000 as monthly outfit expenses. Therefore, it can be concluded that, majority of both male and female students incur monthly expenditure of less than Rs 1000 on clothing, and within this range, expenditure incurred by male students is greater than that of female students. There is only a negligible percentage among both male and female who incur a monthly expenditure above Rs 4000 on clothing, within which, female students spend more than male students (Annexure 5.8.).

5.2.8 Travelling Expenses

The null hypothesis is that there is no significant association between gender and monthly expenditure on travelling by students.

Since P value is less than 0.01, the null hypothesis is rejected at 1 percent level of significance. Hence, it can be concluded that, there exist an association between gender and monthly expenditure incurred for travelling. On the basis of row percentage, among male students, 45.6 percent students spend below Rs 1000 for expenditure on travelling, 29.8 percent students spend between Rs 1000 to Rs 2000, 12.7 percent students spend between Rs 2001-Rs 3000, 9.9 percent students incur monthly expenditure between Rs 3001-Rs 4000 on travelling and 2.0 percent of them incur above Rs 4000 for the same. In the case of female students, 60.1 percent students spend below Rs 1000 for expenditure on travelling, 24.0 percent students spend between Rs 1001 to Rs 2000, 8.7 percent students spend between Rs 2001-Rs 3000, 4.8 percent students incur monthly expenditure between Rs 3001-Rs 4000 on travelling and 2.4 percent of them incur above Rs 4000 for the same. Therefore, it can be concluded that, majority of Muslim students incur a monthly expenditure below Rs 1000 on travelling, where in the share of female students are higher than that of male students. When we consider the monthly expenditure ranges of Rs 1001-Rs 2000, Rs

2001- Rs 3000 and Rs 3001-Rs 4000, it is evident that male students spend more than that of female students. Only a countable few of both male and female students incur monthly expenditure of above Rs 4000, out of which female students tend to spend more than that of male students (Annexur 5.9).

5.2.9 Expenses for Telephone/Mobile/Internet

The null hypothesis is that there is no significant association between gender and monthly expenditure on Telephone/Mobile/Internet by students.

Since p value is less than 0.05, null hypothesis is rejected at 5percent level. Hence, it can be concluded that, there is association between gender and monthly expenditure for Telephone/Mobile/Internet by students. On the basis of row percentage, among male students, 72.2percent students spent below Rs 500as monthly expenditure on Telephone/Mobile/Internet, 7.9percent students spend between Rs 500 to Rs 1000, 11,9 percent students spend between Rs 1001-Rs 1500 and 4.0 percent students incur monthly expenditure between Rs 1500 -Rs 2000. And 4.0 percent of them incur above Rs 2000. In the case of female students, 73.6 percent students spent below Rs 500asmonthly expenditure on Telephone/Mobile/Internet, 14.4 percent students spend between Rs 500 to Rs 1000, 4.8 percent students spend between Rs 1001-Rs 1500 and 4.8percent students incur monthly expenditure between Rs 1500-Rs 2000. And 2.4 percent of them incur above Rs 2000. Therefore, it can be concluded that, majority of both male and female students incur monthly expenditure below Rs 500 on Telephone/Mobile/Internet, comparatively female students incur monthly expenditure below Rs 500 than male students. And a countable few of both male and female students incur monthly expenditure above Rs 2000. In this group, male students spend more than female students (Annexure 5.10).

5.2.10 Expenses for Bag/Shoes/Cosmetics

The null hypothesis is that, there is no significant association between gender and monthly expenditure for bags, shoes, cosmetics by students.

Since P value is less than 0.01, the null hypothesis is rejected at 1percent level. Hence, it can be concluded that, there exist an association between gender and

monthly expenditure for bags/ shoes/ cosmetics by students. On the basis of row percentage, among male students, 62.3 percent students spent below Rs 500 for monthly expenditure on bags/shoes/cosmetics, 17.9 percent students spend between Rs 500 to Rs 1000, 15.9 percent students spend between Rs 1001-Rs 2000 and only 4 percent students spend above Rs 2000 on bags/shoes/cosmetics. In the case of female students, 49.0percent students spend below Rs 500for monthly expenditure on bags/shoes/cosmetics, 24.0 percent students spend between Rs 500 to Rs 1000, 24.5 percent students spend between Rs 1001-Rs 2000 and 2.4 percent students incur monthly expenditure of above Rs 2000 on bags/shoes/cosmetics. Therefore, it can be presumed that, majority of both male and female students incur a monthly expenditure of below Rs 500 on bags/shoes/cosmetics. Comparatively male students in this group spend more than that of female. Whereas, more female students spend between the range of Rs 500-Rs 1000 for bags/shoes/cosmetics. A countable few of both male and female students incur monthly expenditure of above Rs 2000 on bags /shoes/cosmetics (Annexure 5.11).

5.2.11 Other Expenses

The null hypothesis is that, there is no significant association between gender and other monthly expenditure by students.

Since P value is greater than 0.05, the null hypothesis is accepted. Hence, it can be concluded that, there is no association between gender and other monthly expenditures incurred by students (Annexure 5.12).

5.2.12 Special Maintenance Costs

5.2.12.1 Expenses for Hostel Fees

The null hypothesis is that, there is no significant association between gender and student's monthly expenditure incurred for hostel fee. Since p value is greater than 0.05, null hypothesis is accepted. Hence, there is no association between male and female students regarding monthly expenditure incurred for hostel fee. Both male and female students spend equal amount of money for hostel fee (Annexure 13).

5.2.12.2 Expenses for Mess Fees

We have taken the null hypothesis as there is no significant association between gender and monthly expenditure for mess fee.

Since p value is less than 0.05, null hypothesis is rejected at 5 percent level. Hence, there exists an association between male and female students with respect to monthly expenditure incurred on Mess fee. On the basis of row percentage, among male students, 54.8 percent students spend below Rs 3000 per month for mess, 25.4 percent students spend between Rs 3000to Rs 6000, 12.2 percent students spend between Rs 6001-Rs 8000 and 7.6 percent students incur a monthly expenditure of above Rs.8000 on mess. When we consider the female students, 59.5 percent students spend below Rs 3000 per month. 27.6 percent students spend between Rs 3000 to Rs 6000, 9.8 percent students spend between Rs 6001-Rs 8000 and 3.1 percent students incur a monthly expenditure of above Rs.8000. Therefore, it can be concluded that, majority of both male and female students incur a monthly expenditure below Rs 3000 on mess, and while comparing the male and female students, female students incur monthly food expenditure below Rs 3000, which is more than that of male students. Only very few students among both male and female students incur a monthly expenditure of above Rs.8000 on mess and within this range, male students spend more than that of female students (Annexure 5.14).

While considering gender variations in study expenses it is clear from the analysis that with regard to expenses on majority of items like preadmission cost, total fee for the course, fee other than scheduled fee, capitation fee, study project, study tour, private tuition , other expenses and hostel fees, there is no disparity between male and female students. But in the case of expenses on certain items such as books/stationary, instruments, outfit, travelling, telephone/mobile/internet and bag/shoes/cosmetics there exist gender disparity. In some items like books/stationary, instruments, bags/shoes/cosmetics and outfit expenses female students spent more compared to male students.

Previously limited studies were conducted to recognize the difference between gender and costs in higher education. Salami (2013) found that there is significant difference between gender in the case of cost of higher education. But the study by

Ofem & Ahunanya (2013) and Pradhan, (2003) shows that there is no significant difference between gender with regard to cost of higher education. Study by Gopinath et.al (2020) found that cost of education is partly influenced by gender.

5.3 Sources of Financing Study Expenses

Most of the engineering colleges in Kerala are self financing colleges. Generally self financing colleges will collect their capital and recurring cost from students in the form of fees. It is evident from the above analysis that, it costs a lot of money for students to graduate from a self financing engineering college. Apart from the fee charged by the institution the students have to meet several other expenses also, including special fees, expenses on study materials, clothing, travelling, study tour, study project etc. So it is very important to analyse various sources of financing study expenses by students.

Table 5.4
Details regarding sources of financing study expenses

Sources of finance	Percentage of Students	Rank
Self employed	8.7	IV
Parents	83.7	I
Support from relatives	7.6	V
Government Scholarship	12	III
Institute/Management Granted Scholarship	4.3	VI
Educational loans	20.7	II

Source: Primary Data

According to the study for majority of the students the major source of financing study expenses was their 'Parents'(83.7 percent), followed by 'educational loans (20.7 percent), government scholarship (12 percent), self-employment (8.7 percent), support from relatives (7.6 percent) and institute/management granted scholarship (4.3 percent). So, this analysis shows that the study expenses of most of the Muslim students of Self- financing Engineering Colleges in Kerala are financed by their 'Parents' and only very few of them relied on 'institute/management granted scholarship'. Thus our finding is in conformity with the findings of Kalia (2010) who

observed that in Punjab more than 82.90 per cent students in the field of professional education depend upon their parents for financing their study expenses.

Conclusion

In this study, various types of expenditure incurred by Muslim students of Self Financing Engineering Colleges in Kerala have been analyzed in a comprehensive manner. The analysis of data clearly shows that the expenses incurred by Muslim students for acquiring engineering education from self financing colleges is very high. Most of the study expenses were incurred on academic items especially for paying the total course fee. For meeting their study expenses most of the students depends on their parents.

Chapter 6

Professional Achievements of Graduated Muslim Students in Self Financing Engineering Colleges in Kerala

Although everybody tries to achieve success in their career, only a few could achieve success. Sometimes career success is defined as a mixture of financial stability, enjoying the work that they do and happiness in life. As such, to achieve career success, students should be transformed after their education. Of course, career success depends up on many factors such as the education received, the academic skills achieved during their student life and the application of these capabilities while at work. Therefore, for a successful changeover from student life to career life, graduates must be able to apply their education and academic skills in real work-life contexts. To meet the present day challenges in work place and for the survival and for reaping success in employment in today's big corporate enterprises, students require capacity to work in teams and to solve real world problems. Most of the examples in which the competency approach has been followed are in professional fields such as engineering and business (Cabera et.al. 2005). Based on measures of professional success provided by surveys on higher education graduates can be divided into various objective (e.g. income or professional position) and subjective (e.g. job satisfaction, reported use of knowledge and skills, work autonomy) indicators (Schomburg, 2007). New graduates' definitions on career success also emphasized both subjective (confidence in the future, career planning, professional identity construction, work adjustment, and satisfaction with the career path) and objective (work in the area of graduation with a good salary, financial independence, social recognition) career outcomes (Olveira et.al, 2019).

Various studies were conducted in the field of job position, job performance and job satisfaction. These studies mainly analyzed determinants of these factors and their interdependence. Certain factors such as pay or salary, job position and highest education achieved were found to have effect on job satisfaction (Hasin and Omar 2007). According to another study job satisfaction is influenced by demographics and job characteristics such as age, job position and department of work (Hwang et.al. 2009). Pay and extreme benefits were the most important factors in the position choice situation, followed by use of skills and abilities, responsibility and leadership, and autonomy and independence; with flexibility of working hours and types of services the organization provides (Feldman and Arnold, 1978). Employee

performance will be affected by soft skill acquisition and training methodology (Ibrahim et.al. 2017).

This chapter tries to analyze the professional achievements of graduated Muslim students of self-financing engineering colleges in Kerala. The factors including the job position, job performance and job satisfaction are taken into account. The gender wise comparison among the students with respect to these factors has also considered.

6.1 Profile of the Employed Muslim Students

Table 6.1

Classification of students according to Gender

Gender	Frequency	Percentage
Male	210	52.2
Female	192	47.8
Total	402	100

Source: Primary Data

Out of 402 respondents, 52.2 percent are male students and the remaining 47.8 percent are female, indicates a higher proportion of male students to their counterpart in these colleges.

Table 6.2

Classification of students according to the Field of Employment

Field of employment	Frequency	Percentage
Employed in the same field after graduation	348	86.6
Employed in an alternative field after graduation	54	13.4
Total	402	100

Source: Primary Data

The profile of their employment shows that, 86.6 percent students graduated from these institutions have got employment in the same of field in which they were graduated whereas 13.4 percent are working in an alternative field of study. This brings out the fact that majority of the Muslim students have benefited from their education from self-financing engineering colleges for graduation.

Table 6.3

Classification of students according to Employment Sector

Employment sector	Frequency	Percentage
Public sector	72	17.9
Private sector	330	82.1
Total	402	100

Source: Primary Data

Approximately 18 percent of respondents were able to find employment in the public sector. The employment opportunities for these respondents in the private sector companies are 4.5 times higher than public sector, leading to more than 82 percent. It points out that the curriculum of these colleges is meticulously designed to get employment in the private sector after graduation.

Table 6.4

Classification of students according to Place of Employment

Place of Employment	Frequency	Percentage
Kerala	240	59.7
Out of Kerala	66	16.4
Abroad	96	23.9
Total	402	100

Source: Primary Data

59.7 percent of the informants work in Kerala and 23.9 percent are working abroad. 16.4 percent of them are placed outside Kerala. This indicates that majority of the Muslim students who were graduated from self-financing engineering colleges could find employment within the state of Kerala and also in other countries.

Table 6.5

Classification of students according to Annual income

Annual income	Frequency	Percentage
Up to 2,00,000	54	13.4
Rs 2,00,001 to Rs 3,00,000	54	13.4
Rs 3,00,001 to Rs 4,00,000	66	16.4
Rs 4,00,001 to Rs 5,00,000	90	22.4
Rs 5,00,001 to Rs 7,00,000	18	4.5
Rs 7,00,001 to Rs 10,00,000	24	6.0
Above Rs 10,00,000	96	23.9
Total	**402**	**100**

Source: Primary Data

We have included the total informants in seven income groups. 13.4 percent of them have annual income less than Rs. 2 lakhs and almost 24 percent have income above Rs. 10 lakhs. The remaining 62.7 percent have income in between 2 lakhs and 10 lakhs. On the whole, 65.6 percent of students have annual income less than Rs. 5 lakhs.

6.2. Professional Achievements of Students

To estimate the professional achievements of graduated Muslim students of self-financing engineering colleges in Kerala, we have selected three broad categories of attainment factors including (1) job position, (2) job performance and (3) job satisfaction. The determinants of these factors are further identified and listed out in the following schematic presentation. The broad categories of these three attainment factors are analyzed at the aggregate and disaggregate level. The one sample t-test and chi-square tests are used for analysis. Gender, the levels of achievement and the association between gender and level of achievement are taken up for disaggregate level diagnosis. The schematic presentation has been shown below.

PROFESSIONAL ACHIEVEMENT FACTORS AND ITS DETERMINANTS

Table 6.6
ANALYTICAL DIMENSIONS

AGGREGATE LEVEL	DISAGGREGATE LEVEL
JOB POSITION 1. Ranking of the factors of professional achievement 2. Ranking of the determinants of Job position 3. The level of Job position of pass-out students JOB PERFORMANCE 1. Ranking of the determinants of Job Performance 2. The level of Job Performance of the students JOB SATISFACTION 1. Ranking of the components of Job Satisfaction 2. Level of Job Satisfaction of the respondents	JOB POSITION 1. Gender disparity in the factors of professional achievement 2. Gender disparity in the determinants of Job position 3. Association between gender and the level of Job position JOB PERFORMANCE 1. Gender disparity in Job Performance 2. Association between gender and level of Job Performance JOB SATISFACTION 1. Gender difference in Job Satisfaction 2. Association between gender and the level of Job Satisfaction

6.2.1 Extent of Professional Achievement among the students

H0: The professional achievement factors are equal to the avearge level.

Table 6.7
Mean score and one sample t test for Professional Achievement – Aggregate Level

SI No	Factors of professional achievement	Mean	Standard Deviation	Mean difference	t-value	p-value	Rank based on mean
1	Job position	3.60	0.96	0.601	12.48	<0.001**	III
2	Job performance	3.75	0.92	0.754	16.28	<0.001**	I
3	Job satisfaction	3.65	1.05	0.651	12.36	<0.001**	II

*Test Value: 3; ** denotes 1% level significance*

The p-value indicates that, all the factors determining professional achievement is significant at 1% level. The mean scores are higher than the *test value*(>3, 3 is the *test value*). This brings out the fact that the graduated Muslim students of self-financing engineering colleges in Kerala have above average professional achievement in their career.

Based on the mean score, it can also be inferred that, the most attained factor is 'job performance (3.75)' followed by 'job satisfaction (3.65)' and 'job position (3.60)'. That is, among the professional achievement factors, the job performance outperforms job satisfaction and job position.

6.2.2 Gender disparity with respect to professional achievement

We have used t- test for observing statistically significant difference between male and female students with respect to professional achievement factors

H0: There is no significant gender disparity with respect to professional achievement

Table 6.7(1)

Gender Disparity in the factors of professional achievement

Factors of professional achievement	Gender of the students				t-value	p-value
	Male		Female			
	Mean	SD	Mean	SD		
Job position	3.60	0.93	3.59	1.00	0.163	0.870^{NS}
Job performance	3.92	0.86	3.57	0.95	3.84	<0.001**
Job satisfaction	3.73	0.89	3.55	1.20	1.71	0.087^{NS}

*Note : ** denotes significant at 1% level; NS denotes Non-significance*

Since p-value is significant in the case of job performance, the null hypothesis is rejected at 1% level, indicates that there exist a significant difference between male and female students in terms of job performance. The mean score shows that, the performance of male students is better than their counterpart in job.

The p-value further shows that there is no gender disparity in job position and job satisfaction. The male students give more importance to the factor job performance (3.92) than job satisfaction (3.73) and job position (3.60).

The mean scorein the case of female students indicates that, the job position (3.59) is the most achieved factor followed by job performance (3.57) and job satisfaction (3.55).

6.3 Job Position Of Graduated Muslim Students In The Self Financing Engineering Colleges in Kerala

To analyse the factor Job position, we have considered six components including; the attainment of job matching with their qualifications, job matching with the soft skill they gained, application of learned skills, professional reputation, performance based pay and working in a good environment. One sample t-test and Chi-square tests are used for the analysis.

6.3.1 Exent of job position

The hypothesis is that,

H0: The determinants of the factorjob position of Muslim students are equal to the avearge level

Table 6.8

Extent of job position – Aggregate Level

SI No	Determinants of Job position	Mean	Standard Deviation	Mean difference	t-value	p-value	Rank based on mean
1	Job matching with qualifications	3.68	1.05	0.68	13.04	<0.001**	II
2	Job matching with soft skills	3.49	1.19	0.49	8.29	<0.001**	V
3	Application of learned skills	3.65	1.10	0.65	11.95	<0.001**	III
4	Professional reputation	3.70	1.21	0.70	11.61	<0.001**	I
5	Performance based pay	3.47	1.26	0.47	7.57	<0.001**	VI
6	Better working environment	3.59	1.03	0.59	11.52	<0.001**	IV

*Test Value: 3; ** denotes 1% level significance*

The p-value for all the six determinants of job position is less than 0.01, the null hypothesis is rejected at 1% significant level.

The mean scores show that the elements determining job position such as job matching with qualifications, job matching with soft skills, application of learned skills, professional reputation, performance-based pay and better working environment are higher than the *test value*, indicates a better job position of graduated students of these self-financing colleges. (>3, 3 is the *test value*).

The result of one sample t-test shows that the students have got a good job according to their qualifications and soft skills. Also, they have got better job opportunity for the application of learned skills and work in a reputed post under a reputed company. They receive satisfactory performance pay and are working in a good environment.

Based on mean score, we can see that, the most attained factor is 'professional reputation' (3.70) followed by 'job matching with qualification' (3.68), 'application of learned skills' (3.65), 'better working environment' (3.59), 'job matching with soft skills' (3.49) and 'performance based pay' (3.47).A feeling of good reputation is the most important factor that determines job position of Muslim students of these engineering colleges.

6.3.2 Gender wise difference in Job position

We have applied t- test for measuring significant difference between male and female students with respect to job position

H0: There is no gender wise disparity in the determinants of job position

Table 6.8(1)

Gender wise difference in job position

Determinants of the factor Job position	Gender of the students				t-value	p-value
	Male		Female			
	Mean	SD	Mean	SD		
Job matching with qualifications	3.62	1.10	3.75	1.00	-1.153	0.250^{NS}
Job matching with soft skills	3.40	1.12	3.59	1.24	-1.633	0.103^{NS}
Application of learned skill	3.71	1.08	3.59	1.11	1.096	0.274^{NS}
Professional reputation	3.77	1.07	3.62	1.34	1.212	0.226^{NS}
Performance based pay	3.57	1.25	3.37	1.27	1.560	0.120^{NS}
Better working environment	3.57	1.07	3.62	0.99	-0.516	0.606^{NS}

Note: 1. NS denotes Non-significance

Since p-value is greater than 0.05, the null hypothesis is accepted at 5 percent level that there is no disparity with regard to the determinants of job position such as job matching with qualifications, job matching with soft skills, chance for application of learned skills, professional reputation, performance based pay and better working environment.

Based on mean score, it can be inferred that, male students give more importance to professional reputation (3.77) followed by application of learned skills

(3.71), job matching with qualifications (3.62), performance based pay (3.57) and better working environment (3.57) equally and job matching with soft skills (3.40). In the case of female students, the component job matching with qualifications (3.75) is more important followed by professional reputation (3.62), better working environment (3.62) equally, job matching with soft skills (3.59), application of learned skills (3.59) equally and performance-based pay (3.37).

Moreover, the components of 'job matching with qualifications', 'job matching with soft skills' and 'better working conditions' are more favorablein female candidates whereas, 'application of learned skill', 'professional reputation' and 'performance based pay' are biased more towards male candidates.

6.3.3The level of Job position of the respondents

H0: The factors of job position level of the respondents are equally distributed

Table 6.9

The level of job position – Aggregate Level

Attribute	Low level (Q1)	Medium level (Q2)	High level (Q3)	Total	Chi-Square value	p-value
Level of Job position	120 (29.9%)	162 (40.3%)	120 (29.9%)	402 (100%)	7.87	<0.001**

*** indicates significant at 1% level*

The p-value is significant at one percent level, indicates that there is significant difference in the job position level of the pass out Muslim students from the self-financing engineering colleges in Kerala. Table 6.12 shows that, close to 30 percent students have attained low levelofjob position in terms of its determining factors such as Job matching with qualifications, Job matching with soft skills, Application of learned skill, Professional reputation, Performance based pay and Better working environment. 40.3 percent have attained medium level andnearly 30 percent have attained high level of job position conditions in terms of its factors. So it can be inferred that approximately 70 percent of the students passed out from the self-financing engineering colleges have medium to high level of job position with respect to the determining factors that we have taken into account.

6.3.4 The association between gender and the level of job position

We have applied Chi-square test for estimating association between gender and level of job position.

H0: There is no significant association between gender and level of job position

Table 6.9(1)

Association between gender and level of job position

Gender	Level of Job position			Total	Chi-square Value	p-value
	Low	Medium	High			
Male	54 (25.7%)	96 (45.7%)	60 (28.6%)	210 (100%)	5.962	0.051^{NS}
Female	66 (34.4%)	66 (34.4%)	60 (31.3%)	192 (100%)		
Total	120 (29.9%)	162 (40.3%)	120 (29.9%)	402 (100%)		

Note: 1. The value within parenthesis refers to Row Percentage
2. NS denotes Non-Significance

Since p-value is higher than 0.05, the null hypothesis is accepted. Hence, it can be concluded that, there is no significant association between gender and level of job position of pass out students.

6.4 Job Performance of Graduated Muslim Students in The Self Financing Engineering Colleges in Kerala

To analyse the second factor Job Performance, eleven components were taken into consideration. They are; the Timeliness in Job, Job Fulfilment, Responsibility Fulfilment, Fulfilment of Obligation, Energetic at Work, Happiness at Work, Strong and Vigirous at Work, Enthusiastic at Work, Inspiration at Work, Happy to go for Work and finally, Pride at Work. One sample t-test and Chi-square tests are used for analysis.

6.4.1 Exent of job performance of the students

The hypothesis is;

H0: Job performance of students pass-out from the self financing engineering colleges in Kerala is equal to the average level

Table 6.10

Extent of Job Performance – Aggregate Level

SI No	Determinants of Job Performance	Mean	Standard Deviation	Mean difference	t-value	p-Value	Rank based on mean
1	Timeliness in Job	4.04	0.90	1.04	23.12	<0.001**	I
2	Job fulfilment	3.86	1.00	0.86	17.23	<0.001**	V
3	Responsibility fulfilment	4.02	1.02	1.00	19.59	<0.001**	II
4	Fulfilment of obligation	3.95	0.93	0.95	20.40	<0.001**	IV
5	Energetic at work	3.49	1.01	0.49	9.73	<0.001**	X
6	Happiness at work	3.53	1.21	0.53	8.86	<0.001**	IX
7	Strong and vigorous at work	3.61	1.07	0.61	11.36	<0.001**	VIII
8	Enthusiastic at work	3.70	1.12	0.70	12.54	<0.001**	VII
9	Inspiration at work	3.77	1.09	0.77	14.25	<0.001**	VI
10	Happy to go for work	3.31	1.12	0.31	5.59	<0.001**	X1
11	Pride at work	4.00	1.10	1.00	18.10	<0.001**	III

*Test Value: 3; ** denotes 1% level significance*

Since the p-value is less than 0.01, the null hypothesis is rejected at 1% significant level, means that the components responsible for job performance are not the average level.

The mean scores show that all the job performance elements are higher than average level (>3, 3 is the test value). This shows that, the pass-out Muslim students of self-financing engineering colleges are able to complete their duties in time, job fulfillment, responsibility, and fulfillment of job obligations. Also, they are energetic,

happy, strong and vigorous and enthusiastic in their work. Beyond this, they are inspired by their job, feel happy to go for work and are proud of their job.

The mean scores further brings out that the performance factor 'timeliness in job' (4.04)outperformed all the other ten factors. It is followed by 'responsibility fulfillment' (4.02), 'pride at job' (4.00), 'fulfillment of obligation' (3.95), job fulfillment' (3.86), 'inspiration at work'(3.77), 'enthusiastic at work' (3.70), 'strong and vigorous at work' (3.61), 'happiness at work' (3.53), 'energetic at work' (3.49), and 'feeling happy to go for work' (3.31).

6.4.2 Gender wise difference in job performance

We have applied t test for measuring significant difference between male and female students with respect to job Performance

H0: There is no gender difference with respect to job performance.

Table 6.10(1)

Gender disparity with respect to Job Performance

Job performance factors	Gender of the students				t-Value	p-Value
	Male		Female			
	Mean	SD	Mean	SD		
1. Timeliness in Job	4.14	0.93	3.93	0.86	2.282	0.023*
2. Job fulfilment	3.97	0.94	3.75	1.06	2.213	0.027*
3. Responsibility fulfilment	4.08	0.90	3.90	1.13	1.761	0.079^{NS}
4. Fulfilment of obligation	4.05	0.92	3.84	0.94	2.289	0.023*
5. Energetic at work	3.80	0.95	3.15	0.97	6.695	<0.001**
6. Happiness at work	3.82	1.11	3.21	1.24	5.186	<0.001**
7. Strong and vigorous at work	3.80	0.98	3.40	1.14	3.710	<0.001**
8. Enthusiastic at job	3.97	1.03	3.40	1.14	5.210	<0.001**
9. Inspiration at work	3.91	1.05	3.62	1.11	2.674	0.008**
10. Happy to go for work	3.57	0.99	3.03	1.18	4.953	<0.001**
11. Pride at work	4.00	1.01	4.00	1.20	0.000	1.000^{NS}

Note : 1. ** denotes significant at 1% level.
2. *denotes significant at 5% level
3. NS denotes non-significant.

Since p-value is less than 0.01, the null hypothesis is rejected at 1% level with regard to job performance indicators such as; energetic at work, happiness at work, strong and vigorous at work, enthusiastic at job, inspiration at work and happy to go for work. This discloses the fact that there exists gender difference in six out of eleven components that determine job performance.

Since the p value is less than 0.05, the null hypothesis is rejected at 5% level concerning the remaining job performance factors including; timeliness in job, job fulfilment and fulfilment of obligations. On this ground, it can be inferred that there is significant difference between male and female students with respect to three indicators such as timeliness in job, job fulfilment and fulfilment of obligations. On the whole, there exists gender difference in nine out of eleven components that determine job performance. In 'responsibility' and 'pride', there is no gender disparity.

Mean score indicates that, male students show better job performance than female students regarding maintaining timeliness in job, job fulfilment and fulfilment of obligations. They give more importance to the timeliness in job(4.14) followed by responsibility in fulfilment (4.08), fulfilment of obligation (4.05), being pride at work (4.00), job fulfilment (3.97) and being enthusiastic at job (3.97) equally, the inspiration at work (3.91), energetic at work (3.80), getting happiness at work (3.82), being strong and vigorous at work (3.80) equally and feeling happy to go for work (3.57).

Mean score of female students shows that, being pride at work (4.00) is of high priority followed by timeliness in job (3.93), responsibility fulfilment (3.90), fulfilment of obligation (3.84), job fulfilment (3.75), being inspiration at work (3.62), strong and vigorous at work (3.40) and enthusiastic at job (3.40) equally, then energetic at work (3.15), getting happiness at work (3.21) and feeling happy to go for work (3.03).

6.4.3 Levels of job performance – Aggregate Level

H0: Proportions of the level of job performance among the students are equally distributed

Table 6.11

The level of job performance – Aggregate Level

Attribute	Low level (Q1)	Medium level (Q2)	High level (Q3)	Total	Chi-Square value	p-value
Level of Job performance	96 (23.9%)	198 (49.3%)	108 (26.9%)	402 (100%)	11.24	<0.001**

*** indicates significant at 1% level*

Since the P value is less than 0.01, the factors of the level of performance which is not equally distributed among the students. Nearly 24 percent have shown low level job performance in terms of the underlying factors whereas, more than 76 percent of students have shown medium to high level of performance. So, it can be inferred that graduated Muslim students pass out from self-financing engineering colleges in Kerala have shown above medium level of performance in the job.

6.4.4 Association between gender and level of job performance

We have applied Chi-square test for estimating association between gender and level of job performance

H0: There is no significant association between gender and level of job performance

Table 6.11(1)

The association between gender and level of job performance

Gender	Level of Job performance			Total	Chi-square Value	p-value
	Low	Medium	High			
Male	36 (17.1%)	102 (48.6%)	72 (34.3%)	210 (100%)	17.411	<0.001**
Female	60 (31.3%)	96 (50%)	36 (18.8%)	192 (100%)		
Total	96 (23.9%)	198 (49.3%)	108 (26.9%)	402 (100%)		

Note: 1. The value within ( ) refers to Row Percentage

2. ** denotes 1% level Significance

Since P value is less than 0.01, the null hypothesis is rejected at 1% level. Hence, it can be concluded that, there is an association between gender and level of job performance. On the basis of row percentage, among male students, 17.1% students show low level job performance, 48.6% students show medium level job performance and 34.3% students show high level job performance. In the case of female students, 31.3% students show low level job performance. 50% students show medium level job performance and 18.8% students show high level job performance. On this ground it is summed up that, the association between gender and job performance is skewed more towards male students than female students.

6.5. JOB SATISFACTION OF GRADUATED MUSLIM STUDENTS IN THE SELF FINANCING ENGINEERING COLLEGES IN KERALA

To estimate job satisfaction, six elements were taken into consideration. They are; Intention to recommend the organization, Intention to recommend the products, willingness to work more, Organizational pride, Pay satisfaction and finally Job satisfaction.

6.5.1 Extent of job satisfaction ofthe students

We have used mean score and one sample t test for estimating the job satisfaction of respondents**.**

H0: The components influencing the job satisfaction is equal to the avearge level

Since the p-value is less than 0.01, the null hypothesis is rejected at 1% significant level. The job satisfaction is not equal to the average level. The mean scores show that, all the six determinants of job satisfaction are higher than average level (>3, 3 is the *test value*).

Based on the mean score, the ranking of the components of job satisfaction are in the order;‘willing to work more’ (3.85) followed by ‘organizational pride’ (3.80), ‘job satisfaction’ (3.70), ‘intention to recommend the products’ (3.61), pay satisfaction’ (3.47) and ‘intention to recommend the organization’ (3.46).

Table 6.12
Extent of job satisfaction – Aggregate Level

SI No	Components of Job satisfaction	Mean	Standard Deviation	Mean difference	t-value	p-Value	Rank based on mean
1	Intention to recommend the organization	3.46	1.22	0.46	7.55	<0.001**	VI
2	Intention to recommend the products	3.61	1.14	0.61	10.69	<0.001**	IV
3	Willingness to work more	3.85	1.25	0.85	13.64	<0.001**	I
4	Organizational Pride	3.80	1.21	0.80	13.31	<0.001**	II
5	Pay satisfaction	3.47	1.16	0.47	8.21	<0.001**	V
6	Job satisfaction	3.70	1.14	0.70	12.25	<0.001**	III

*Test Value: 3; ** denotes Significance at 1% level*

6.5.2 Gender wise difference with respect to job satisfaction.

We have applied t test for measuring significant difference between male and female students with respect to job satisfaction**.**

H0: There is no significant gender difference with respect to the determinants of job satisfaction

Since P value is less than 0.01, null hypothesis is rejected at 1% level with regard to 'organisational pride'. For this reason, there exists significant gender difference in this element. Mean score shows that, the male candidates' are more proud of their organization compared to the female candidates.

Since P value is less than 0.05, null hypothesis is rejected at 5% level with regard to 'willingness to work more'. Hence, there is a significant difference between male and female students with respect to willingness to work more. Mean score

indicates that, male students show more work willingness compared to female students.

Table 6.12(1)

Gender disparity in job satisfaction

Job satisfaction factors	Gender of the students				t-Value	p-Value
	Male		Female			
	Mean	SD	Mean	SD		
Intention to recommend the organization	3.51	1.05	3.40	1.39	0.881	0.379^{NS}
Intention to recommend the products/service	3.68	0.98	3.53	1.30	1.350	0.178^{NS}
Willingness to work more	4.00	1.17	3.68	1.31	2.519	0.012*
Organizational Pride	4.00	1.04	3.59	1.34	3.395	0.001**
Pay satisfaction	3.51	1.13	3.43	1.20	0.660	0.510^{NS}
Job satisfaction	3.71	1.03	3.68	1.26	0.233	0.816^{NS}

Note: 1. ** denotes significant at 1% level.
2. *denotes significant at 5% level
3. NS denotes non-significant.

Since p-value is greater than 0.05, the null hypothesis is accepted with regard to 'intention to recommend the organization', 'intention to recommend the products/service', 'pay satisfaction' and 'job satisfaction'. That is, there is no significant gender difference in these components.

Based on mean score it can be inferred that, among male students, willingness to work more (4.00) and organisational pride (4.00) are the most important elements followed by job satisfaction (3.71), intention to recommend the products/service (3.68), intention to recommend the organization (3.51) and pay satisfaction (3.51).

In the case of female students, willingness to work more (3.68) and getting job satisfaction (3.68) have got high priority, followed by organisational pride (3.59), intention to recommend the products/service (3.53), pay satisfaction (3.43) and intention to recommend the organisation (3.40).

6.5.3 Levels of job satisfaction of the students

H0: Proportions of the level of job satisfaction factorsare equally distributed

Table 6.13
Level of job satisfaction – Aggregate Level

Attribute	Low level (Q1)	Medium level (Q2)	High level (Q3)	Total	Chi-Square value	p-value
Level of Job satisfaction	96 (23.9%)	198 (49.3%)	108 (26.9%)	402 (100%)	11.97	<0.001**

** *indicates significant at 1% level*

Since the P value is less than 0.01, the proportions of job satisfaction factor of outgoing Muslim engineering students of self-financing engineering colleges in Kerala are not equally distributed. It indicates that there is significant difference in the level of job satisfaction in terms of the factors. From the above table, it can be observed that 23.9 percent Muslim students have low level of job satisfaction. More than 76 percent students have medium to high level job satisfaction.

6.5.4 Association between gender and the level of job satisfaction

We have applied Chi-square test for estimating association between gender and level of job satisfaction.

H0: There is no significant association between gender and the level of job satisfaction

Table 6.13(1)
Association between gender and the level of job satisfaction

Gender	Level of Job satisfaction			Total	Chi-square Value	p-value
	Low	Medium	High			
Male	36 (17.1%)	126 (60%)	48 (22.9%)	210 (100%)	21.297	<0.001**
Female	60 (31.3%)	72 (37.5%)	60 (31.3%)	192 (100%)		
Total	96 (23.9%)	198 (49.3%)	108 (26.9%)	402 (100%)		

Note: 1. The value within ( ) refers to Row Percentage
2. ** denotes 1% level Significance

Since P value is less than 0.01, the null hypothesis is rejected at 1% level. Hence, it can be concluded that, there is an association between gender and level of job satisfaction. On the basis of row percentages, the proportion of low job satisfaction level of female candidates is more than male. At the same time the high level of job satisfaction is also skewed towards female candidates.

6.6 Major Findings

The third specific objective of the study is to analyze the professional achievements of graduated Muslim students of self-financing engineering colleges in Kerala. We have taken up three major factors and its determining components to analyze the professional achievement of students' pass-out of these institutions. The study found that graduated Muslim students of self-financing engineering colleges in Kerala have above average professional achievement in terms of Job position, Job Performance and Job Satisfaction and the attainment of Job Performance is more than Job Satisfaction and Job position.

The observations are summarized as follows.

6.6.1 Job position

1. The job positions of the students are above average. They have got the opportunity for the application of learned skills and work in a reputed post under a reputed company, receive satisfactory performance pay and to work in a good environment.
2. There is no gender disparity with regard to attaining a job matching with their qualifications, soft skills, learned skills, professional reputation, performance based pay and better working environment.
3. In Job position, male students give more importance to professional reputation whereas, job matching with qualification is more important in the case of female students.
4. The aggregate level analysis shows that close to 70% of students have medium to high level of job position with respect to its determining factors. Moreover, there is no association between gender and the level of job position.
5. There is no gender disparity in job position

6.6.2 Job Performance

1. The level of job performance of students pass out from these institutions are higher than the average level
2. In their performance, the timeliness in job and responsibility in fulfillment are the most important components.
3. There exists gender disparity in nine out of eleven components that determine job performance. In 'responsibility fulfilment' and 'pride at work', there is no gender disparity.
4. Male students show better job performance than female students with respect to timeliness in job, job fulfillment and fulfillment of obligations whereas; female students give priority for being pride at work and timeliness in job.
5. The level of job performance at the aggregate level indicates that more than 76 percent of students have shown medium to high level of performance.
6. There is an association between gender and level of job performance. This association is skewed more towards male students.

6.6.3 Job Satisfaction

1. The job satisfaction of students is above average in terms of all the six determining components. Their 'Willingness to work more' and 'Organizational pride' are the prominent components of satisfaction.
2. There is no significant gender difference in job satisfaction with respect to four out of six components, but there is difference in Organization pride and Willingness to work more.
3. Both male and female students have shown high priority to 'Willingness to work more'. It is followed by 'Organizational pride' in the case of males and 'Job satisfaction' for female students.
4. More than 76 percent students have medium to high level job satisfaction.
5. There is an association between gender and job satisfaction. The proportion of female candidates witnessed both low and high level of job satisfaction compared to their counterpart.

Conclusion

This chapter covered the third objective of the study which is to analyze the professional achievements of graduated Muslim students of Self Financing engineering colleges in Kerala. In this chapter analyzed the job position, job performance and job satisfaction factors which influence professional achievement of students. The chapter also encompassed gender wise differences with respect to job position, level of job performance and level of job satisfaction. The association between gender and professional achievement factors has also taken up for analysis.

Chapter 7

The Effects of Academic and Soft Skill Performances on the Professional Achievement of Graduated Muslim Students of Self-Financing Engineering Colleges in Kerala

This chapter covers the fourth objective of the study that is to explore the effects of Academic and Soft skill Performances of graduated Muslim students of Engineering Colleges in Kerala on their professional attainments. Co-variance Based Confirmatory Factor Analysis (CB-CFA) and Structural Equation Modelling (SEM) techniques have been used for analysis. This chapter involves two sections; the first section deals with the Co-variance Based Confirmatory Factor Analysis (CB-CFA) and the second section covers the Structural Equation Modelling (SEM) techniques by using IBM SPSS AMOS 21 software package. This chapter also contains an overview of CB-SEM techniques followed by the summary of hypothesis testing.

SECTION – I (A)

7.1 Hypothesis Formulation- A Theoretical Framework

Soft skills are personal attributes that enable individuals to interact effectively and harmoniously with other people. It plays an important role in determining the overall performance of an employee. The acquired skills apart from academia differentiate the high potential and low potential employees in the global labour market. The literature of Boyatzis (2006), Hopkins and Bilimoria (2008), Mustafa and Agus (2007) support this fact. Evidences on the link between performance and skills point towards the inevitable role of skills for enhancing employee performance and success in any business project. The studies of Massaro et al. (2016), Grugulis and Stoyanova (2011) observed this and added that, communication skills, problem-solving skills, leadership, teamwork and interpersonal skills are some of the empirically tested categorical soft skills that improve employee performance and project success. Therefore, we set up the hypothesis that;

1. *H0: Soft skills has a positive effect on job performance*

Secondly, Robles (2012) and Zhang (2012) found that, soft skill competencies help an individual to advance in his job career in a better way. Employers have also value soft skills over academic skills (Casner-Lotto & Barrington, 2006).Organizations are often willing to pay higher wages to those individuals possessing these attributes. From these findings, we can extract the hypothesis that;

2. *H0: Soft skill has a positive effect on job position*

Thirdly, Empirical evidences in psychology and economics have confirmed that, the project supervisor's evaluation of an employee's job performance is positively related to job satisfaction. There exist a positive correlation between job performance and job satisfaction (Judge et al. 2001 and Bowling 2007). This leads to the formulation of the hypothesis that;

3. *H0: Job performance has a positive effect on job satisfaction*

Fourthly, though there is no unanimous view on the causal relationship between an individual's academic performance and the eventual job performance, the studies of Wise (1975) and Hashim (2011) tries to link the relationship between these two attributes. These studies lead to the development of following hypothesis.

4. *H0: Academic performance has a positive effect on job performance*

Fifthly, individuals with more human capital in terms of education and work experience have greater accessibility to higher earnings in the profession (Sicherman&Galor, 1990; Strober, 1990). The studies of Vermeulen and Schmidt (2008) and Thomas (2000) showed that alumni with high grades academically were more successful in terms of earnings later. These observations leads to the extraction of the hypothesis that;

5. *H0: Academic performance has a positive effect on job position*

Finally, Locke (1976) observed that, job satisfaction is an emotional state resulting from the appraisal of one's job. It is an attitude an individual carries about work roles(Vroom 1964).Variables that influence job satisfaction are promotional opportunities, positions for higher pay, considerate and participative supervision, opportunities to interact with peers, a variety of duties and a high degree of control over work methods and pace. The following hypothesis has been evolved from these findings.

6. *H0: Job position has a positive effect on job satisfaction*

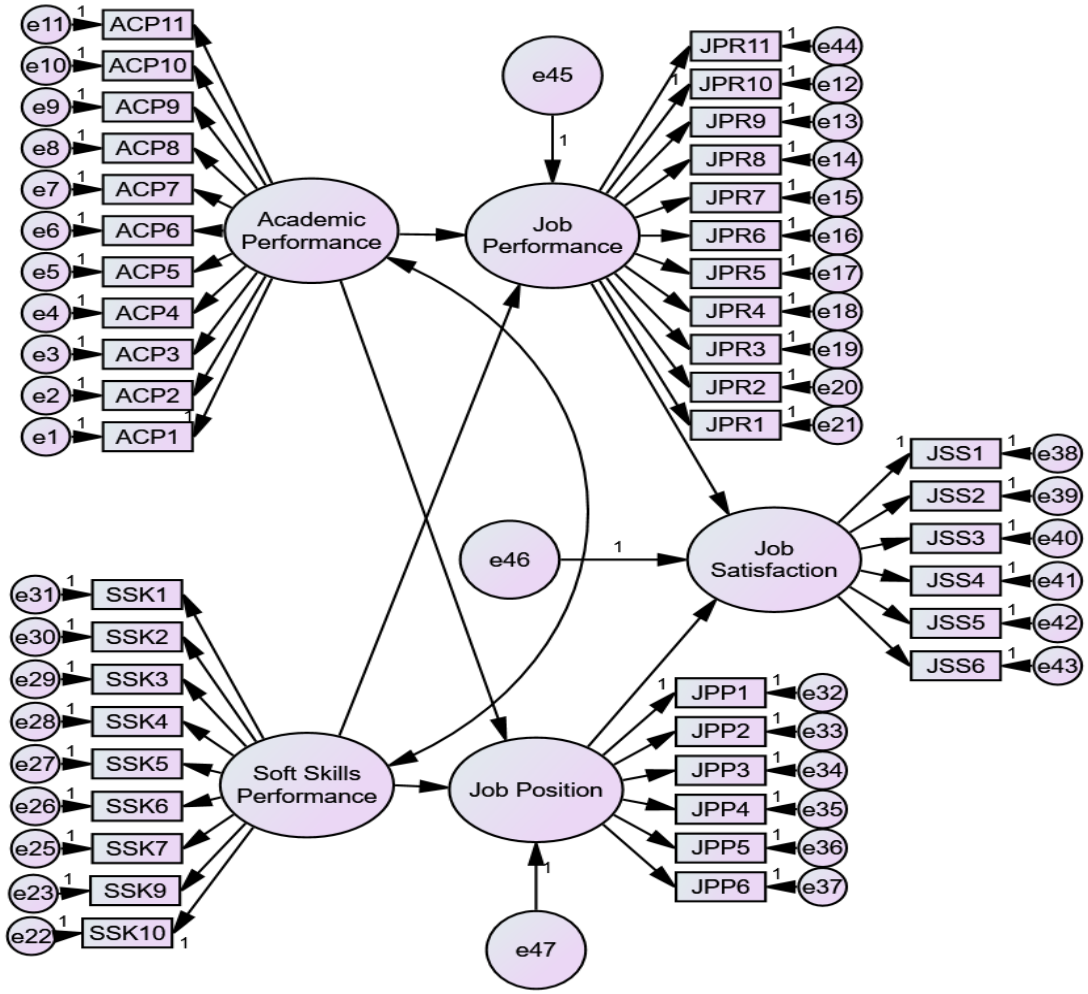
These six hypotheses have been listed out as;

1. *H0: Soft skills has a positive effect on job performance*
2. *H0: Soft skill has a positive effect on job position*

3. *H0: Job performance has a positive effect on job satisfaction*
4. *H0: Academic performance has a positive effect on job performance*
5. *H0: Academic performance has a positive effect on job position*
6. *H0: Job position has a positive effect on job satisfaction*

So we have extracted six hypothesis from five professional achievement factors including Academic Performance (ACP), Soft Skill Performance (SSK), Job Performance (JPR), Job Position (JPP) and Job Satisfaction (JSS). These six hypotheses are used in the Confirmatory Factor Analysis (CFA) model and Structural Equation Model (SEM) for testing in the subsequent part.

Figure 7.1
Hypothesized conceptual model of the study



SECTION – I (B)

7.2 Co-Variance Based Confirmatory Factor Analysis for Testing the Reliability and Validity of the Research Instrument

In statistics, confirmatory factor analysis (CFA) is used to verify the factor structure of a set of observed variables, which is most commonly used in social science research. It is used to test the hypothesis that whether there exists a relationship between observed variables and their underlying latent constructs (Suhr, 2009) i.e., to test whether the data fit the hypothesized measurement model.

7.2.1 Assessment criteria of the CB-CFA[1] models for final reliability and validity

The following tools are employed for the assessment of the measurement model:

(1) Composite Reliability (CR)

(2) Construct validity

(a) Convergent Validity

(b) Discriminant Validity.

1. **Composite Reliability (CR)** – is a measure of the overall reliability of a construct. The value varies between 0 and 1. Values of composite reliability of 0.7 and above are good (Hair et al., 2010). Values less than 0.6 indicates lack of internal consistency.

2. **Construct validity:** construct validity can be measured by two methods which includes convergent validity and discriminant validity

(a) Convergent Validity – the items which are the indicators or the observed variables in a specific construct should converge or share a high proportion of variance with each other. The researcher has used the average variance extracted (AVE) for measuring convergent validity for this study. The value of AVE is calculated by using standardized factor loadings. The threshold value of AVE is >0.5 (Hair et. al., 2010).

[1]CB-CFA – Co-variance Based Confirmatory Factor Analysis

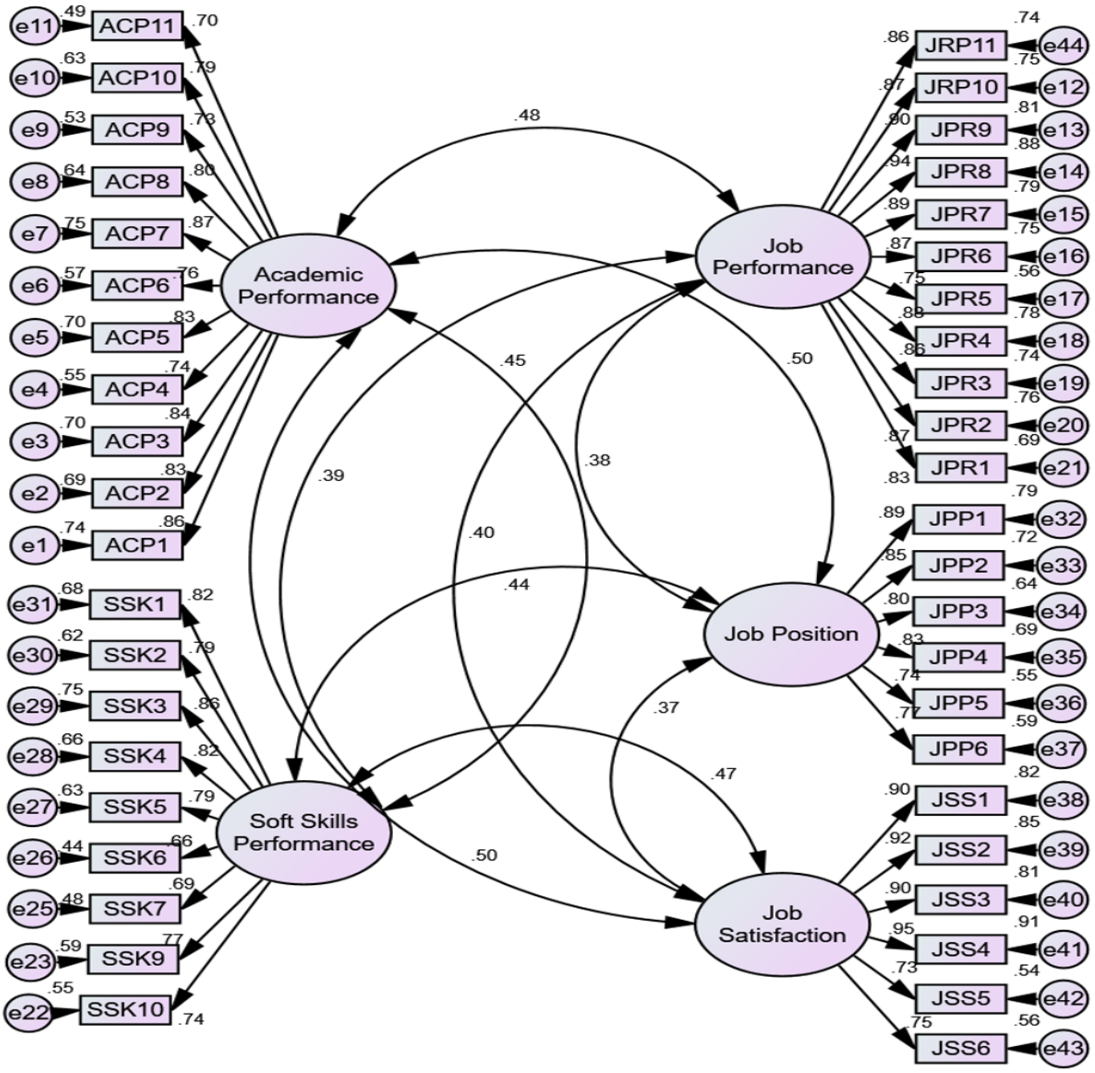
Item factor loadings are also a measure to identify convergent validity (Hair et. al., 2010). The threshold value of standardized factor loading for establishing item validity is >0.5 for this study (Hair et. al., 2010). If the standardized factor loadings and AVE values are more than 0.5, it indicates adequate convergence.

(b)Discriminant validity – is the extent to which a construct is truly distinct from other constructs. High discriminant validity indicates that a construct is unique and captures phenomena that are not represented by other constructs. If the discriminant validity examination does not yield the required results, it indicates that the variables correlate with variables of the other constructs to a large extent i.e. the latent variable is better explained by some other variables than by its own observed variables. The researcher has used the Fornelland Larcker (1981) criterion which is a conservative method of assessing discriminant validity. It compares the square root of AVE with the latent variable correlations. The square root of AVE of each construct should be greater than its latent variable correlation with any other constructs. With this, discriminant validity can be established.

7.2.2 Confirmatory Factor Analysis (CFA) for academic and soft skills performance and professional achievement constructs

The hypothesized model can be schematically presented Figure 7.2.

Figure 7.2
Confirmatory Factor Analysis for academic and soft skills performance and professional achievement constructs



We want to see whether the model is suitable for further analysis. If the values of the model fit indices of Confirmatory Factor Analysis are within the threshold limits, the model can be used for further analysis. These indices are the ratio of Chi-square to degrees of freedom (CMIN/DF), Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA).It has been summarized in table 7.1.

Table 7.1

Model fit indices of CFA model for academic and soft skills performance and professional achievement constructs

ATTRIBUTES	CMIN/DF	P-VALUE	GFI	AGFI	CFI	RMSEA
Study model	3.755	0.000	0.948	0.928	0.970	0.068
Recommended value	Acceptable fit [1-5]	Greater than 0.05	Greater than 0.9	Greater than 0.9	Greater than 0.9	Less than 0.08
Literature support	Hair et al., (1998)	Barrett (2007)	Hair et al. (2006)	Hair et al. (2006)	Hu and Bentler (1999)	Hair et al. (2006)

The value of the ratio of Chi-Square to the degrees of freedom (CMIN/DF) for an acceptable model should be less than 5. In our model, the value is 3.755 which are very well within the suggested maximum value. The GFI and AGFI values are above 0.9 and CFI is above 0.9 for which 1.0 indicates exact fit. Moreover, the RMSEA score is 0.068, well below the accepted threshold score of 0.08.Therefore, the model is a good fit and can be considered for further analysis.

From Table 7.2 it can be inferred that all the factor loadings are above the threshold level of >0.5 which establishes the item validity of the constructs. The item SSK 8 was deleted due to poor factor loading found in the CFA process. The researcher has performed the Cronbach Alpha reliability test after the full-scale data collection. The final values of Cronbach Alpha are found to be greater than 0.9 which confirms the reliability of the items used to measure the construct. The Composite Reliability values are found to be greater than 0.9 which indicates that all the constructs have a high level of internal consistency. The Average Variance Extracted (AVE) values are also found to be above the suggested threshold value of >0.5. Thus, it can be inferred that the all constructs have high levels of convergence. As all the parameters meet the recommended threshold level, the data is suitable for further analysis and research model building.

Table 7.2 Final Reliability and Validity of CFA Model for academic and soft skills performance and professional achievement constructs

Academic and soft skills performance and professional achievement constructs	Item code	Factor loading	Cronbach's Alpha Final	AVE	Composite Reliability
Academic Performance (ACP)	ACP1	0.86**	0.948	0.635	0.952
	ACP1	0.86**			
	ACP2	0.83**			
	ACP3	0.84**			
	ACP4	0.74**			
	ACP5	0.83**			
	ACP6	0.76**			
	ACP7	0.87**			
	ACP8	0.80**			
	ACP9	0.78**			
	ACP10	0.79**			
	ACP 11	0.70**			
Softskills Performance (SSK)	SSK 1	0.82**	0.929	0.600	0.930
	SSK2	0.79**			
	SSK3	0.86**			
	SSK4	0.82**			
	SSK5	0.79**			
	SSK6	0.66**			
	SSK7	0.69**			
	SSK9	0.77**			
	SSK10	0.74**			
Job Performance (JPR)	JPR 1	0.83**	0.970	0.750	0.971
	JPR 2	0.87**			
	JPR 3	0.88**			
	JPR 4	0.88**			
	JPR 5	0.75**			
	JPR 6	0.87**			
	JPR 7	0.89**			
	JPR 8	0.94**			
	JPR 9	0.90**			
	JPR 10	0.87**			
	JPR 11	0.86**			
Job Position (JPP)	JPP 1	0.89**	0.919	0.663	0.922
	JPP 2	0.85**			
	JPP 3	0.80**			
	JPP 4	0.83**			
	JPP 5	0.74**			
	JPP 6	0.77**			
Job Satisfaction (JSS)	JSS 1	0.90**	0.945	0.748	0.945
	JSS 2	0.92**			
	JSS 3	0.90**			
	JSS 4	0.95**			
	JSS 5	0.73**			
	JSS 6	0.75**			

** denotes significant at 1% level

Table 7.3 Discriminate Validity among academic, soft skills performance and professional achievement constructs

Constructs	ACP	SSK	JPR	JPP	JSS
ACP	**(0.78)**				
SSK	0.45	**(0.77)**			
JPR	0.48	0.39	**(0.87)**		
JPP	0.50	0.44	0.38	**(0.81)**	
JSS	0.50	0.47	0.40	0.37	**(0.86)**

Table 7.3 displays the square root of AVE values and inter construct latent constructs correlations. Values in brackets are the square root of AVE scores which must be greater than the inter construct latent variable correlation values to establish the non-existence of any relationship. From the above table, it can be observed that there exists no relationship between the constructs and discriminant validity among academic, soft skill performance and professional achievement constructs.

SECTION – II

7.3 Co-Variance Based Structural Equation Modeling

This section deals with the development of a Structural Equation Model (SEM) which explores the effects of Academic and soft skills performances of graduated Muslim students of self-financing engineering colleges on their professional achievements.

Structural Equation Modelling (SEM) is a multivariate statistical technique used to analyse structural relationships between measured variables and latent constructs. It is the combination of factor analysis and multiple regression analysis. The multiple and interrelated dependence can be estimated by using two types of variables; endogenous variables (dependent) and exogenous variables (independent). Covariance Based Structural Equation Modelling is a confirmatory approach and is mainly used for hypotheses testing and for the analysis of a structural theory bearing on some phenomenon. The IBM SPSS AMOS 21 software package has been used to run the SEM.

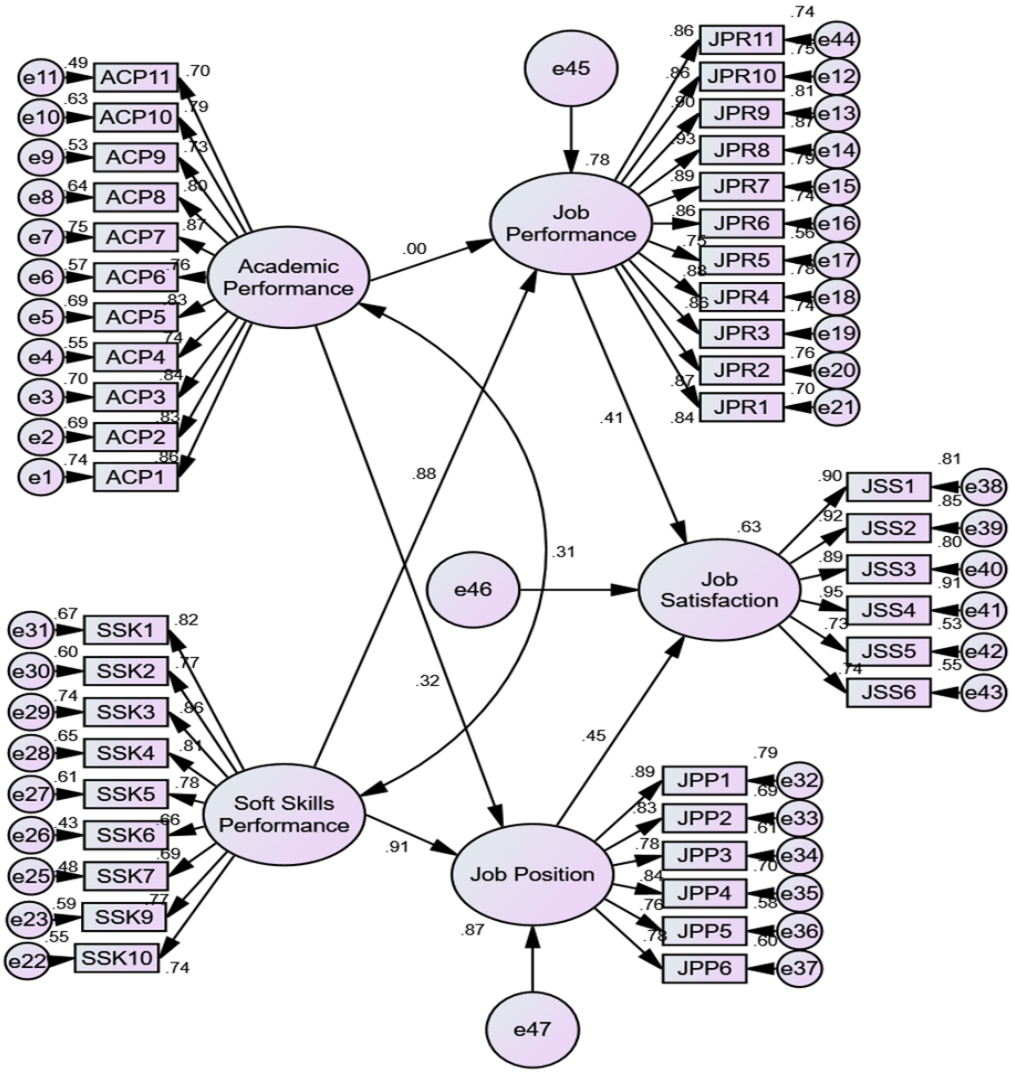
Here, we have to test the following six hypotheses that we have extracted earlier. It is shown below.

Table 7.4
Hypotheses for model building

Hypotheses No.	Hypotheses for model building
SM.H1	Academic performance has a positive effect on Job performance
SM.H2	Soft skills performance has a positive effect on Job performance
SM.H3	Academic performance has a positive effect on Job position
SM.H4	Soft skills performance has a positive effect on Job position
SM.H5	Job position has a positive effect on Job satisfaction
SM.H6	Job performance has a positive effect on Job satisfaction

SM.H1 to SM.H6 indicates Structural Model Hypotheses 1 to 6.

Figure 7.3
The Structural Equation Model for Testing the effects of Academic and Soft skills Performance



We observe whether the indices including the ratio of Chi-square to degrees of freedom (CMIN/DF), Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Root Mean Square Error of

Approximation (RMSEA) and p-values are within the threshold limits. It has been summarized in the following table.

Table 7.5
Model fit indices for Structural Equation Model

MODEL	CMIN/DF	P-VALUE	GFI	AGFI	CFI	RMSEA
Study model	4.125	0.000	0.922	0.901	0.945	0.067
Recommended value	Acceptable fit[1-5]	Greater than 0.05	Greater than 0.9	Greater than 0.9	Greater than 0.9	Less than 0.08

In this table, the value of Chi-Square to the degrees of freedom ratio (CMIN/DF) for an acceptable model should be less than 5. Here, the value is 4.125 which are very well within the suggested maximum value. The Root Mean Square Error of Approximation (RMSEA) score is 0.067, below the accepted threshold score of 0.08. Moreover, the Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI) values are above 0.9. Thus, the SEM model is a good fit.

7.4 Path analysis

Path analysis is one form of multiple regression statistical analysis that is used to evaluate causal effects in the model by examining the relationships between a dependent variable and two or more independent variables.

Table 7.6
Path analysis of the SEM model which link the academic performance, soft skills performance and professional attainments

Constructs path index			Standardized co-efficient (Beta)	R^2 Value	Critical Ratio	p-value
Job Performance	←	Academic Performance	0.00	0.78	0.041	0.954^{NS}
Job Performance	←	Soft Skills Performance	0.88		14.08	<0.001**
Job Position	←	Academic Performance	0.32	0.87	8.87	<0.001**
Job Position	←	Soft Skills Performance	0.91		15.87	<0.001**
Job Satisfaction	←	Job Position	0.45	0.63	9.98	<0.001**
Job Satisfaction	←	Job Performance	0.41		9.67	<0.001**

*** indicates significant at 1% level*

7.4.1 Interpretation of path analysis and hypothesis testing

Our first hypothesis was;

SM.H1: Academic performance has a positive effect on Job performance

The standardized beta coefficient of academic performance on job performance is 0.00 which indicates that the academic performance do not have a positive effect on Job performance. It implies that the academic performance of graduated Muslim students from the self-financing engineering colleges in Kerala have not enabled to enhance the job performance in their job settings.

SM.H2: Soft skills performance has a positive effect on Job performance

The standardized beta coefficient of soft skills performance on job performance is 0.88represents the partial effect of soft skills performance on job performance, holding the other path variables constant. The estimated positive sign implies that such effect is positive and job performance of the students of these colleges in Kerala would increase by 0.88 for every unit of standard deviation, increase in soft skills performances of the students and this coefficient value is significant at 1% level. It shows that job performance of the students of these engineering colleges is mainly based on the soft skills capabilities.

SM.H3: Academic performance has a positive effect on Job position

The standardized beta coefficient of academic performance on job position is 0.32. It represents the partial effect of academic performance on job position, holding the other path variables as constant. The estimated positive value implies that such effect is positive and job position of the students in these engineering colleges would increase by 0.32 for every unit of standard deviation, increase in academic performance and this coefficient value is significant at 1% level. It means that the academic performance of the Muslim students in the form of marks, class etc. helps them to get better job positions in an organization.

SM.H4: Soft skills performance has a positive effect on Job position

The study depicts that the soft skills performance of Muslim students in the self-financing engineering colleges in Kerala has a positive effect on getting better job position in an organization. The standardized beta coefficient of soft skills performance on job position is 0.91 that represents the partial effects of soft skills performance on job position, holding the other path variables as constant. The estimated positive value implies that such effect is positive and job position of the students would increase by 0.91 for every unit of standard deviation increase in soft skills performance of Muslim students and this coefficient value is significant at 1% level. It reveals that getting better job position in an organization mainly depends up on the soft skills performance of the students.

SM.H5: Job position has a positive effect on Job satisfaction

The study reveals that the job position has a positive effect on job satisfaction of the Muslim students in the self-financing engineering colleges in Kerala. The standardized beta coefficient of job position on job satisfaction is 0.45 which represents the partial effects of job position on job satisfaction, holding the other path variables as constant. The estimated positive value implies that such effect is positive and the job satisfaction of the Muslim students pass out from the self-financing engineering colleges in Kerala would increase by 0.45 for every unit of standard deviation increase in job position and this coefficient value is significant at 1% level. It indicates, holding a better job is an imperative factor that determines the job satisfaction of the students.

SM.H6: Job performance has a positive effect on Job satisfaction

The study reveals that the job performance has a positive effect on job satisfaction of the Muslim students in the self-financing engineering colleges in Kerala. The standardized beta coefficient of job performance on job satisfaction is 0.41, which represents the partial effects of job performance on job satisfaction, holding the other path variables as constant. The estimated positive value implies that such effect is positive and the job satisfaction of pass out students of these colleges would increase by 0.41 for every unit of standard deviation increase in job performance and this coefficient value is significant at 1% level. It shows that, when the students are able to effectively perform their job, it leads to an increase in their job satisfaction.

7.5 Explanation of R^2 values

The explanatory power of the structural equation model is assessed by examining the R^2 value of the dependent variables. The R squared coefficient measures the percentage of variation that is explained by the model (See Model figure). The coefficient of determination for job performance, R^2 is 0.78. This value implies that about 78% of the variation in job performance of the Muslim students graduated from the self-financing engineering colleges in Kerala is explained by soft skills performance of the students. This value leads to the conclusion that other independent variables are necessary for predicting job performance besides the independent construct and soft skills performance. The remaining 22% of the variation in job performance is not explained by this independent construct.

The coefficient of determination for job position, R^2 is 0.87. This value implies that about 87% of the variation in job position factor is explained by the academic performance and soft skills performance factors. This value leads to the conclusion that other independent variables are necessary for predicting the perceived values besides the independent constructs, academic performance and soft skills performance. The remaining 13% of the variation in job position is not explained by these independent constructs.

The coefficient of determination for job satisfaction, R^2 is 0.63, which implies that about 63% of the variation in job satisfaction of graduated Muslim students of the self-financing engineering colleges in Kerala is explained by the job position and job performance. This value leads to the conclusion that other independent variables are also necessary for predicting the job satisfaction besides these independent constructs. The remaining 37% of the variation in job satisfaction is not explained by these independent constructs.

7.6 Summary of the Model

Overall, the academic and soft skills performances and professional achievement model reveals that academic performance of the graduated Muslim students in the self-financing engineering colleges in Kerala does not have any positive effects on the job performance of the students. It indicates the engineering education provided by the self-financing engineering colleges in Kerala needs to be

more application oriented. But they have better performance in their job setting because of the soft skills which they possess.

Study reveals that both academic and soft skills performances of the students do have positive effect on getting better Job position in the organizations where they are working. It further shows that academic excellence and soft skills performance helps them in getting better job position in their organizations. This is in fact the achievement of the engineering education provided by the self-financing engineering colleges in Kerala.

The study exhibits the job satisfaction level of the graduated Muslim students of the self-financing engineering colleges in Kerala. The major factors that results in the job satisfaction of the students are their better job performances and better job position.

Table 7.7

Result summary of hypothesis testing

Hypotheses No.	Hypotheses of the model developed	Result of Hypotheses testing
SM.H1	Academic performance has a positive effect on Job performance	***Not Supported***
SM.H2	Soft skills performance has a positive effect on Job performance	***Supported***
SM.H3	Academic performance has a positive effect on Job position	***Supported***
SM.H4	Soft skills performance has a positive effect on Job position	***Supported***
SM.H5	Job position has a positive effect on Job satisfaction	***Supported***
SM.H6	Job performance has a positive effect on Job satisfaction	***Supported***

SM.H1 to SM.H6 indicates Structural Model Hypotheses

Conclusion

This chapter covered the fourth objective of the study that is to explore the effects of academic and soft skills performance of graduated Muslim students of the self-financing engineering colleges in Kerala on their professional attainments. Six hypotheses were tested and a Structural Equation Model was developed based on the results of the hypothesis testing. Out of the six hypotheses, five hypotheses are supported and one hypothesis is not supported in this model. The fit indices show that both CFA and SEM models are a good fit.

Chapter 8

Summary of Findings and Conclusions

Education is an important indicator of human development. It helps to develop skills and competency and leads to better career opportunities. Education plays a pivotal role in strengthening the socially and economically weaker sections and thereby helps to build a just and equitable society. Though education is the gateway to development and social change, equity in the attainment of education is important. At various levels of education, higher education in particular, has a far-reaching and powerful influence on balanced social and economic development. In this context, the study focuses on the different dimensions of the attainment of education among weaker sections with special reference to the education of Muslim students in Kerala.

Since independence, India has been making significant progress in the field of education. However, there are severe inequalities in educational attainment between different religious groups. Muslims are the second largest religion and the largest religious minority in India. However, their economic and educational status was very poor and they were behind many other minorities at the national level. In Kerala also they remained economically and educationally backward for a long period. Nevertheless, since the 1970s they are able to make rapid progress in the field of education. Many historical, economic and social factors have contributed to this. Important among them are the migration of Muslims to the Gulf countries, the economic liberalisation that has taken place in India since the 1990s and the consequent emergence of many self-financing educational institutions in the state. This has resulted in a significant increase in the enrolment of large number of Muslim students in higher education especially in the self-financing colleges. In recent times, there has been a considerable increase in the demand for engineering education among the students in Kerala. As a result, there has been a tremendous increase in the enrolment of Muslim students in higher education especially in self-financing engineering colleges in Kerala.

A review of literature on the condition of Muslim education throws insights into the progress of Muslim students in higher education, particularly in engineering education. Although, there were some efforts to analyse the performance of students in engineering colleges in Kerala, none of these studies have attempted to examine the performance of Muslim students in the self-financing engineering colleges in Kerala. As such, the present study aims to analyse the economics of education of Muslim

students in the self-financing engineering colleges concentrating on the cost of education of Muslim students in the self-financing engineering colleges in Kerala. Along with this, the study also examined the performance of Muslim Students, their professional achievements and the effects of academic and soft skill performances on their professional attainments. Therefore, the general objective of the study is to examine the economics of Education of Muslim Students in the Self-financing Engineering Colleges in Kerala. The specific objectives of the study are:

1. To examine the performance of Muslim students in the self-financing engineering colleges in Kerala.

2. To analyse the cost of education of Muslim students in the self-financing engineering colleges in Kerala

3. To trace out the professional achievements of Muslim students graduated from the self-financing engineering colleges in Kerala.

4. To explore the effects of academic and soft skill performance of these students on their professional attainments.

This study used both primary and secondary data. For primary data we have chosen four districts from Kerala and these districts are Malappuram, Kozhikode, Palakkad and Thrissur. It should be mentioned that these are the districts where Muslim population is very high and the number of self-financing colleges is comparatively higher. We have selected eight private self financing engineering colleges from these districts for the study: 4 from Thrissur, 2 from Palakkad and 1 each from Malappuram and Kozhikode. The population of the study was the students who were admitted to these self -financing engineering colleges during the year 2011-12 and who might have completed their engineering course in the year 2014-15. Out of these colleges, we have selected students from four branches - Civil Engineering (CE), Electronics and Communication Engineering (EC), Computer Science Engineering (CS), and Mechanical Engineering (ME) for the detailed analysis and these colleges are affiliated to the University of Calicut. Out of 784 Muslim students from these branches, we have chosen a sample of 460 students for the study. However, for the purpose of examination of professional achievements of graduated

Muslim students and the effect of academic performance and soft skill ability on the professional achievements, we could contact only 402 students who are presently employed.

For data analysis, we have used descriptive statistics like mean, quartile deviation, standard deviation and one sample t- test, independent t- test, chi-square tests using IBM SPSS 21 software package. In addition, the Co-variance Based Confirmatory Factor Analysis (CB-CFA) and Structural Equation Modeling (SEM) techniques were also employed using IBM SPSS AMOS 21.

The study is in eight chapters and chapter one is an introduction and chapter two is a brief review of literature. Chapter three depicts the educational status of Muslims in Kerala while chapter four is an analysis of the performance of Muslims students in the self-financing engineering colleges. Educational costs of Muslims students are examined in chapter five while the professional achievements of graduated Muslim students are analyzed in chapter six. Chapter seven is about the effect of academic and soft skill performances on the professional achievement of graduated Muslim students whereas chapter eight is a summary of findings and conclusion.

As stated before, chapter four examined the performance of Muslim students in self financing engineering colleges in terms of their performance in the university final examinations, their capability in soft skills and campus placements.

Academic performance analysis in terms of three point LIKERT scale for eleven academic attributes showed that more than 76 percent have moderate to high level performance and in terms of soft skills on three point LIKERT scale for nine soft skill attributes showed that 75 percent of them have performed moderate to high levels. Student participation in college seminars was excellent as about 77 percent of them have participated actively in these seminars. Similarly, their participation in other co-curricular activities was also very good. However, the performance of students in terms of campus placements was very poor as most of them could not attend the campus interview.

We have also taken all the 784 Muslim students from the eight sampled colleges and analysed their performance in terms of their pass percentage and the grade/class they secured in the final examination. On the basis of the University records, it was found that bulk of the Muslim students (71 percent) have passed their B.Tech examination in their first attempt and about 78 percent of them have passed the degree subsequently taking four chances. Out of this about 82 percent have secured first class. As the University record contains information about the total students of the sampled colleges, we have compared the performance of Muslim students with Non-Muslim and total students.

The pass percentage in the first attempt among the non-Muslim students was 83 percent and that of total students was 79 percent and hence was much higher. Hence, our analysis shows that the performance of Muslim students in the university examinations is good. However, when compared to the performance of non-Muslim students and the total number of students the performance was poor. The comparatively poorer performance of Muslim students was due to their poor performance in their 10^{th} and 12^{th} and in the engineering entrance examinations. The average educational background of some of the students also may have resulted in the comparatively poorer performance of Muslim students in the engineering colleges.

There were a large number of factors affecting the performance of students which are parental factors, individual and student related factors, college and university related factors etc. Among the parental factors, better economic condition of the family and encouraging parental attitude towards studies have helped to improve the performance of students. Coming to the individual and student related factors, higher percentage of marks in 10^{th} and 12^{th} especially in Physics, Chemistry and Mathematics, regular attendance in classes, average hours of regular study are also favourable factors in improving the student performance in the engineering colleges. Among the college and university related factors, student counselling system and better infrastructural facilities of the colleges in terms of library, computers and other lab facilities have helped the students to improve their performance. However, poor family background, lower entrance rank, cutting classes, poor proficiency in English, inability of the university to conduct the examinations

in time, lack of interest in studies are some of the factors adversely affected the student performance.

The analysis of gender wise difference among Muslim students with regard to their performance in self financing engineering colleges in Kerala shows that female students outperform male students in terms of academic performance, campus placement and successful completion of the course. But male students are better than female students in soft skill performance.

Chapter five examined the educational costs of Muslim students of self-financing engineering colleges in Kerala. Costs of education are generally classified in to two and they are academic and maintenance costs. Expenditures directly related to formal education of a student is academic cost and it includes pre-admission cost, expenses on books and stationeries, cost on instruments, scheduled course fee, fee paid to the college other than the scheduled fee, and money spend for the study project. However, there are some expenses related to academics which are peculiar to some of the students which we called special academic costs and it include capitation fee, private tuition fee and expenses on study tour. Maintenance costs are outlays which are indirectly related to education such as spending on conveyance, clothing and dress (outfit expenses), bags, shoes, cosmetics and other expenses. There are some items of maintenance costs incurred by some students alone and it is called special maintenance costs and it is the expenses on hostel and Mess.

We have estimated the average expenditure on these items with and without special academic and special maintenance Costs. Including all types of academic and maintenance costs (with special academic and special maintenance costs), a Muslim student had spent an average total cost of Rs. 1,140,838 for the completion of B.Tech Degree in the self-financing college. The average total cost without special academic and special maintenance costs of a Muslim student is found to be Rs. 6, 40,484. Hence, there is a significant difference in the expenses incurred by students under management quota (Special academic cost due to capitation fee) and government quota (without capitation fee) for the completion of their course in the self financing engineering colleges.

The average total academic cost (academic cost +special academic cost) forms 67 percent of the average total cost. While average total maintenance cost including maintenance cost and special maintenance cost constitute only 33 percent of the average total cost. In the total academic cost (academic cost + special academic cost), the special academic cost comes around 37 percent and in total maintenance cost (maintenance cost + special maintenance cost), the special maintenance cost is more than 57 percent. It can be further seen that, in total academic cost, the scheduled fee including tuition and examination fee is the major item of expenses which occupies 70 percent and in special academic cost, about 64 percent is capitation fees. In maintenance cost, more than 66 percent goes to travelling and outfit expenses. In special maintenance cost, the major item is mess fees (55 percent).

In the sixth chapter, we have analysed the professional achievements of graduated Muslim students of self-financing engineering colleges in Kerala. We could get information from 402 students who are presently employed and this chapter is based on the details elicited from these graduated Muslim students. Bulk of the students is employed in private companies and although about 59 percent is working in Kerala, about 24 percent of them are working abroad. One fourth of the employed students earn an average annual income above Rs. 10 lakh and a significant percentage (about 65.6 percent) earns an annual income below Rs. 5 lakh.

The professional achievements of graduated students are measured on the basis of job position, job performance and job satisfaction. Mean score and one sample t test were used for analysing Professional Achievements. To analyse the level of job position, job performance and job satisfaction of the respondents, the components of these factors have been classified in a three point LIKERT scale - low level, moderate level and high level and Chi- squire test is applied to estimate the statistical significance. We have made gender based analysis wherever possible and for this one sample t-test and chi-square tests were used.

The study found that graduated Muslim students of self-financing engineering colleges in Kerala have above average professional achievement in terms of Job position, Job Performance and Job Satisfaction and the attainment of Job Performance is more than Job Satisfaction and Job position.

About 70% of students have medium to high level of job position with respect to its determining factors. Most of them were able to get a reputed post suitable for applying the skills they have learned and earn a satisfactory pay. No gender disparity existed with regard to attaining job matching with their qualifications, soft skills, learned skills, professional reputation, performance based pay and better working environment. The study shows that the job performance of Muslim students is higher than the average level. The analysis of level of job performance indicates that more than 76 percent of students have shown medium to high level of performance. There exists gender disparity in nine out of eleven components that determine job performance. The job performance of male graduates is better than that of female graduates. This may be due to the better soft skill performance of male graduates.

The job satisfaction of students is above average in terms of all the six determining components. More than 76 percent graduates have medium to high level job satisfaction. There is no significant gender difference in job satisfaction with respect to four out of six components, but there is difference in organizational pride and willingness to work more. Male graduates are more proud of their organization and they also show more work willingness compared to female graduates.

In chapter seven, the effects of academic and soft skills on the professional attainments of graduated Muslim students of Self-Financing Engineering Colleges in Kerala were examined. This was on the basis of Co-variance Based Confirmatory Factor Analysis (CB-CFA) and Structural Equation Modelling (SEM) techniques. Covariance Based Structural Equation Modelling was used for hypotheses testing and path analysis of the SEM model was used to link the academic performance and soft skills with professional attainments.

The analysis revealed that academic performance of the graduated Muslim students in the self-financing engineering colleges in Kerala does not have any positive effects on the job performance of the students. Thus, the engineering education provided by the self-financing engineering colleges in Kerala needs to be more practical and application oriented. However, their performance in their job setting is very much better as they possess much better capability in soft skills. Moreover, the study found that academic excellence and ability in soft skills have

helped them to attain superior position in employment in their organizations. This is in fact the achievement of the engineering education provided by the self-financing engineering colleges in Kerala. Our analysis of job satisfaction of the graduated Muslim students in the self-financing engineering colleges in Kerala showed that the major factors that resulted in the job satisfaction of the students were their better job performances and better job position.

This study has mainly focused on the education of Muslim community in Kerala and analysed the economics of the attainment of professional education from Self Financing Engineering Colleges. Muslim community always has a significant place in Kerala society as they are the major minority community of the state. Despite being socially, economically and educationally backward for a long period, they have come a long way in the field of education. Efforts of famous Muslim leaders and Muslim organisations, Migration of Muslims to the gulf region, liberalization policy of the government and the resultant emergence of self-financing educational institutions are major factors behind the educational expansion of Muslims in Kerala. Because of their better economic edge owing to gulf migration, Muslim parents can afford to spend a lot on their children's education. As a result, there has been an improvement in the participation of Muslim students in the self-financing engineering colleges in Kerala. Now, it is time to make our conclusions.

The performance of students in the final university examination was good. However, even after four chances after completing the degree course, only about 78 percent are qualified for the degree. Hence, 22 percent of the students are wasted and not qualified for the B.Tech Degree. It represents huge wastage of resources for the family, society and loss of many years for the students. The extent of wastage of resources is seen in the huge costs for the four years of engineering education which came to about twelve lakhs on an average. No doubt it results in colossal loss of resources in men and material.

The performance of Non-Muslim students was much better than that of Muslim students. This means that some of the Muslim students admitted in the colleges may be through the management quota, paying many lakhs of rupees as

capitation fee and without necessary talents which has resulted in their poor performance in the engineering examinations.

The 10^{th} and 12^{th} marks and marks in Mathematics, Physics and Chemistry are important factors leading to success in engineering education. Hence, those who lack sufficient aptitude in Mathematics, Physics and Chemistry should be discouraged to take admission in engineering colleges.

The expenditure incurred by Muslim students for their B.Tech course was very high as it is as high as Rs. 1,140,838 (total average cost with special academic and special maintenance costs) and Rs. 6, 40,484 without special academic and special maintenance costs. In the total academic cost, the special academic cost comes around 37% in which about 64% is capitation fees. Hence, it is clear that self financing college managements are collecting huge sums of money from engineering aspirants with low entrance rank and marks in the eligibility examination. It is possible that those who come through the management quota have higher chances of failure compared to the merit quota students.

The performances of graduated Muslim students were good in employment as most of them were employed after their studies. Majority of the graduated Muslim students of self-financing engineering colleges have got above average professional achievement in terms of Job position, Job Performance and Job Satisfaction. This is due to their academic excellence and soft skill performance although there are some students without sufficient merit.

Policy Implications

- Government intervention is urgently required to enhance the quality of self financing engineering colleges.
- The system of capitation fee should be completely abolished to reduce the expenditure on education.
- The Government attention is necessary to provide soft skill training programmes to all the economically backward children to augment their job performance.

- Further policy measures are required to adopt industry related interactive curriculum for resource management, problem solving and marketing management.

- A publicly sponsored incubation center for product development, marketing strategy and startup ideas at the institutional level, and its affiliation with higher education institutions and Engineering colleges is required.

Suggestions

- To improve the performance of students in the self financing engineering colleges, the quality of teachers should be insisted. There should be a minimum salary to teachers sufficient for a descent living and it should be strictly implemented by government along with security of employment.

- There should be an improvement in the infrastructural facilities of the self financing colleges to improve the performance of students. The infrastructural facilities of the colleges should be most modern with modern laboratories and libraries with high speed internet to practice practical classes.
- The quality of students should be ensured while admitting students into these self financing colleges. Students without necessary aptitude should be discouraged to choose engineering subjects.
- An institutional system is needed to identify students with academic and technical skills at the early stages of education and to motivate them in the relevant domain of their choice.
- Mandatory start-ups and incubation centres in technical educational institutions and provide output-based capabilities by means of affiliation and tie-ups with industry partners.
- Given the limited background of parents in general and technical education, students should be given more orientation programmes in communication skills, industry knowledge and global business trends.
- A technological fair in association with higher education and technical institutions are to be convened annually to showcase the new and innovative ideas of students.

Annexure

ANNEXURE

Annexure 5.1. Association between gender and monthly expenditure on books/stationary and instruments

Gender	Below Rs.500	Rs 500-Rs 1000	Rs 1001 – Rs 2000	Above Rs. 2000	Total	Chi-square Value	P value
Monthly expenditure on books/stationary							
Male	142 (56.3%)	60 (23.8%)	40 (15.9%)	10 (4%)	252 (100%)	12.310	0.006**
Female	87 (41.8%)	65 (31.3%)	51 (24.5%)	5 (2.4%)	208 (100%)		
Total	229 (49.7%)	125 (27.2%)	91 (19.8%)	15 (3.3%)	460 (100%)		
Expenditure on instruments							
Male	163 (64.7%)	69 (27.4%)	5 (2.0%)	15 (6%)	252 (100%)	23.127	<0.001**
Female	122 (58.7%)	66 (31.7%)	15 (7.2%)	5 (2.4%)	208 (100%)		
Total	285 (62.0%)	135 (29.3%)	20 (4.3%)	20 (4.3%)	460 (100%)		

** denotes 1% level significance

Note: 1. Figures in parentheses show percentages

Annexure 5.2 Association between Gender, Pre-admission Cost, Scheduled Fee

Gender	Pre-admission cost					Total	Chi-square Value	P value
	Up to Rs 10,000	Rs 10,000 to Rs 20,000	Rs 20,001 to Rs 30,000	Rs 30,001 to Rs 40,000	Above Rs 40,000			
Male	99 (39.3%)	75(29.8)	10 (4.1%)	50 (19.8%)	18 (7.1%)	**252 (100%)**	8.647	0.527^{NS}
Female	63 (30.3%)	67(32.2%)	8(3.9%)	30(14.4%)	40(19.2%)	**208 (100%)**		
Total	**162 (35.2%)**	**142 (30.9)**	**18 (3.9%)**	**80 (17.4%)**	**58 (12.6%)**	**460 (100%)**		
Gender	**Scheduled fees per academic year**					**Total**	**Chi-square Value**	**P value**
	BelowRs 50000	**Rs 50000– Rs 100000**	**Rs 100001 – Rs 200000**	**Rs 200000 to 300000**	**Above Rs 300000**			
Male	69(27.4%)	145(57.5)	23(9.1%)	10(4.0%)	5(2.0%)	**252 (100%)**	12.310	0.054^{NS}
Female	36(17.3%)	140(67.3)	17(8.2%)	10(4.8%)	5(2.4%)	**208 (100%)**		
Total	**105(22.8%)**	**285(61.9%)**	**40(8.7%)**	**20(4.3%)**	**10(2.2%)**	**460 (100%)**		

Note: 1. Figures in parentheses show percentages

Annexure 5.3 Association between Gender and Fees Other than Scheduled fee

Gender	Money demanded by the institution other than scheduled fee				Total	Chi-square Value	P value
	Below Rs 25,000	Rs 25000-Rs 50000	Rs 50001 – Rs 75000	Above Rs.75000			
Male	201 (79.8%)	28 (11.1%)	23 (9.1%)	0 (0.0%)	**252 (100%)**	12.310	0.054^{NS}
Female	173 (83.2%)	21 (10.1%)	14 (6.7%)	0 (0.0%)	**208 (100%)**		
Total	**374 (81.3%)**	**49 (10.6%)**	**37 (8.1%)**	**0 (0.0%)**	**460 (100%)**		

Note: 1. Figures in parentheses show percentages

Annexure 5.4 Association between Gender and Cost for Study Project

Gender	Money spend for doing study project						Total	Chi-square Value	P value
	Below Rs 5000	Rs 5,000 - Rs 10,000	Rs 10,001 - Rs 15,000	Rs 15,001 - Rs 20,000	Rs 20,001 – Rs 25,000	Above Rs 25,000			
Male	116 (46.0%)	85 (33.7%)	14 (5.6%)	19 (7.5%)	18 (7.1%)	0 (0.0%)	**252 (100%)**	12.310	0.054^{NS}
Female	104 (50%)	75 (36.0%)	6 (2.9%)	15 (7.2%)	7 (3.4%)	1 (0.5%)	**208 (100%)**		
Total	**220 (47.8%)**	**160 (34.8%)**	**20 (4.3%)**	**34 (7.4%)**	**25 (5.4%)**	**1 (0.2%)**	**460 (100%)**		

Note: 1. Figures in parentheses show percentages

Annexure 5.5**Chi-square test for association between gender and amount of capitation fee charged**

Gender	Amount of capitation fee charged					Total	Chi-square Value	P value
	Below Rs 50000	Rs 50000 - Rs 100000	Rs 100001 - Rs 200000	Rs 200000 to 300000	Above Rs 300000			
Male	38 (39.2%)	41 (42.3)	5 (5.1%)	3 (3.1%)	10 (10.3%)	**97 (100%)**	12.310	0.054^{NS}
Female	33 (41.2%)	25 (31.2)	5 (6.3%)	5 (6.3%)	12 (15%)	**80 (100%)**		
Total	**71 (40.1%)**	**66 (37.3)**	**10 (5.6%)**	**8 (4.6%)**	**22 (12.4%)**	**177 (100%)**		

Note: 1. Figures in parentheses show percentages
2. * denotes significance at 5% level.

Annexure 5.6Chi-square test for association between gender and money students spent on private tuition facility

Gender	Money spend for private tuition facility						Total	Chi-square Value	P value
	Below Rs 50000	Rs 50,000 - Rs 1,00,000	Rs 1,00,001 - Rs 2,00,000	Rs 2,00,001- Rs 3,00,000	Rs 3,00,001– Rs 4,00,000	Above Rs 4,00,000			
Male	68 (59.1%)	17 (14.8%)	0 (0.0%)	15 (13.0%)	15 (13.0%)	0 (0.0%)	**115 (100%)**	12.310	0.054^{NS}
Female	57 (60%)	8 (8.4%)	0 (0.0%)	15 (15.8%)	15 (15.8%)	0 (0.0%)	**95 (100%)**		
Total	**125 (59.5%)**	**25 (11.9%)**	**0 (0.0%)**	**30 (14.3%)**	**30 (14.3%)**	**0 (0.0%)**	**210 (100%)**		

Note: 1. Figures in parentheses show percentages
2. NS denotes non significance

Annexure 5.7Chi-square test for finding the association between gender and studentsexpenditureonstudy tour

Gender	Students expenditureonstudy tour				Total	Chi-square Value	P value
	Below Rs 10,000	Rs 10,000 - Rs 20,000	Rs 20,001 - Rs 30,000	above Rs.30000			
Male	169 (75.4%)	36 (16.0%)	14 (6.3%)	5 (2.3%)	**224 (100%)**	12.310	0.054^{NS}
Female	156 (83.9%)	19 (10.2%)	6 (3.2%)	5 (2.7%)	**186 (100%)**		
Total	**325 (79.2%)**	**55 (13.4%)**	**20 (4.9%)**	**10 (2.4%)**	**410 (100%)**		

Note: 1. Figures in parentheses show percentages
2. NS denotes non significance.

Annexure 5.8 Chi-square test for finding the association between gender and monthly outfit expenses by students

Gender	Monthly outfit expenses					Total	Chi-square Value	P value
	Below Rs.1000	Rs 1000- Rs 2000	Rs 2001- Rs 3000	Rs 3001 – Rs 4000	Above Rs 4000			
Male	150 (59.5%)	70 (27.8%)	20 (7.9%)	7 (2.8%)	5 (2.0%)	**252 (100%)**	11.257	<0.031*
Female	95 (45.7%)	70 (33.7%)	20 (9.6%)	18 (8.6%)	5 (2.4%)	**208 (100%)**		
Total	**245 (53.3%)**	**135 (29.3%)**	**45 (9.8%)**	**25 (5.4%)**	**10 (2.2%)**	**460 (100%)**		

Note: 1. Figures in parentheses show percentages
2. * denotes 5% level significance

Annexure 5.9 Chi-square test for association between gender and monthly expenditure on travelling by students

Gender	Monthly expenditure on travelling					Total	Chi-square Value	P value
	Below Rs 1000	Rs 1000- Rs 2000	Rs 2001- Rs 3000	Rs 3001- Rs 4000	Above Rs 4000			
Male	115 (45.6%)	75 (29.8%)	32 (12.7%)	25 (9.9%)	5 (2.0%)	**252 (100%)**	37.214	<0.001**
Female	125 (60.1%)	50 (24.0%)	18 (8.7%)	10 (4.8%)	5 (2.4%)	**208 (100%)**		
Total	**240 (52.2%)**	**125 (27.2%)**	**50 (10.8%)**	**35 (7.6%)**	**10 (2.2%)**	**460 (100%)**		

Note: 1. Figures in parentheses show percentages
2. ** denotes 1% level significance

Annexure 5.10 Chi-square test for finding the association between gender and monthly expenditure on Telephone/Mobile/Internetby students

Gender	Monthly expenses on Telephone/Mobile/Internet					Total	Chi-square Value	P value
	Below Rs 500	Rs 500- Rs 1000	Rs 1001- Rs 1500	Rs 1501- Rs 2000	Above Rs 2000			
Male	182 (72.2%)	20 (7.9%)	30 (11.9%)	10 (4.0%)	10 (4.0%)	**252 (100%)**	11.237	0.004*
Female	153 (73.6%)	30 (14.4%)	10 (4.8%)	10 (4.8%)	5 (2.4%)	**208 (100%)**		
Total	**335 (72.8%)**	**50 (10.9%)**	**40 (8.7%)**	**20 (4.3%)**	**15 (3.3%)**	**460 (100%)**		

Note: 1. Figures in parentheses show percentages
2.. * denotes 5% level significance

Annexure 5.11**Chi-square test for association between gender and monthly expenditure for bags, shoes, cosmetics by students**

Gender	Expenditure for bags/shoes/cosmetics.				Total	Chi-square Value	P value
	Below Rs.500	Rs 500- Rs 1000	Rs 1001- Rs 2000	above Rs 2000			
Male	157 (62.3%)	45 (17.9%)	40 (15.9%)	10 (4%)	**252 (100%)**	20.589	<0.001**
Female	102 (49.0%)	50 (24.0%)	51 (24.5%)	5 (2.4%)	**208 (100%)**		
Total	**259 (56.3%)**	**95 (20.7%)**	**91 (19.8%)**	**15 (3.2%)**	**460 (100%)**		

Note: 1. Figures in parentheses show percentages
2. ** denotes 1% level significance

Annexure 5.12 Chi-square test for association between gender and other monthly expenditure by students

Gender	Monthly expenditure					Total	Chi-square Value	P value
	Below Rs.1000	Rs 1000-Rs 2000	Rs 2001-Rs 3000	Rs 3001-Rs 4000	Above Rs 4000			
Male	173 (68.6%)	41 (16.3%)	21 (8.3%)	12 (4.8%)	5 (2.0%)	**252 (100%)**	5.245	0.117^{NS}
Female	122 (58.7%)	34 (16.3%)	24 (11.5%)	18 (8.7%)	10 (4.8%)	**208 (100%)**		
Total	**295 (64.1%)**	**75 (16.3%)**	**45 (9.8%)**	**30 (6.5%)**	**15 (3.3%)**	**460 (100%)**		

Note: 1. Figures in parentheses show percentages
2. NS denotes Non- significance

Annexure 5.13 Chi-square test for association between gender and students monthly expenditure incurred for hostel fee

Gender	Monthly expenditure incurred for hostel fee				Total	Chi-square Value	P value
	Below Rs 3000	Rs 3000 - Rs 6000	Rs 6001 - Rs 8000	Above Rs 8000			
Male	40 (58.0%)	25 (36.2)	3 (4.3)	1 (1.5)	**69 (100%)**	11.374	0.098^{NS}
Female	41 (75.9%)	10 (18.5%)	2 (3.7%)	1 (1.9%)	**54 (100%)**		
Total	**81 (65.8%)**	**35 (28.5%)**	**5 (4.1%)**	**2 (1.6%)**	**123 (100%)**		

Note: 1. Figures in parentheses show percentages
2. NS denotes non significance.

Annexure 5.14 Chi-square test for association between gender and monthly expenditure for mess fee

Gender	Monthly expenditure on mess fee				Total	Chi-square Value	P value
	Below Rs 3000	Rs 3000 - Rs 6000	Rs 6001 - Rs 8000	above Rs.8000			
Male	108 (54.8%)	50 (25.4)	24 (12.2%)	15 (7.6%)	**197 (100%)**	12.310	0.045*
Female	97 (59.5%)	45 (27.6)	16 (9.8%)	5 (3.1%)	**163 (100%)**		
Total	**205 (56.9%)**	**95 (26.4)**	**40 (11.1%)**	**20 (5.6%)**	**360 (100%)**		

Note: 1. Figures in parentheses show percentages.
2. * denotes significance at 5% level.

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Questionnaire

QUESTIONNAIRE 1

Questionnaire on Performance and Cost of Education of Muslim Students in the Self Financing Engineering Colleges in Kerala

1. Name (Optional) :
2. Telephone No: E mail ID :
3. Gender: Male ☐ Female ☐
4. Admission Category: GEN ☐ OBC ☐ EX ☐ PH ☐ MQ ☐ NRI ☐
5. Status of your Engineering course completion :
   Successfully completed. ☐
   Completed the course with some back papers. ☐
   Discontinued midway. ☐
6. If completed successfully placed in ..... class
7. Current status: PG ☐ Employed ☐ Unemployed ☐
8. If Employed, Please give the details:

FAMILY DETAILS

9. Father's Occupation: Monthly Income:
10. Place of employment of father:
    Kerala ☐ Within India ☐ Abroad ☐
11. Mothers Occupation: Monthly Income:
12. Place of employment of mother:
    Kerala ☐ Within India ☐ Abroad ☐
13. Monthly Income of the Family:
14. Education level of Father:
15. Education level of Mother:
16. Medium of Instruction in the School:
17. School in which Studied: Govt ☐ Aided ☐ Unaided ☐
18. Syllabus: State ☐ CBSE ☐ Any other (Specify) :
19. Marks obtained at10th:
20. 18. Plus Two:
21. 10^{th} Std Marks in Maths: ☐ Physics: ☐ Chemistry: ☐

22. Where did you study your Plus Two? Govt ☐ Aided ☐ Unaided ☐

22. Which was the syllabus of your plus two? State ☐ CBSE ☐ VHSE ☐

Any other (Specify) :

23. Plus Two Marks in Maths: ☐ Physics: ☐ Chemistry: ☐

ENTRANCE EXAMINATION DETAILS

24. Did you attend any Coaching Classes for Entrance Examination?

Yes ☐ No ☐

25.1If yes, specify Period of coaching:

25. In which chance you got admission to the engineering course:

1st chance ☐ 2nd chance ☐ 3rd chance ☐ 4th chance and above ☐

26. Your rank number in the entrance list:

PRIVATE COST DETAILS

27. How much is your monthly expenditure on Education?

Category	Expenditure(Amount in Rs)	Remarks
Hostel Fee		
Mess Fee		
Books/stationary		
Bags/Shoes/Cosmetics		
Instruments		
Dress/Clothing		
Travelling		
Telephone/Mobile/Internet		
Other expenses		
Total		

Fee and other charges

28. Total fees paid by you for your admission in to the college .....

29. What was the total fee for the course?

..... Per academic year

..... Per semester

(Choose which ever is applicable)

30. Did the institution charge capitation fee at the time of admission against mana☐ent/paid s☐ Yes No

If yes, specify the amount (per seat). .....

31. Did the institution demands for money (other than the scheduled fee) during the academic session from th☐dents? ☐ No

32.1. If yes, specify purpose (s) and amount

....

....

32. Specify the examination fee for the course

..... Per academic year

..... Per semester

(Choose which ever is applicable)

33. How much did you spent on your project for Engineering Education?

.....

34. If you have availed the guidance of private tutors, state the total fees paid during the course: .....

35. Have you participated in any educational tour/excursion organised by the college?

Yes ☐ No ☐

36.1 If yes state the expenses incurred: .....

Sources of Financing

36. How is your study expenses financed?

(Put tick mark on all suitable answers)

a. Self employed ☐
b. Parents ☐
c. Support by relatives ☐
d. Government Scholarship ☐
e. Institute/Management Granted Scholarship ☐
f. Educational loans ☐
g. Any other (Specify): ☐

PERFORMANCE DETAILS

37. How will you evaluate your performance in the Engineering College?

a. Very good ☐ b. Good ☐ c. Poor ☐ d. Very Poor ☐

38. If poor, what are the reasons for the poor performance?

(Put tick mark on all suitable answers)

a. Lack of background knowledge ☐ b. Inefficient Teachers ☐

c. poor knowledge of the Plus Two level Maths or Physics ☐

d. Course selected due to the insistence of Parents ☐

e. Irregularity of Teachers ☐ f. Unattractive classes ☐

g. No interest in studies ☐ h. Domestic problems ☐

i. Bad Company of Friends ☐ j. Any other (Specify): ☐

39. Did you have any back papers in any Semester?

Yes ☐ No ☐

40. Did you experience any difficulty in following the lectures in English?

Yes ☐ No ☐

41. Are the teachers efficient and regular?

Yes ☐ No ☐

42. Did you cut the classes?

Yes ☐ No ☐

42.1 If yes why? (Put tick mark on all suitable answers)

a . Inefficient Teachers ☐ b. Unattractive classes ☐ c. No interest in studies ☐

d. Laziness ☐ e. Assignments ☐ f. Home Sickness

g. Family Problems h. Influence of friends

i. Supplementary Examinations ☐ j. Any other (Specify): ☐

43. Was there any attendance shortage to you?

Yes ☐ No ☐

44. What was the average percentage of attendance in semesters :

a. Below 75 b. 75 - 80 c. 81 - 85 d. 85 - 90 e. Above 90

45. Why did you choose this course?

a. Self Interest ☐ b. Reputation ☐ c. Parental insistence ☐

e. Job opportunity ☐ f. Did not get admission in other courses ☐

g. Any other (Specify): ☐

46. Were you able to comprehend the lectures?

Yes ☐ No ☐

47. Were you a day scholar or a hosteller?

47.1 . If a day scholar what is the distance of your house from the college:

a. Below 15 K m ☐ b.16 Km - 30 Km ☐

c. Above 30 Km ☐

48. How many hours per day did you spend for studies, after classes, on an average?
    a. Less than 2 hours ☐ b. Between 2 and 4 hours ☐
    c. More than 4 hours ☐

49. Do you think that daily travelling has adversely affected your studies?
    Yes ☐ No ☐
50. Were the facilities in the hostel adequate for studies?
    Yes ☐ No ☐ Give details:
51. Do you have adequate computer facilities in the college?
    Yes ☐ No ☐
52. Did you participate in seminars in the college?
    Yes ☐ No ☐
53. Did you participate in sports/arts/quizzes etc?
    Yes ☐ No ☐ Mention your achievements:
54. Is the performance poor due to the insufficient facilities in the laboratory?
    Yes ☐ No ☐
55. Is the performance poor due to the non- availability of necessary books in the Library?
    Yes ☐ No ☐
56. Was there any remedial coaching in the college for the students who were weak in studies ☐ Yes ☐ No
56.1 If yes, did you attend it regularly?
56.2 Yes ☐ No ☐
57. Did you attend any special coaching for any of your papers in the Engineering Colleg ☐ ☐
    Yes No
58. Was th ☐ any system ☐ tudent Counselling (Staff Adviser System) in the college?
    Yes No
59. Is the hostel life, away from home interaction, some type of nostalgia affecting the perfor ☐ ce of Musli ☐ udents?
    Yes No
60. Does the family background of the students have any role in the poor performance of the M ☐ n students i ☐ examinations?
    Yes No
61. Is the poor performance of Muslim students in the Engineering Examination due to their p ☐ financial c ☐ ion?

☐ ☐

Yes No

62. Is the inability of the universities to conduct the examinations in time affecting the performance? Yes No
63. Is it because of the long time gap between the examination and publishing of results that result in the poor performance of students?

    Yes No
64. Did you attend any Campus interview?

    Yes ☐ No ☐ If yes give details:
65. Do you have any health problem that has affected your studies?

    Yes ☐ No ☐ If yes give details:
66. Was the approach of the family to your studies very much encouraging?

    Yes ☐ No. ☐ If no, Give details:
67.

(Give tick mark, wherever it is applicable)

Item code	Statements (Items)	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
(A) Academic Performance (ACP)						
ACP1	I had been very attentive to the lectures of my teachers during my course in the engineering college(Classroom listening)					
ACP 2	I had effectively participated in my classes during my engineering study(Classroom participation)					
ACP 3	I had taken initiative in academic activities during my engineering college study (Academic initiative)					
ACP 4	I was academically up-to-date during my engineering study(Academic up-to-date)					
ACP 5	I had obtained good grades/marks in my engineering subjects during my engineering study (Academic scores)					
ACP 6	I had a study Schedule for Proper timing during my engineering college study(Timeliness in study)					
ACP 7	I was fully concentrated while studying during my engineering study (Concentration in study)					

ACP 8	I had done Proper revision of notes during my engineering study(Study revisions)					
ACP 9	I had Critical attitude towards new concepts during my engineering study(Intensive learning for new concept)					
ACP 10	I was very hard working during my engineering study(Hardworking)					
ACP 11	I had enough confidence after Joining the engineering college (Confidence)					
(B) Soft skills (SSK)						
SSK 1	I had an ability to work very well on team during my engineering college study (Teamwork Skills)					
SSK 2	I had been very empathetic towards others during my engineering college study(Empathetic)					
SSK 3	I had positive attitude during my engineering college study(Positive attitude)					
SSK 4	I had good self control during my engineering college study (Self control)					
SSK 5	I had an ability to speak clearly the subject matter during my engineering college study (Communication skills)					
SSK 6	I had many friends during my engineering college study (Friend circles)					
SSK 7	I was a respectful and obedient student towards my teachers during my engineering college study (Respectful and obedient)					
SSK 8	*I was very anxious and fearful student during my engineering college study (Anxious and fearful)*					
SSK 9	I had good project management skills during my engineering college study (Project management skills)					
SSK 10	I had an ability for presenting my seminars very effectively during my engineering college study (Presentation skills)					

QUESTIONNAIRE 2

Questionnaire on the Effects of Academic and Soft Skills performance on Professional Achievements of Graduated Muslim Students of Self-Financing Engineering Colleges in Kerala

1. Name of the Respondent :
2. Telephone No : E mail ID :
3. Gender : M F
4. Designation :
5. Sector of Employment : Govt. Sector / Private sector
3. Place of Employment : Kerala / Out of Kerala / Abroad
4. Field of Employment : Employed in the same field after graduation / Employed in an alternative field after graduation

6. Annual income from your job :

(Give tick mark, wherever it is applicable)

Item code	Statements (Items)	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
(A) Job Performance						
JPR 1	I always complete the duties specified in my job description(Timeliness in Job)					
JPR 2	I meet all the formal performance requirements of the job(Job fulfillment)					
JPR 3	I fulfill all responsibilities required by my job.(Responsibility fulfillment)					
JPR 4	I never neglect aspects of the job that I am obligated to perform.(Fulfillment of obligation)					
JPR 5	At my work, I feel bursting with energy (Bursts of energy)					
JPR 6	I feel happy when I am working intensely (Happiness at work)					
JPR 7	At my job, I feel strong and vigorous(Strong and vigorous at work)					

JPR 8	I am enthusiastic in my job(Enthusiastic at work)					
JPR 9	My job inspires me(Inspiration at work)					
JPR 10	When I get up in the morning, I feel like going to work(Happy to go for work)					
JPR 11	I am proud of the work that I do(Pride at work)					
(B) Job Position						
JPP 1	I got a good job according to my qualifications (Job matching with qualifications)					
JPP2	My job exactly match according to my knowledge, skills and abilities (Job matching with softskills)					
JPP3	I am able to apply my learned skills and knowledge for better and effective doing of my works (Application of learned skills)					
JPP4	Now I am working in a reputed post under a reputed company (Professional reputation)					
JPP 5	My pay is fair for the work I perform(Performance based pay)					
JPP 6	I feel this organization has created an environment where I can do my best work(Better working environment)					
(C) Job Satisfaction						
JSS1	I would recommend working here to my friends (Intention to recommend the organization)					
JSS 2	I would recommend this organization's products/services to my friends(Intention to recommend the products)					
JSS 3	I am willing to give extra effort for the success of this organization . (Willingness to work more)					
JSS 4	I am proud to work for this organization(Organizational Pride)					
JSS 5	I am satisfied with my pay (Pay satisfaction)					
JSS 6	I am satisfied with my Job (Job satisfaction)					