A Study on Faculty Engagement With Special Reference to Arts and Science Colleges of Kerala

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DOCTOR OF PHILOSOPHY IN COMMERCE

Under the Faculty of Commerce and Management Studies

By

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April 2023

DECLARATION

*I hereby declare that this thesis entitled '**A Study on Faculty Engagement With Special Reference to Arts and Science Colleges of Kerala**', submitted to the University of Calicut, for the award of the Degree of Doctor of Philosophy in Commerce, is a record of the bonafide research work done by me under the supervision and guidance of Dr. Sindhu K. P, Assistant Professor, Department of Commerce, N.S.S Arts and Science College, Kappur, Parakulam. I also declare that, this thesis has not been formed the basis for the award of any degree, diploma, Associateship, fellowship or any other title of recognition from any university or institution and to the best of my knowledge and belief, it contains no material previously published by any other person, except where due references are made in the text of the thesis.*

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The thesis is the outcome of her original work and has not formed the basis for the award of any Degree, Diploma, Associateship, Fellowship or any other similar title and is worth submitting for the award of the Degree of Doctor of Philosophy in Commerce under the Faculty of Commerce and Management Studies, University of Calicut.

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URMILA R MENON

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LIST OF ABBREVIATIONS

AICTE	All India Council for Technical Education
AISHE	All India Survey on Higher Education
AIU	Association of Indian Universities
ANOVA	Analysis of Variance
BCI	Bar Council of India
CGPA	Cumulative Grade Point Average
CSC	Centre for Studies in Civilisations
DCE	Directorate of Collegiate Education
DDE	Deputy Directorate of Collegiate Education
FDP	Faculty Development Programmes
GER	Gross Enrolment Ratio
GOI	Government of India
HEI's	Higher Educational Institutions
HR	Human Resource
ICHR	Indian Council of Historical Research
ICPR	Indian Council of Philosophical Research
ICSSR	Indian Council of Social Science Research
ICT	Information & Communication Technology
KSHEC	Kerala State Higher Education Council
MHRD	Ministry of Human Resource Development
MoE	Ministry of Education
MoU	Memorandum of Understanding
NAAC	National Assessment and Accreditation Council
NBA	National Board of Accreditation
NEP	New Education Policy
NGO's	Non-Governmental Organisations
NIRF	National Institutional Ranking Framework
OCB	Organisational Citizenship Behaviour
PHISPC	Project of History of Indian Science, Philosophy and Culture
PI	Principal Investigator

QWL	Quality of Work Life
RTI	Right to Information
SAAC	State Assessment and Accreditation Council
SD	Standard Deviation
SPSS	Statistical Package for Social Sciences
Tukey HSD	Tukey Honestly Significant Difference
UGC	University Grants Commission

Chapter 1

INTRODUCTION

Contents

1.1 Introduction

Education plays a pivotal role in the development and growth of a country. The UNESCO Global Education Monitoring Report and the Education Commission's Learning Generation Report state that "171 million people could be lifted out of extreme poverty if all children left school with basic reading skills". Education empowers people by fostering independence, confidence, and self-esteem. Education does not limit its role in the development of intellectual skills and knowledge to meet the needs of strategic decision-makers and successful trainers. Furthermore, it is regarded as a tool for instilling values in citizens and eradicating false prejudices and ignorance from their minds. Education is a pre-requisite for employment generation and the development of the workforce in any country. The development of manpower entirely depends upon the education system that is being practised in a country, which contributes towards the development of a civic society.

India holds an important position in the global education industry, with the largest education networks and the largest reservoir of technically competent manpower in the world (Report of the World Bank, 2010). The quality of human resources can be enhanced either through the creation of knowledge or by inculcating skills in them. Knowledge creation is possible by educating the workforce with the intention of transferring the abilities and ideas owned by the older generation and guiding them towards inventions. A country's knowledge creation and dissemination should be advanced enough to place it among the

world's most economically developed nations. In order to ensure long-term sustainability, the higher education system should go through a great degree of transformation and innovation (Mukhopadhyay, 2019). The effectiveness of higher education can be measured in terms of the increase in the number of higher education institutions, the creation of a competent and skilled workforce, learning opportunities, exposure to research, innovative practices, and well-trained faculty members.

Higher education is demanded on the job market, and to enhance critical thinking abilities, the institutions must focus on quality. Along with well-equipped infrastructure, the availability of books and materials, and access to libraries and computer systems, priority must also be given to highly qualified faculty members. The contribution of faculty members to inculcate values and make them socially responsible should be appreciated. As a result, it is critical to focus the efforts of faculty members in higher education to reap the maximum benefits from them.

1.2 Higher Education

Higher education has to be considered an intense instrument to construct the learning-based society of the 21st century. (Nyangau, 2014). Primary education consists of training from the first grade to the fifth grade, where a child is empowered to learn, read, and write and becomes capable of entering secondary education. Senior secondary education includes the eleventh and twelfth grades, with the intention of preparing them for higher education and improving their abilities and crucial aptitudes. Vocational training is also taking place during this tenure. Higher education implies postsecondary or tertiary-level education. Any institution providing instructions and facilities to earn a university degree, diploma, or certificate can be considered an institution of higher education. India, being one of the largest higher education systems in the world, imparts higher education after the completion of senior secondary education. That is, a person will enter the higher education level after completing the secondary level, after the age of 18. The courses are provided either by the universities, affiliated colleges, institutes of national importance, stand-alone institutes, or professional colleges. An enormous number of courses are being provided by the institutes, which range from medicine,

science and technology, arts, music, law, theology, business, and others. Along with imparting knowledge, training is also increasingly included in the curriculum of higher education nowadays in order to create a competitive workforce. The history of higher education dates back to the establishment of universities in Europe in the Middle Ages. The higher education models of France, Germany, Great Britain, and the United States have been set as standards by the world.

1.2.1 Higher Education in Indian Context

India occupies a position of 'vishwaguru' in the context of higher education with her global eminence and wisdom. The Indian universities 'Nalanda,"Takshashila,' and 'Viramshila' are regarded as 'centres for global excellence' as well as the world's oldest. The Indian Higher Education System started its journey ages ago and has a deeply rooted history ranging from 'ancient', 'medieval', 'colonial', 'post-independence,' and 'contemporary'. The country has followed Vedic, Buddhist, Islamic, and English educational systems. In ancient India, religion was the basis for imparting higher education. Hinduism, Jainism, and Buddhism were the prevalent religions in that period. Religious education played a significant role in the growth, development, transformation, and dissemination of knowledge to people in society. (Ghosh, 2001). Two systems of education were developed: Vedic and Buddhist. The Vedic system used Sanskrit as their medium of communication, while Pali was used by the Buddhists. The development of the inner body along with the outer body was a focus at that time. They focused on transferring ethics and values in life like honesty, humility, discipline, self-reliance, and giving respect to all creations of the world. Ashrams, gurukuls, and temples were the study centres at that time, and even pujaris at the temple took part in learning activities. Along with the Vedas, Upanishads, Darshanas, and Tarka Shastra being taught, more emphasis was also given to algebra, geometry, and grammar.

Medieval India reflected a major phase of social and cultural synthesis. The Arabs and Turks arrival brought some cultural changes, which reflected in the educational sector as well. The education system at that time focused on the Islamic and Mughal systems. The main purpose to be served is the creation of

religious minds among people. Calligraphy and grammar were the most prominent subjects taught by them. Arabic literature, geography, philosophy, mathematics, politics, economics, and history were also taught. More focus on reading and writing in order to reform scripts was encouraged by the emperor Akbar during his period. Maktabs and madrasas were the centres of higher learning at that time. Some of the institutions even enjoyed the status of universities.

The Indian education system went down drastically due to the colonial conquest, and there was a replacement of the old system of education that led to the modern education system that is still followed in our country. During the initial phase, the British paid no attention for providing education to the people of our country. Later, due to the unmanageable size of the territory and to have a command over revenue and administration, educating Indians in English became a necessity in order to procure manpower. The Charter Act of 1813 was the first step taken by the British to modernise the education system in the country by allotting an amount of Rs. 1,00,000 for educating the Indian subjects. Christian missionaries played an active role in imparting education, but more emphasis was given to religious teachings. Macauley's minutes came out by ignoring the value of the oriental languages of India and placing more stress on tutoring western sciences and English literature. A comprehensive plan that conceived mass education in India is Wood's Despatch (1854), which is known as the "Magna Carta of English education in India'. In 1882, the Hunter Commission on Indian Education recommended that mass education be more successful through the adoption of vernacular languages. In 1902, the Raleigh Commission was set up to review the entire university education system in the country, believing that universities were factories producing students with revolutionary ideologies. The Indian Universities Act of 1904 brought all Indian universities under the control of the Government by giving more attention to learning and research activities. The Hartog Committee of 1929 recommended that primary education to be provided but that there was no need to stress compulsory education. The Wardha Scheme of Basic Education by the Indian National Congress (INC) places emphasis on "learning through activity" on the basis of Gandhiji's ideas published in Harijan. The Sergeant Plan of Education by the Central Advisory Board of Education focused on free primary

education and teacher training. There was a skewed growth of higher education in India during colonial rule. The English education system was beneficial to the urban elite class while ignoring others, which led to serious regional and class inequalities in the propagation of higher education in that era. The inherited system of higher education at the time of independence was too small, characterized by regional imbalances. A need for total transformation in the educational set-up was a real challenge to the people of India. Higher education institutions were fewer in number, with 20 universities and 500 colleges dispersed in different parts of the country. It was essential to build a network of universities and affiliated colleges due to the vast diversities in language and culture within the country and to accommodate all. Few women entered the field of higher education, and their participation was limited. Higher education plays an inevitable role in nation-building and economic development. The government of India set up many commissions in order to enrich the educational system of the country. The drastic growth of higher education in India after independence is marked by the appointment of various committees and commissions by the government and five-year plans (Ghosh, 2000a, p. 178).

The Radhakrishnan Commission (1948–49) was the first education commission after independence, which recommended the establishment of the University Grants Commission (UGC). The goal was to assess the state of Indian education and make recommendations for improvement. It has been recommended that both the central and state governments should take responsibility for financing the education sector. The commission also suggests redefining educational goals, standards set in education, courses, curriculum, funding, faculty, and job conditions. The National Council of Education, Research, and Training (1965) placed emphasis on financing higher education. It has been mentioned that the major trouble in upgrading higher education is raising finance because the Indian education system is complex. The Kothari Commission (1966) focused on the prominence of education in the social and economic development of the country. "The Kothari Commission noted that we should accord the highest priority to education and allocate the largest proportion of GNP possible to it" (Tilak, 2007).

The suggestion of spending 6% of national income on education has remained an elusive dream for the country.

India ranks second in terms of higher education networks and first in terms of total higher education institutions, but it lags in terms of average HEI size in terms of student enrollment (Agarwal, 2006). Educational institutions must ensure quality in higher education in order to produce enterprising and creative minds. Indian Higher Education is growing day by day, as is evident from the increase in the total number of Universities to 1047 from 20 and 41935 colleges from 500. The students' enrolment has also achieved a growth percentage of 178.09 on the basis of figures at the time of independence. (University Grants Commission, 2019). On the other hand, Indian higher education is confronted with some challenges that must be overcome in the near future. Poor quality of mentoring, constraints on research and innovation, uneven growth, fewer opportunities, and a low enrolment rate compared to other countries slow down growth (British Council, 2014). 'Expansion', 'Equity', and 'Excellence' are considered to be the major challenges of Indian higher education in the 12th Five-Year Plan (Planning Commission, 2013). As a result, more private players in higher education must be encouraged so that the country can reach new heights.

New Education Policy (1986) highlights the role of education, the national system of education, equality, education for women, scheduled castes and scheduled tribes, backward classes, and adult education. A revision was made to the 1992 Revised National Policy of Education, which introduced a new dimension to education by introducing distance education. Indira Gandhi Open University was one of the outcomes of this policy. Technical and management education, establishing rural universities, innovation, research, development, and declining unemployment were given more attention. The National Assessment and Accreditation Council (1994) was established by UGC as an autonomous body for assessing and accrediting higher education institutions in the country, with more emphasis on quality assurance and enhancement. The National Knowledge Commission (2005) aims to develop a blueprint to equip educational institutions with sophisticated technology and infrastructure in order to meet future challenges.

The Yash Pal Committee (2009) also sticks in renovating and rejuvenating the higher education system followed in the country. The National Commission for Higher Education and Research (NCHER) Bill, 2010, intends to promote the autonomy of higher educational institutions for the free pursuit of knowledge and innovation and to facilitate access, inclusion, and equal opportunity for all. Rashtriya Uchchatar Shiksha Abhiyan (RUSA), an umbrella mission to incentivize the state governments to improve higher education. The primary components of RUSA include the creation of new institutions, the expansion of existing institutions, infrastructural upgrades, establishing bodies such as state higher education councils, accreditation agencies, sectoral affiliations, academic examination reforms, etc. (MHRD Annual Report 2012–2013). NIRF (National Institutional Ranking Framework), a methodology adopted by the Ministry of Education, Government of India, was launched on September 29th, 2015, to rank institutions across the country. With the NIRF ranking procedure, the standard and quality of institutions are improving. The National Education Policy (2020) aims at transforming the Indian education system and making it par with international standards. The emphasis on providing quality education to all focuses on individual needs and a flexible and adaptive education system. The policy also aims for the creation of at least one oversized multidisciplinary HEI in or near every district by 2030.

1.2.2 Types of Higher Education Institutions in India

Any education imparted in post-secondary or tertiary institutions and which confers an academic degree, diploma, or certificate of higher studies upon the completion of the stipulated course is known as higher education. The three-level structure of Indian higher education comprises the university, the college, and the council. Universities are those that have the power to grant degrees and are classified as central, state, private, institutes of national importance, and deemed universities. Colleges are affiliated with universities but don't have the power to grant degrees and have to follow the instructions stipulated by the universities.

Following are the higher educational institutions in India:

Table 1.1

Types of Higher Education Institutions in India

Types of Higher Educational Institutions	Description
a. Central University	A University founded or established under a central act
b. State University	A University set up or established by a provincial act or a state act
c. Private University	A University founded by a sponsoring body through a state or central act, viz., a society registered under the Societies Registration Act, 1860, or any other legislation, a public trust, or a company registered under Section 25 of the Companies Act, 1956.
d. Colleges	Institutions that are not empowered to grant the degree in their own name and are, hence, affiliated with Universities.
e. Institutions of National Importance	An institution incorporated by act of parliament and declared as 'Institution of National Importance'.
f. Stand-alone Institutions	Institutions that are not allowed to provide degrees and therefore, run diploma-level programmes
g. Institutions under the State Legislature Act	An institution founded by a state legislature act.
h. Deemed to be University	High-performing institutions so declared by the Central Government under Sec. 3 of the UGC Act, 1956.

Source: Adapted from the University Grants Commission, (2021)

1.2.3 Growth Statistics of Higher Education in India

The higher education sector in our country has witnessed a tremendous increase in the number of institutions since independence. Among the HEIs in the country, the quantitative growth of universities acts as a leading element. A university can be defined as "a university established or incorporated under a central act, a provincial act, or a state act, and includes any such institutions as may, in consultation with the university concerned, be recognised by the University Grants Commission (UGC) in accordance with the regulations made in this regard under the UGC Act, 1956". Higher education is shared by the Centre and the States, and the coordination and determination of standards in universities and colleges are entrusted to the UGC and other statutory regulatory bodies. (Ministry of Education, 2022).

According to the Report of 2019–20 by the All India Survey on Higher Education (AISHE), there are 1043 universities and 42343 colleges in India. 78.60% of colleges, including aided and unaided, run by the private sector. Total enrolment in higher education has been estimated at 38.5 million, with 19.6 million males and 18.90 million females. As a result, 49% of the total enrolment is female. The Gross Enrolment Ratio (GER) in higher education in India is 27.10, based on the age group of 18–23 years. The number of students who are enrolled in undergraduate-level programme comes to around 79.5%, and out of the total student enrolment, only 0.5% enrolled in Ph.D. programmes during 2020. More than three-fourths of the colleges run in the private sector, which includes both aided and unaided institutions but caters to 66.30% of the total enrolment. It has been estimated that there are merely 74 female teachers per 100 male teachers in India. State public universities have the highest percentage of Ph. D students, followed by Institutes of National Importance with a percentage of 23.20, Deemed University with a percentage of 13.90, and Central University with a percentage of 13.60. The share of female students is lowest in institutes of national importance, followed by deemed universities and private universities.

Table 1.2

Type and Number of Universities in India

Type of Universities	Number of Universities
a. Central University	48
b. Central Open University	01
c. Institute of National Importance	135
d. State Public University	386
e. Institution under State Legislature Act	5
f. State Open University	14
g. State Private University	327
h. State Private Open University	1
i. Deemed University – Government	36

j. Deemed University- Government Aided	10
k. Deemed University – Private	80
Grand Total	**1043**

Source: AISHE Report 2019-20

1.2.4 Higher Education in Kerala Context

The performance of higher education in the state of Kerala is widely recognised as one of the most advanced in India. The state has attained a high growth rate in literacy, universal elementary education, and enrolment ratios in secondary education. The inequality among social, gender, and economic classes is negligible as compared to other parts of our country. Kerala possesses a higher education system that is capable of providing training and education covering human creative and intellectual endeavours.

The modern education of the state begins in the early 19th century, when it was under the rule of the East India Company. Both Christian missionaries and the colonial administration were keenly interested in establishing educational institutions to serve their personal interests. Likewise, the other states of India, including Kerala, followed the pattern set by the British to replace the indigenous education system with the western education system. The indigenous system of Kerala was well maintained and built in accordance with the caste system that was followed. The knowledge imparted during that period was barely confined to reading, writing, and basic arithmetic. Along with these, basic ideas on astrology and ayurveda were also transferred. It has been believed that it is necessary to have a basic knowledge of astronomy in order to observe nature and natural phenomena and to make predictions about weather and climate, which are crucial factors in agriculture. Imparting education to the artisan profession is done through caste groups. Kalaris are for imparting physical education and martial arts, while Assan and Ezhuthassan are for imparting literary education and are taught in Gurukkal, Vedic education, to Brahmins. Children belonging to the upper and intermediate castes were only permitted to study literary education, and the low caste people were never allowed to take part in any of the above education systems. The learners support the teaching community either with cash or in kind.

Christian missionaries paid special attention for teaching English and vernacular languages during the colonial period as part of implementing western education. The royal rulers of Travancore and Kochi supported the initiative taken by the Christian missionary by donating or leasing out the land and providing financial assistance to build up educational institutions. As a result, western education spread rapidly and substituted for the prevailing caste system of education. The Princely State of Travancore took over the responsibility of setting up schools, and the Government of Kochi followed the Travancore model to expand western education in their province. Later, the government started an institution at Kochi where both English and Western subjects are being taught. In 1854, Wood's Despatch, which is a detailed proposal for expansion of education in India, is forwarded to the Government of India by Sir Charles Wood and is considered to be the foundation on which Indian higher education is built. The proposal to start universities in provinces led to the establishment of universities in Calcutta, Mumbai, and Madras in 1857. Later, presidency colleges were started, which led to the beginning of the system of affiliation of colleges with universities.

The University of Travancore was established under an Act by His Highness the Maharaja of Travancore, Sri. Bala Rama Varma, in 1937, which was the first university in the state of Travancore. In order to check out the feasibility of establishing a university in the state, three committees were set up in 1919, 1923, and 1932. Ten colleges transferred their affiliation to the University of Travancore, which had earlier been affiliated with the University of Madras. Later in 1939, the government entrusted the additional responsibility of controlling government colleges to the University of Travancore. In 1949, when the princely states of Travancore and Cochin were merged, all the colleges that were affiliated with the University of Madras also transferred their affiliation to the University of Travancore. Although professional colleges in law, medicine, engineering, and education, along with a few established arts and science colleges, were maintained by the state itself, compared to the other two states, Malabar State was behind in higher education, and colleges were affiliated with the University of Madras.

After independence, social groups were inspired to set up schools and colleges in order to promote and popularise modern education. In Travancore and Cochin, the Christian community has already established schools and colleges. Nair Service Society (NSS) started setting up colleges at Changanaserry, Pandalom, and Thiruvananthapuram. In 1948, Sree Narayana Dharma Paripalana Yogam (SNDP Yogam) at Kollam and Muslims at Faroke set up their first colleges. The number of colleges in Travancore, Cochin, and Malabar increased by 1950. In 1956, Kerala state was formed by uniting Travancore-Cochin with Malabar. The first ministry, led by E.M.S. Namboothirippad and Education Minister Joseph Mundasserry, paved efforts toward the unification of higher education in the state. In 1957, the University of Travancore was replaced by Kerala University, with which the whole state of Kerala was entrusted. In the same year, the Department of Collegiate Education was established as an administrative authority for colleges. The Kerala Education Act, 1958, and the Kerala Education Rules, 1959, were the stepping stones of higher education in the state. The establishment of a second medical college in Kozhikode and a regional engineering college in Kozhikode, TKM Engineering College, Kollam, gave momentum to the higher education sector. The Senate of the University of Kerala decided to introduce two-year pre-university or pre-degree courses as part of college education.

The need for more universities was recognised due to the rising number of colleges in the state. The Kothari Commission Report (1964–1966) also recognised the demand for the establishment of a second university in the state. The Minister of Education, C.H. Mohammed Koya, appointed a committee to evaluate the need for establishing more universities in Kerala. Based on recommendations made by the committee, the University of Calicut was immediately established in 1968, followed by the establishment of Cochin University in 1971. Kerala Agriculture University was also set up in 1971 at Thrissur. An agreement reached between the government and management to overcome the trouble brewing in affiliated colleges is called the "Direct Payment Agreement," through which the fees collected from students will be deposited in treasury, the salaries to the college staff will be paid by the government, and the staff will be selected by a committee where management retains the power of making decisions. These provisions have

to be followed by all the universities, and it also provides quotas to students for getting admission in the ratio of 20% for management, 20% for scheduled castes and scheduled tribes, 20% or 10% for the community, and 40% or 50% on the basis of merit. Later in 1983, Mahatma Gandhi University was established. In 1990's the 'Sree Sankara Sanskrit University' at Kalady and the 'Kannur University' were formed. In 1996, the Indian Institute of Management, Kozhikode (IIM-K) was established, becoming the first national-level institute in the state. Sree Chithira Tirunal Institute for Medical Science and Technology being recognised as an institute of national importance and an autonomous medical school is considered to be a great achievement.

Since the 1990s, higher education in the state has gone through major policy shifts. The crucial one is the wide opening of the education sector to private parties and the flourishing of self-financing colleges. Kerala State Higher Education came into existence in 2007 and acts as a principal higher education policy input provider and strives to attain equity and excellence in higher education. In 2018, the State Assessment and Accreditation Centre were operationalized, becoming the first state-level accreditation agency in the country to function in accordance with the values proposed by NAAC. Recently, Kerala State Higher Education has also taken an initiative to improve teaching and learning outcomes via conducting a survey named the All Kerala Higher Education Survey. It is strongly evident from the above instances that Kerala has covered a long distance to build a strong position in higher education.

1.3 The role of faculty engagement in the higher education system

Faculty engagement is an employee's commitment to their work, and it is a self-driven process with the goal of achieving psychological satisfaction and meeting physical needs. Employee performance is thought to be the result of adaptability, competency, and engagement. As a result, it is theoretically proven that employee performance has a direct relationship with engagement. Human resources, which are abundant and unique in their own way, could be used more efficiently and effectively if the appropriate strategies were implemented. Teachers are considered to be the most talented and committed workforce available in the

country. Apart from being an economically dependent profession, it is considered as a divine profession by societies like India. The government, universities, and other statutory bodies take great care and measures to improve faculty performance and ensure quality. Many programmes, training sessions, and courses are being conducted by the authorities for the same. A group of well-trained and committed teachers produces the most talented citizens. The authorities should take significant steps to increase faculty engagement because it contributes to the development of society, institutions, and oneself. Engagement results in higher performance, which results in a higher level of satisfaction with the work performed by the employees.

The primary focus of a faculty member is to enhance the learning environment through clear instructions, the inclusion of applied research and scholarly activities, the application of information technology in the teaching process, and service that supports the fulfilment of the mission of the institution. The changing role of faculty members has widened to include effective teaching and learning, advising, academic counselling, being part of committee duties, evaluation of curriculum, the need for continuous assessment, taking part in applied research, other scholarly activities, and all those functions designed for the success of students and accomplishment of institutional mission. It is argued that a focus on enriching students' experiences of the field of study and practice is more closely and directly related to the aims of teaching in higher education. (Dall' Alba, 1993).

The role of the teaching community in higher education is widely spread in the areas of teaching, research, and service, which seem to overlap conceptually and practically. Teaching should intend to develop a student's level of thinking, activities performed, approach towards the subject, and interest in gaining practical knowledge of the concerned study. Hence, faculty members must try to create a platform for experiential learning. Faculty members who engage in active research and intense involvement in their disciplines will instil loyalty to their disciplines rather than their institutions. (Khosla). The institutional level service performed by faculty members includes participation in internal committees, advisory boards, mentoring, advising, and taking part in administrative work as program officers,

unit leaders, or heads. It's very tedious to maintain a balance in these three roles for a faculty member in this changing scenario.

Higher education is undergoing rapid evolution and reform as a result of the use of ICT-enabled services in the teaching and learning process. The faculty members are entrusted with a huge responsibility as knowledge creators for students and engaging them, which replaces their role as mere knowledge transferors. The teachers are supposed to prepare the students for facing the complexities of today's workplace. (Patel, 2018). There was a complete shift from traditional methods of teaching and learning to virtual-based learning, which presents a set of challenges for the teaching community. The set of challenges includes connectivity issues, the inability to assure student engagement, external noise and disturbances, developing innovative methods and strategies, and inculcating interest in students. Preparing online materials, slides, using ICT-enabled tools and applications, evaluating students, and conducting online exams all require significant effort, time, and energy. (Agarwal, 2020). The biggest challenge faced by the teaching community is keeping the students engaged and motivating them, as they are unaware whether they are paying attention to the classes taken or playing games and watching other videos by merely taking part in the online class. (Coderz, 2020). The COVID-19 led to the adoption of the blended learning model by the faculty members, through which video lectures, discussion forums, and doubt clearance can be made without any hindrances. But the sudden shift to a new method of learning may lack orientation and tend to create disengagement in students. (Latino, 2020). Hence, it can be concluded that a faculty member has a significant role in maintaining interest among students and strengthening the entire education system in the country. In this context, the researcher is very interested in studying the factors that contribute to faculty engagement and analysing the outcomes generated by the process. The researcher intends to develop a model for faculty engagement by analysing regulatory authorities' efforts to improve faculty engagement.

1.4 Need and Significance of the Study

India's higher education sector will continue to play a significant role in preparing the young talent pool as a result of an increase in the young and working-age population. Higher education institutions are faced with increased student diversity, advancement in technology, pedagogical approaches, teaching and learning outcomes, accountability towards society, the need for better engagement of students, globalisation, and the growing importance of research outcomes. (Vilkinas & Ladyshewsky, 2011). The higher education sector of our country is in deep trouble when comparing the higher education standards of foreign countries due to the slow adoption of many corporate management practises. It is clearly evident that Indian universities are lagging behind foreign universities in terms of quality standards and high-standard research publications. (Raghavan, 2017). Around 15,000 arts and science colleges operate in the country, which is a higher number than other HEIs. The student community in the age range of 17 to 23 belongs to arts and science colleges, which are considered to be in a transitional phase of youth, a period considered crucial enough to choose their career and life. There comes the role of faculty members, not only as knowledge disseminators, but also for instilling moral values and ideal behaviour and training them to become good citizens of a country. Moreover, the works performed by faculty members are highly demanding and stressful, and in the long run, this worsens due to lack of necessary resources, which may lead to burnout and other chronic health issues. (Doyle & Hind, 1998; Houston, Meyer & Paweai, 2006; Schaufeli, 2003). It is relevant to note that faculty members have a major role in shaping the future of a country. Hence, it is imperative to ensure that the most outstanding and efficient candidates enter the profession. (MHRD, GOI, 2020). But it is disheartening to know that the quality of teaching in India is struggling due to a wide range of issues relating to selection, on boarding, professional development, and talent management in relation to faculty members. (KPMG, 2019). The lack of emotional and psychological connections is said to have harmed classroom performance. (Raina & Khatri 2015) This lack of emotional and psychological connection may be due to an increase in workload, a lack of sufficient rewards and recognitions, the non-availability of resources, a lack of

interest among students, an unhealthy relationship with co-workers, and a lack of support from management. There comes the role of engaging the faculty members to gain maximum benefits from them for the development of students and the institution.

To highlight the relevance of a faculty member and to achieve the goals of higher education, it is mandatory that the government and institutions introduce various initiatives and measures. Despite the various efforts to improve the status of the academic profession, faculty motivation in terms of teaching, research, and service in HEIs remains far below the desired level. Hence, it is urgently needed to address the factors that contribute to faculty engagement, through which each faculty member could be made enthusiastic, engrossed, motivated, and happier in their work, which will be reflected in their performance. (MHRD, GOI, 2020).

Most of the theories and models for faculty engagement have been developed in a Western cultural context. A country like India, which has its own unique identity in the educational system and has the least similarity with other systems of education, cannot adopt the models and theories formulated by foreigners.

The studies that were done earlier in the Indian context were related to Quality of Work Life (QWL), motivating factors, and satisfaction levels among college teachers. In these studies, engagement is regarded as a predictor variable of job satisfaction, QWL, and faculty motivation. However, in this case, the researcher considers engagement to be the dependent variable, with job satisfaction, organisational citizenship behaviour, employee retention, and innovative behaviour as the outcomes of engagement. Considering this element, the researcher has to study its dimensions to have an understanding and acceptance of the importance of faculty engagement. Committed employees eventually become satisfied, which leads to increased productivity, this study is undertaken to know the determinants and tap a model for engaging the faculty members in the context of Indian higher education. It is crucial to grab the attention of the management and administrators, especially the policy makers, on the factors, dimensions, components, and outcomes of engagement among the faculty members of Arts and Science colleges

in Kerala. Hence, the outcome of the present study will help the regulatory bodies to utilise the potential workforce effectively in the higher education sector for the overall development of the country.

1.5 Chapter Scheme

The thesis is divided into nine chapters.

Chapter 1: Introduction

Chapter 2: Review of Literature

Chapter 3: Research Methodology

Chapter 4: Role of Regulatory Bodies to enhance Faculty Engagement

Chapter 5: Contributing Factors of Faculty Engagement

Chapter 6: Comparison of Faculty Engagement in different types Institutions

Chapter 7: Statistical Model for Faculty Engagement and its Outcomes

Chapter 8: Summary, Findings and Conclusion

Chapter 9: Recommendations and Implications

REFERENCES

Agarwal, P. (2006). *Higher education in India: The need for change* (Indian Council for Research on International Economic Relations Working Paper No. 180).

Agarwal, S. (2020, June). Virtual *teaching: A new norm*al. Counter Currents. Retrieved June 2022, from https://countercurrents.org/2020/06/virtualteaching-a-new-normal/

AISHE. (2019-20). *All India survey on higher education* 2019-20. Ministry of Human Resource Development.

British Council. (2014). *Understanding India: The future of higher education and opportunities for international cooperation.* British Council.

CoderZ. (2020). *Challenges teachers face when teaching online*. Retrieved October 2021, from CoderZ:gocoderz.com/blog/challenges-teachers face-when- teaching-online/

Dall'Alba, G. (1993). The role of teaching in higher education: Enabling students to enter a field of study and practice. *Learning and Instruction, 3*(4), 299-313. https://doi.org/10.1016/0959-4752(93)90021-Q.

Doyle, C., & Hind, P. (1998). Occupational stress, burnout and job status in female academics. *Gender, Work and Organisation, 5*, 67-82.

Ghosh, S. (2001a). *The history of higher education in ancient India*. Munshiram Manoharlal.

Ghosh, S. (2001b). *The history of education in mediaeval India, 1192 A.D.-1757 A.D*. Originals.

Ghosh, S. C. (2000a). *The history of education in modern India*. Orient Longman.

Houston, D., Meyer, L. H., & Paweai, S. (2006). Academic staff workloads and job satisfaction: Expectations and values in academe. *Journal of Higher Education Policy and Management, 28*(1), 17-30.

KPMG. (2019). *Enhancing quality of education in India by 2030: A F.I.T. approach to realising SDG 4*. KPMG.

Latino, J. (2020). *Student engagement: Strategies to help institutions retain students during the COVID-19 pandemic*. https://www.ellucian.com/insights/student-engagementstrategieshelpinstitutions-retain-students-during-covid-19-pandemic

MHRD, GOI. (2020). *National education policy 2020*. Ministry of Human Resource Development. Government of India.

MHRD. (2012). *Annual report*. Department of School Education and Literacy.

Ministry of Education. (2022). *About MoE*. https://www.mhrd.gov.in/about-moe

Ministry of Human Resource Development. (2017). *Rashtriya uchchtar shiksha abhiyan*. Department of Higher Education. Retrieved October 31, 2021, from http://rusa.nic.in/

Mukhopadhyay, D. (2019, January). *Transformational need for higher education.* Daily Excelsior. https://www.dailyexcelsior.com/transformational-need-forhighereducation/

Nyangau, J. Z. (2014). Higher education as an instrument of economic growth in kenya. *FIRE: Forum for International Research in Education*, 1(1): 7-25.

Patel, J. V. (2018). Paradigm shift from pedagogy to andragogy to heutagogy in higher education. *University News, 56*(30), 22-26.

Planning Commission (2013). *Twelfth Five Year Plan 2012- 17*. Government of India.

Raghavan, H. V. (2017). Good research promotes good teaching. *University News, 55*(33), 3-5.

Raina, K., & Khatri, P. (2015). Faculty engagement in higher education: Prospects and areas of research. *On the Horizon*, *23*(4), 285-308.

Schaufeli, W. B. (2003). Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology*, *29*(4), 1-15.

The Education Commission. (n.d.). *The learning generation.* https://report.educationcommission.org/report/

Tilak, J.B.G. (2007) Post-elementary education, poverty and development in India. *International Journal of Educational Development, 27*, 435-445.

UNESCO. (n.d.). *Global education monitoring report.* UNESCO. https://www.unesco.org/gem-report/en

University Grants Commission. (2018-19). *UGC annual report 2018-19*. University Grants Commission.

University Grants Commission. (2021). *About Us: UGC*. University Grants Commission: https://www.ugc.ac.in/ University Grants Commission.(2021).

Vilkinas, T., & Ladyshewsky, R. K. (2011). Leadership behaviour and effectiveness of academic program directors in Australian Universities. *Educational Management Administration & Leadership*, *40*(1), 109-126.

World Bank (2010). *India Country Summary of Higher Education*. World Bank.

Chapter 2

REVIEW OF LITERATURE

Contents

2.1 Introduction

This chapter provides an overview of the studies that have already been conducted in the field of faculty engagement in order to define the research gap, identify the variables, and develop the conceptual model for the relevant study. Variables used for the study are used as the base for this purpose. A review of relevant work relating to the topic under study is presented in the following sections:

2.2 Studies relating to employee engagement

To retain the employees in an organisation, keeping them engaged is a cost-effective task. Engagement is the level of commitment an employee has towards his job, organisation, and society in the long run. (Barman, 2011). An engaged employee will put his energy, effort, and mind towards achieving the organisation's goals and will also support his co-workers in their work, which leads to a better working environment. Human resources, the most precious factor that cannot be imitated by others if properly employed, yield more productivity. Making the employees engaged is the only process that could be used for this purpose. Employee engagement is the "psychological experiences of work and work contexts shape the process presenting and absenting their selves during task performance". Meaningfulness of the work, availability, and safety are the three

psychological conditions required for an engaged employee (Kahn, 1990). The employees in any organisation fall into one of the following three categories: engaged, not engaged, or actively disengaged. Engagement is not a static concept; it fluctuates depending upon the activities happening around the clock in the organisation. Engaged employees will be intellectually and emotionally bound to the organisation. The retention and dedication of an employee are the result of their commitment to the organisation. (Stairs, 2005) Engagement is positively related to job satisfaction, job performance, organisational citizenship behaviour, organisational commitment, productivity, profitability, and safety, and relatively negatively related to turnover intentions and burnout. (Rich, Lepine & Crawford, 2010; Saks, 2006; Harter, Schmidt & Hayes, 2002). Emotional, cognitive, and behavioural energies at the workplace aligned with organisational strategies and objectives evolve out of engagement. (Andrew & Sofian, 2012). An engaged employee remains focused, energetic, and fully engrossed in their jobs and directs all their efforts towards achieving organisational objectives. (Macey & Schneider, 2008; Barbera & Young, 2009). The efforts of engaged employees are reflected in the organization's performance and effectiveness. (Bakker, 2011). Highly engaged employees experience a greater attachment to their work and organisation, which leads to more outcomes. (Organ, 1994; Schaufeli & Bakker, 2008). Engaged employees are considered to be more dynamic, enthusiastic, and captivated than non-engaged employees. Engaged employees are much more creative, and it is necessary to channel their efforts so that they contribute to the well-being of an organisation and that greater control of work can be achieved. (Luthans, 2013). Employees prefer the jobs that keep them engaged, motivated, and assure flexibility, growth, and promotion. Positive psychology and mental well-being play a vital role in today's work environment; hence, employee engagement cannot be neglected in today's working space. To make employees content and stay within the organisation for a longer duration, they should be engaged, and employers should stress the strategies of employee engagement. Strategies such as financial reward, job enlargement, training and development opportunities, work-life balance, and a supportive work environment help to retain employees. (Ghosh et.al, 2013). For engaged employees, it is easy to have control over their work by job

enlargement and demanding more responsibilities from them. (Weigl, 2010). To live a high-quality life, engaged employees need to be psychologically stronger (Fredrickson, 2009) in terms of general wellbeing and control at work to attain personal and organisational goals. (Richman, 2006). According to the claims of consulting firms and researchers, employee engagement is a success factor in increasing organisational productivity and remaining competitive in the global marketplace. (Macey et al., 2009; Sak & Gruman, 2014). A high degree of involvement and commitment in the profession is reflected in engaged faculties rather than passive compliance.

Employee engagement has been focused on through the lens of three different backgrounds, and different viewpoints have been developed. The first concept was developed by Kahn and viewed engagement as work engagement. It covers the individual, physical, emotional, and cognitive aspects of an employee. (Truss et al., 2006; Shuck & Wollard, 2010). The second concept was influenced by the concept of job burnout. (Maslach & Leiter, 1997; Carwright & Holmes, 2006). The third concept was based on the JD-R model, or Job Demands- Resource model. (Bakker & Demerouti, 2007; Sak & Gruman, 2014). The need-satisfaction framework, the burnout-antithesis framework, and the multi-dimensional framework are the concepts that underpin the employee engagement frameworks. The need-satisfaction framework is similar to Kahn's, the burnout antithesis is similar to Maslach & Letiter's concept; and the multi-dimensional framework reflects the personal and role performance of the employee in an organisation by including cognitive, emotional, and behavioural components.

2.3 Studies relating to Faculty Engagement

Faculty engagement is the commitment of faculty members to their activities relating to research, teaching, service, and other allied activities. An engaged faculty member will be passionate about their work and strive continuously to achieve their goals. Extrinsic rewards, along with intrinsic ones such as recognition, appraisals from authorities, personal growth, and advancement in their careers, do drive them to be more engaged. Instructors recognise their role beyond the delivery of content in order to facilitate learning and to inculcate

overall development among students. Livingston (2011) states, for validating the Faculty Engagement Survey (FES), that "it can be described as an intense and positive long-term relationship in which the person is absorbed in the experience and in aspects that the individual considers important and meaningful." A high-quality student experience predicts the level of engagement among faculty members. (Gallup, 2017). A high degree of commitment will be reflected in an engaged faculty's actions, and teaching is more about commitment than compliance with them (Barman & Ray, 2011). It incorporates enjoyment in the areas of research, teaching, and service and considers the tasks they have to perform in their roles while experiencing congruence between their values. (Nakamura & Csikszentmihalyi, 2005).

Faculty engagement is being considered a crucial strategic approach in the discipline of Human Resource Management (HRM) as it helps the educational institution to meet success. Institutions treat faculty members as a valuable asset in order to obtain a healthier outcome. Those institutions that engage their faculty members may see positive changes in productivity, student satisfaction, retention of faculty members, and passion for research-related activities, innovations, and performance. By making faculty members engaged, the institution benefits in the areas of competitive advantage, productivity, less burnout, and lower employee turnover. (Ameen & Babu, 2018).

The role of faculty members in creating a conducive environment for engaging students is a crucial one. It is the combined responsibility of faculty members and the effort of the students that results in student engagement. Faculty engagement in this context is the deliberate effort of the faculty members to positively impact student learning outcomes by keeping them lively in the classroom and always keeping them connected. (Chew & Chan 2008). Student-faculty interactions also play a pivotal role in retaining the students within the institutions and rely on the academic and social integration skills of students, which are the favourable outcomes of the faculty-student interactions. (Tinto, 1993). Moreover, to attain student success, faculty engagement is considered as a major ingredient and acts as a key to student engagement. (Beairsto, 2012). A

faculty member who is more passionate and highly involved in research-related activities is found to be more devoted to teaching due to their ability to attract and engage students. (Trowler & Wareham, 2008).

Higher Educational Institutions (HEIs) can attract and retain faculty members who are more engaged, as engaged faculty members act as a source of competitive advantage in this era. (Shuck & Wollard, 2010). Engaged faculty also contribute to student success due to their ability to create interest, enthusiasm, and excitement among them and induce them to exhibit innovative behaviour. (Maheshwari & Mathur, 2020; Patrick, Hisley, & Kempler 2000; Bakker, 2005).

Spiritual, emotional, and intellectual aspects of the faculty members have been explored to measure the commitment. (Palmer, 1998). An attempt to measure the personal engagement in the work of faculty members has been made to know the level of passion. (Nakamura & Csikszentmihalyi, 2005). Internal motivation drives the members of an institution to be engaged. (Palmer, 1998). By finding out the factors that contribute to engagement and identifying engaged faculty members, a researcher can develop a set of faculty development programmes and professional growth initiatives that, in the long run, will contribute to student success. (O'Meara et al., 2009). Administrators could improve faculty morale and productivity and influence students' outcomes by quantifying engagement among faculty members. (Livingston, 2011). To exhibit higher levels of engagement, faculty members must be provided with a good working environment, proper recognition, sufficient rewards, the opportunity to grow, platforms to learn, and to attain overall development. It is the duty of administrators and authorities to assure that the faculty members are satisfied with the services provided by the Universities. (Bay et al. 2014) Engaging the faculty members forcefully is not possible; it should come from their hearts naturally to enjoy, serve the targeted audience, and strive for excellence at the institution.

2.4 Studies on Factors Affecting Faculty Engagement

To enhance University effectiveness, faculty engagement factors play a critical role, like factors affecting employee engagement. (Rhoades, 2012). Academic staff engagement mediates trust and group conflict. (Selmer et al., 2013).

Job engagement and organisational engagement mediate antecedents of faculty engagement such as job characteristics, perceived organisational support, recognition and rewards, and procedural and distributive justice (Saks, 2006). For convincing faculty members to work and engage with their duties of teaching, research and service motivation theories are widely accepted and used in educational contexts. There are several factors that affect the engagement level of faculty members in higher education. By reviewing the existing literature, it has been found that many authors have used different terms interchangeably to measure the factors that influence faculty engagement. The researcher has broadly categorised the factors that affect faculty engagement under six headings.

2.4.1 Personal Factors

2.4.2 Organisational Factors

2.4.3 Psychological Factors

2.4.4 Economic Factors

2.4.5 Social Factors

2.4.6 Management Factors

2.4.1 Personal Factors

Organisational commitment is determined by a set of personal factors. (Luthans, Baack, & Taylor, 1987). Individual characteristics play a crucial role in building capabilities to achieve the academic goals of faculty members. Many studies on faculty involvement reveal possible associations between demographic characteristics such as gender, age, race, rank, experience, and title of post with engagement. Women are more likely to be involved in engaging students as compared to men. (Abes, Jackson, & Jones, 2002; Antonio, Astin, & Cress 2000; Hammond, 1994). The engagement levels of common faculty members and tenure-track faculty members differ as the latter spends more time on research. The experiences of the faculty members inside and outside the academic world also shape their beliefs regarding their capabilities and enhance their confidence. (Bandura, 1977; Boyte, 2004; Donahue, 2000).

Demographic variables such as gender, marital status, age, length of work experience, level of education, and grade of the employee are the most commonly studied personal factors. A positive relationship between commitment and both age and length of work experience has been reported. (Kumar & Giri, 2009). The relationship between age and commitment alone was indicated in some other studies. (Mathieu & Zajac, 1990; Cohen, 1993; Mayer & Schoorman, 1998; Abdulla & Shaw, 1999). Commitment was seen to be positively related to job tenure and negatively related to level of education. (Kassahun, 2005).

2.4.2 Organisational Factors

For organisational identification Locus of control, need for strength, and need for satisfaction act as important antecedents. (Shrivastava & Dolke, 1978). Characteristics of the job such as role clarity, autonomy, challenge, opportunities for career advancement, and participative management are related to organisational commitment in a positive manner. (Wright, 1990; Niehoff Enz, & Grover, 1990; Pallich, Hom, & Griffeth, 1995). Recognition and appreciation do have a positive role in creating organisational commitment. (Mishra, 1992). Job content and scope for advancement act as critical antecedents of organisational commitment. (Sharma & Sharma, 2003; Sharma & Joshi, 2001). To predict the work engagement among telecom managers, social support, autonomy, opportunities to learn, and feedback have been taken into account. (Schaufeli, Bakker, & Rhenen, 2009). A significant relationship between work redesign and organisational commitment has been reported in relation to state-owned enterprises. (Chen & Chen, 2008). Organisational climate, supervisory behaviour, organisational tenure, role clarity, and interpersonal relationships at the workplace act as determinants of organisational commitment. (Tao et al., 1998). Employee loyalty could be enhanced with the help of factors such as job variety, support from co-workers, and opportunities for promotion. (Iverson & Buttigieg, 1999). Innovative HR practises and organisational commitment are positively related. (Agarwala, 2003). Career opportunities have a significant relationship with organisational commitment. (Blackhurst, Brandt, & Kalinkowski, 1998; Sturges et al., 2002). Justice, autonomy, and competence development are positively correlated with organisational

commitment. (Kassahun, 2005). A significant relationship between engagement and elements such as strong leadership, accountability, autonomy, a sense of control over one's environment, and opportunities for development is established. (Perrin, 2003). Individual characteristics, along with characteristics of the institutions and departments in which they work, shape the faculty member's motivation to participate in activities (Colbert, 2012).

2.4.3 Psychological Factors

Psychological conditions exhibit a significant positive relationship with engagement. Meaningfulness, which is a strong predictor of engagement, is positively linked with job enrichment and work-role fit. Some individuals immerse themselves while at work, while others become disengaged and alienated from their work. Along with cognitive elements, emotional and behavioural elements must also be duly considered to entail engagement. Meaningfulness is "the value of a work or purpose, judged in relation to an individual's own ideals or standards". A job that is considered meaningful contributes to personal growth and motivates workers. A work that is meaningless leads to detachment from one's own work and leads to apathy.

Treating employees with dignity and respecting and valuing their opinions and deeds helps create confidence among employees to outperform their tasks. It is always better not to treat the employees as occupants of roles and mere performers of tasks, but rather to give them due consideration for their acts and make them feel like they are part of the institution. Employees who are assigned challenging work are seen to be more active, tend to be more involved in work, and are less likely to leave the institution. (Idaszak & Drasgow, 1987). Authorities should take a practical as well as a humanistic approach when handling the work pressure of employees, as it will lead to burnout and the intention to quit. (Wang & Walumbwa, 2007; Rowley & Purcell, 2001).

Challenging work, Meaningful work, opportunities for advancement, empowerment, responsibility, managerial integrity, and quality act as factors that contribute to organisational commitment and retention. (Birt, Wallis, & Winternitz, 2004). Meaningfulness, safety, availability, rewarding co-workers, and supportive

supervisory relations have a positive relation towards employee engagement. (May, Gilson, & Harter, 2004). Objectivity and rationality are related to organisational commitment (Mishra, 1992). Enhancing engagement rests on meaningful work and an enriching work experience. (Perrin, 2003). Involvement and enthusiasm were linked with employee turnover, loyalty, productivity, safety, and profitability criteria. (Harter, Schmidt & Hayes, 2002).

2.4.4 Economic Factors

Compensation is an indispensable factor that motivates employees to focus on work and achieve more in terms of personal growth and development. It combines both financial and non-financial incentives such as pay, bonuses, other financial rewards, extra holidays, and voucher schemes. Recognition and rewards have a significant positive relationship with engagement. It has been noticed that when proper rewards and recognition are provided to employees, they are obliged to show higher levels of engagement in performing their tasks. (Saks & Rotman, 2006). The levels of engagement among employees vary with their perception of the benefits they receive. (Kahn, 1990). Hence, it is the employees' perception towards the benefits they receive that determines their level of engagement and has nothing to do with the quantity and type of rewards provided to them. In order to achieve a higher level of engagement, it is desirable for the management to provide acceptable standards of remuneration and benefits to the employees.

Compensation is the "most critical issue when it comes to attracting and keeping talent." (Willis, 2000). An organisation that invests in pay and benefits could be able to reduce voluntary turnover. (Shaw et al., 1998). By adopting skill-based pay systems, employee retention can be improved, and organisations that adopt group incentive plans are associated with high turnover. (Guthrie, 2000). A positive relationship between organisational commitment and employees' perceptions of various benefits provided by the organisation has been reported. (Goldberg et al., 1989; Rothausen et al., 1998; and Ngo & Wing-Ngar Tsang, 1998). Monetary benefits were found to have a positive relationship with organisational commitment. (Mishra, 1992). A positive relationship is established between the employee's perception of pay and their commitment to the organisation. (Sharma

& Singh, 1991). Money and incentives play a lesser role in engaging employees. (Perrin, 2003). A positive relationship between innovative HR practises and organisational practises has been established. (Agarwala, 2003).

2.4.5 Social Factors

Engagement occurs when leaders are inspiring and support from co-workers is assured. Social Exchange Theory (SET) explains the importance of interactions in creating engagement, "Obligations are generated through a series of interactions between parties who are in a state of reciprocal interdependence". Relationships, work-life balance, and values are the elements that have an impact on faculty engagement. (Saks, 2006). "The relationship evolves over time into trusting, loyal, and mutual commitments as long as the parties abide by certain rules of exchange". (Cropanzano & Mitchell, 2005). Effective leadership is a higher-order, multi-dimensional construct that comprises self-awareness, balanced processing of information, relational transparency, and internalised moral standards. (Walumbwa et al., 2008).

It would be more effective when the leaders communicate that the employees' efforts play a crucial role in achieving business success. Supportive leadership impacts employee engagement and increases their sense of involvement, satisfaction, and enthusiasm for work. (Schneider et al., 2009). To promote employee engagement, supportive interpersonal relationships and an efficient team are necessary. (Kahn, 1990).

Relationships in the workplace had a significant impact on meaningfulness, which is one of the important components of employee engagement. (May, Gilson, & Harter, 2004). Individuals who have positive interpersonal interactions with their co-workers will experience greater meaning in their work. (Locke & Taylor, 1990) Hence, high levels of work engagement could be expected from the employees if relationships with co-workers are ideal.

2.4.6 Management Factors

Management factors play a vital role in creating engagement among employees. To enhance the engagement level of employees and to gain

concentration and focus on their work, training and career development could be considered as an important dimension. It improves accuracy in the tasks they perform and thereby enhances performance. (Paradise, 2008). Confidence can be built in the areas of training, and it motivates them to get engaged in the job at a higher level. Providing employees with a chance to grow is considered to be equivalent to rewarding them. "Satisfaction of growth needs depends on a person finding the opportunity to be what he or she is most fully and become what he or she can". (Alderfer, 1972). Training and education contribute positively to organisational commitment. (Mishra, 1992). Effective training and opportunities to learn and develop were positively related to employee retention. (Arnold, 2005). So, to retain employees, sufficient attention could be provided by the authorities for the learning of employees.

Performance appraisal critically determines the commitment level of employees. (Sharma & Joshi, 2001). Measuring the actual performance of the employees is considered to be a challenging task in developing an appraisal system. When the organization's performance appraisal system is properly aligned with the objectives of the institution, the result is always positive. The positive results include high-performing employees, increased job satisfaction, low turnover, and an increase in the level of engagement. (Shin et al., 2016). There is a direct positive relationship between training, awareness of rules and supervision, and organisational commitment. (Rochi & Swardlow, 1999).

Talent management can be defined as "the implementation of integrated human resource strategies to attract, develop, retain, and productively utilise employees with the required skills and abilities to meet current and future business needs". (Kontoghirges & Frangou, 2009). Talent management policies and practises that are effective to demonstrate a commitment to the human resources of the organisation, which leads to an enhancement in engagement levels. Hence, many implement talent management practises for enhancing employee engagement and decreasing turnover. (Bhatnagar, 2007; Roper, 2009).

After considering the Kerala context, the researcher has categorised the factors under six major headings and incorporated all elements into them. Table 2.1 shows the summary of the review done.

Table 2.1

Summary of the Review of Literature: Factors that affect faculty engagement

Sl. No	Constructs	Description	References
1.	Personal	Age, Gender, Years of experience, type of institution, designation.	Abes, Jackson, & Jones.(2002); Abdulla & Shaw, (1999); Antonio et al., (2000); Bandura, (1977); Boyte, (2004); Cohen, (1993); Donahue, (2000); Hammond, (1994); Kassahun, (2005); Kumar & Giri, (2009); Luthans, Baack, & Taylor, (1987); Mathieu & Zajac, (1990); Mayer & Schoorman, (1998).
2.	Organisational	Organisational culture and policy, departmental culture, autonomy, innovation, accountability, and recognition	Ajgaonkar, Baul, & Phadke,(2012); Anitha (2014); Bakker (2011); Bethencourt (2012); Dutta (2004); Fornes, Rocco, & Wollard. (2008); Gitanjali, Sharma, & Sharma, (2010); Ghosh et al. (2013); Kumar & Sia (2012); Mohapatra & Sharma (2010); Ramlall (2003); Sak (2006); Walker (2001); Whitener (2001).
3.	Psychological	Meaningfulness, involvement, personal trust, and value Challenging work and work pressure	Birt et al. (2004); Csikszentmihalyi (1990); Dutta (2004); Fornes, Rocco, & Wollard. (2008); Ghosh et al. (2013); Harter, Schmidt & Hayes, (2002); May, Gilson, & Harter(2004); Mishra (1992); Perrin, 2003; Reoi & Sanders (2011); Rousseau et al. (1998); Sak (2006); Ugwu et al. (2013); Whitener (2001); Walker (2001); Whittington & Galpin (2010).
4.	Economical	Rewards and Benefits; External Funding and Funders' Requirements	Agarwala (2003); Anitha (2014); Bethencourt (2012); Chambel, Castanheira, & Sobral (2014); Ghosh et al. (2013); Gitanjali, Sharma &Sharma,(2010);Goldberg et al. (1989); Kahn (1990); May, Gilson, & Harter (2004); Mohapatra & Sharma (2010); Rothausen et al.,

Sl. No	Constructs	Description	References
			(1998); Saks (2006); Sharma & Singh (1991); Shaw et al. (1998); Whittington & Galpin (2010); Willis (2000);
5.	Social	Leadership, relationship with peers and other authorities, and personal networks	Ajgaonkar et al. (2012); Andrew & Sofian (2012); Anitha (2014); Bakker (2011); Bethencourt (2012); Cropanzano & Mitchell (2005); Fornes, Rocco, & Wollard. (2008); Gitanjali, Sharma, & Sharma, (2010);Gruman & Saks (2012); Iverson & Buttigeig; Kahn (1990); Kumar & Sia (2012); Locke & Taylor (1990); May, Gilson, & Harter (2004); Mohapatra & Sharma (2010); Remo (2012); Reoi & Sanders (2011); Saks (2006); Schneider et.al (2009); Tao et.al (1998); Walker (2001); Walumbwa et.al (2008); Whittington & Galpin (2010).
6.	Management	Talent management, performance appraisal, and T&D programmes	Andrew & Sofian (2012); Anitha (2014); Arnold (2005); Bhatnagar (2007); Chambel et al. (2014); Dutta (2004); Gitanjali, Sharma, & Sharma, (2010); Gruman & Saks (2011); Hughes & Rog (2008); Kontoghiorges & Frangou (2009); Mohapatra & Sharma (2010); Raju (2004); Rooper (2009); Shin et al. (2016); Whittington & Galpin (2010)

Source: Secondary Data

2.5 Studies on the Outcomes of Faculty Engagement

The outcomes of the faculty engagement could be related to two states: outcomes relating to Universities or institutions, and the second one relating to individual benefit. (Wuttaphan, 2016). Four dimensions have been identified relating to the consequences of faculty engagement towards institutions and consist of job satisfaction, organisational commitment, intention to quit, and organisational citizenship behaviour. (Saks, 2006). Engaged employees help in the enhancement of performance and greater productivity. However, the engagement could be

utilised by the institutions to manage their talent and retain the top performers and high achievers within the institution. (Bhatnagar, 2007). While moving to personal benefits, it is possible for an engaged employee to maintain a work-life balance and assure the quality of their work life. It is possible to instill a sense of ownership in them, increasing their commitment. (Baldomi, 2013). Commitment can be classified as rational or emotional, where rational specifies that the acts are self-driven, demand extrinsic rewards, and demand professional development. Whereas, emotional commitment refers to a deeper level of involvement with the job, other employees, and the organisation as a whole. (Barman, 2014).

The outcomes of commitment comprise lower absenteeism, increased work effort (Mathieu & Zajac, 1990), improved production (Randal & Cote, 1994), and overall performance on the job (Meyer & Allen, 1997). Those employees with strong organizational commitment have an emotional attachment to the organization and a stronger desire to contribute meaningfully to the achievement of organizational goals. The employees will be willing to go beyond their role and duty, such as providing extra help to co-workers, voluntarily taking part in special assignments, being considerate towards co-workers, showing loyalty towards customers, being willing to work for additional hours, and providing suggestions when a problem arises (Meyer & Allen, 1997). Organisational commitment results in lower turnover, which results in improved organisational effectiveness.

2.6 Studies on Regulatory Bodies of Higher Education in India

The higher education sector is the most important sector and plays a pivotal role in improving national productivity by developing human resources in a horizontal dimension. To improve national effectiveness, academic staff, faculty members, and students should be involved. (Tight, 2003; Humphreys & Hoque, 2007; Lew, 2009). Faculty members are the talented working group for higher educational institutions who are bound to perform teaching, research, and service-oriented activities as stated in university policies. Universities are confronted with the task of becoming centres of excellence in both teaching and research. As the number of students with various specialisations and disciplines increases, so does the importance of teaching quality. (Smbey, 2003; Roberts, 2009). The higher

education sector adopts a learner-centred approach and keeps keen attention on the learning experience of students, through which institutions could strive for excellence in designing curriculum and syllabus. (Brusoni et al., 2014). In order to remain prominent in the knowledge economy, an educational institution should be effective disseminators of knowledge and create innovative and self-directed individuals who become assets to society. (Candy, 2000).

By 2030, the Indian higher education system, in terms of quality and affordability, will become a role model for the world. It will improve the socio-economic fabric of the country and help it attain quality and excellence. The prevailing challenges faced by the educational system, such as lack of equal access, obsolete curriculum and pedagogy, scarcity of qualified staff, and a relative lack of collaboration between industries, research, and academia, will be successfully resolved by 2030. (FICCI-EY Report). The critical issue that is getting in the way of the educational system is the lack of governance. The weak social and institutional foundation led to the vast entry of private players in the education sector of India, which made a transition like "from half-baked socialism to half-baked capitalism". (Kapur& Mehta, 2007). Low investment in libraries, ICT, laboratories, and classrooms acts as a hurdle for providing quality teaching and taking part in research activities. (Altbach, 2005). The existing higher education system does not incentivize the best performing, most productive, and most efficient faculty; rather, it rewards longevity and conformity. "If India is to succeed as a great technological power with a knowledge-based economy, world-class universities are required". To govern and manage universities effectively, deep structural and cultural changes are needed. (Altbach & Jayaram, 2015). To enhance the quality of higher education and equip it with infrastructure, the government would take steps to source Foreign Direct Investment (FDI) and External Commercial Borrowing (ECB). (Jayakumar, 2020).

2.7 Research Gap

Faculty engagement is not a novel concept, but it is an area that is less focused as compared to other sectors where engagement is continuously measured. The paucity of research in the areas of faculty engagement leads other sectors to

thrive heavily on the development of their human resources and to inculcate skills. The study intends to develop a model in order to promote engagement levels among faculty members in higher education.

More foreign studies were done in the area of faculty engagement in order to understand the antecedents and outcomes. The concept is underdeveloped in a country like India, where much effort should be made as it helps in achieving academic excellence and success at HEIs. The research study exploring the antecedents and consequences of faculty engagement is totally absent in the context of Kerala. Few studies that were done in the area of faculty engagement focused on Universities, ignoring arts and science colleges, which differ in functioning. The researcher tries to identify the factors that contribute to faculty engagement, the outcomes associated with faculty engagement, and their level of engagement in teaching, research, and service activities. A comparison of engagement levels among Government, Aided and Autonomous college teachers was made in the study to provide institutional wise suggestions.

The study tries to develop a model comprising factors that lead to faculty engagement and attainment of outcomes that are beneficial to individuals and the institution as a whole. The model will be validated and tested empirically so it can be adopted by the HEIs of the state to foster commitment levels and reduce burnout.

2.8 Conclusion

The chapter headed Review of Literature covers various studies that have been conducted relating to the topic ‘Faculty Engagement'. The areas covered were engagement, faculty engagement, factors affecting faculty engagement, outcomes associated with faculty engagement, and the regulatory bodies of higher education in India. This helps the researcher to conceive of the idea regarding the topic, to develop the research gap, to formulate the research questions, objectives along with hypotheses, and to frame out a conceptual model.

REFERENCES

Abdulla, M.H., & J.D. Shaw. (1999). Personal factors and organisational commitment: Main and interactive effects in the united arab emirates. *Journal of Managerial Issues, 11,* 77-93.

Abes, E. S., Jackson, G., & Jones, S. R. (2002). Factors that motivate and deter faculty use of service-learning. *Michigan Journal of Community Service Learning, 9*(1), 5–17.

Agarwala, T. (2003). Innovative human resources practices and organisational commitment: An empirical investigation. *International Journal of Human Resource Management, 14*(2), 175-197.

Ajgaonkar, M., Baul, U., & Phadke, S. M. (2012). Relationship between organizational citizenship behaviour and job characteristics model of motivation: An empirical study. *NMIMS Management Review*, *April-May,* 51-72.

Alderfer, C.P. (1972). *Human needs in organisational settings*. Free Press

Altbach, P. G. (2005, April 12). A world-class country without world-class higher education: India's 21st century dilemma. *International Higher Education, 40*(Summer), 18-20.

Altbach, P., & Jayaram, N. (2015). India's effort to join 21st-century higher education. *International Higher Education*, *54,* 17-19.

Ameen, N., & Babu, G. (2018). Parameters inducing faculty engagement in private education institutions: A conceptual study. *Journal of Management*, *5*(4) 343-348.

Andrew, O. C., & Sofian, S. (2012). Individual factors and work outcomes of employee engagement. *Procedia-Social and Behavioral Sciences,40*(2012), 498-508.

Anitha, J. (2014). Determinants of employee engagement and their impact on employee performance. *International Journal of Productivity and Performance Management, 63*(3), 308-323.

Antonio, A. L., Astin, H. S., & Cress, C. M. (2000). Community service in higher education: A look at the nation's faculty. *Review of Higher Education, 23*(4), 373–398.

Arnold, E. (2005), Managing human resources to improve employee retention. *The Health Care Manager, 24*(2), 132-140.

Bakker, A. B. (2005). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vocational Behavior, 66,* 26-44.

Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in Psychological Science, 20*(4), 265-269. https://journals.sagepub.com/doi/abs/10.1177/0963721411414534

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology, 22,* 309–328.

Bakker, A.B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, *13*, 209–223.

Baldoni, J. (2013). Employee engagement does more than boost productivity. *Harvard Business Review, July*, 2013, Retrieved June 15, 2015, from https://hbr.org/2013/07/employee-engagement-does-more/

Bandura, A. (1997). *Self-efficacy: The exercise of control.* Freeman.

Barman, A., & Saikat, R. (2011). Faculty engagement in higher educational institution: A proposed model. *Journal for Multidimensional Education*, 3(6), 7-17. http://ssm.com/abstract=1844432

Barman, L., Laksov, K. B., & Silén, C. (2014). Policy enacted teachers' approaches to an outcome-based framework for course design. *Teaching in Higher Education, 19*(7), 735-746. 10.1080/13562517.2014.934346

Bay, A. B., An, I. L., & Laguador, J. M. (2014). Organizational satisfaction and work engagement of filipino teachers in an asian university. *International Journal of Multidisciplinary Academic Research, 2*(4), 32- 41.

Beairsto, B. (2012, March). *Teacher engagement is the key to student engagement.* Retrieved July 2021, from https://www.edcan.ca/articles/teacher-engagement-is-the-key-to-student-engagement/

Bethencourt, A. L. (2012). *Employee engagement and self-determination theory* [Doctoral dissertation, Northern Illinois University].

Bhatnagar, J. (2008). Managing capabilities for talent engagement and pipeline development. *Industrial and Commercial Training, 40*(1), 19-28. 10.1108/00197850810846021

Birt, M., Wallis, T., & Winternitz, G. (2004). Talent retention in a changing workplace: An investigation of variables considered important to South Africa talent. *South Africa Journal of Business Management, 35*(2), 25-31.

Blackhurst, A. E., Brandt, J.E., & Kalinkowski, J. (1998). Effects of career development on the organisational commitment and life satisfaction of women students affairs administrators. *The NASPA Journal*, 36(1), 19-34.

Boyte, H. C. (2004). *Going public: Academics and public life.* Kettering Foundation.

Brusoni, M., Damian, R., Sauri, J. G., Jackson, S., Kömürcügil, H., Malmedy, M., Matveeva, O., Motova, G., Pisarz, S., Pol, P., Rostlund, A., Soboleva, E., Tavares, O., & Zobel, L. (2014). *The concept of excellence in higher education* (ENQA Occasional Papers 20). European Association for Quality Assurance in Higher Education.

Candy, P. C. (2000). Reaffirming a proud tradition: Universities and lifelong learning. *Active Learning in Higher Education, 1*(2), 101-125.

Cartwright, S., & Holmes, N. (2006). The meaning of work: The challenge of regaining employee engagement and reducing cynicism. *Human Resource Management Review, 16*(2), 199-208. https://www.sciencedirect.com/science/article/abs/pii/S1053482206000246

Chambel, M. J., Castanheira, F., & Sobral, F. (2014). Temporary agency versus permanent worker: A multigroup analysis of human resource management, work engagement and organizational commitment. *Economic and Industrial Democracy, 37*(4), 1-25. https://journals.sagepub.com/doi/10.1177/0143831X14550695

Chew, J., & Chan, C.C.A. (2008). Human resource practices, organizational commitment and intention to stay. *International Journal of Manpower, 29*(6), 503-522.

Cohen, A. and Hudecek, N. (1993). Organizational commitment-turnover relationship across occupational groups. *Group & Organization Management, 18*(2), 188-213.

Colbert, E. M. (2012). *The impact of leadership on employee engagement at a chemical manufacturing company in the United States* [Dissertation] ProQuest. AAI3537415.

Cropanzano, R. and Mitchell, M.S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, *31*(6), 874-900.

Donahue, D. (2000). Charity basket or revolution: Beliefs, experiences and context in preservice teachers' service learning. *Curriculum Inquiry, 30*(4), 429-450.

Dutta, A. (2004). Strategies for retaining employees. *Human Resource Management Review, August,* 31-35.

FICCI- E&Y (2012). Higher education in India: Vision 2047. file:///C:/Users/URMILA%20R%20MENON/Downloads/ey-higher-education-in-india-vision-2047.pdf

Fornes, S. L., Rocco, T. R., & Wollard, K. K. (2008). Workplace commitment: A conceptual model developed from integrative review of the research. *Human Resource Development Review, 7*, 339-357.

Fredrickson, B.L. (2001). The role of positive emotions in positive psychology: The broaden and build theory of positive emotions. *American Psychologist*, *56*, 218–226.

Gallup. (2017). Higher education employee engagement. The Engaged University.

Ghosh, P., Satyawadi, R., Joshi, J. P., & Shadman, M. (2013). Who stay with you? Factors predicting employees' intention to stay. *International Journal of Organizational Analysis, 21*(3), 288-312. https://www.emerald.com/insight/content/doi/10.1108/IJOA-Sep-2011-0511/full/html

Gitanjali, R., Sharma, Y., & Sharma, B. R. (2010). Search for the drivers of employee engagement among executives of a manufacturing organization. *Management and Labor Studies, 35*(2), 189-207.

Goldberg, W.A., Greenberger, E., Koch-Jones, J., O'Neil, R., & Hamill, S. (1989). Attractiveness of Child Care and Related Employer Supported Benefits and Policies to Married and Single Parents. *Child and Youth Care Quarterly, 18*, 23-37.

Gruman, J. A., & Saks, A. M. (2011). Performance management and employee engagement. *Human Resource Management Review, 21,* 123-136. 10.1016/j.hrmr.2010.09.004

Guthrie, J. (2000). Alternative pay practices and employee turnover. *Group & Organization Management, 25*(4), 419-439.

Hammond, C. (1994). Integrating service and academic study: Faculty motivation and satisfaction in michigan higher education. *Michigan Journal of Community Service Learning, 1*(1), 21–28.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*(2), 268-279.

Hughes, J. C. & Rog, E. (2008). Talent management: A strategy for improving employee recruitment, retention and engagement within hospitality organizations. *International Journal of Contemporary Hospitality Management, 20*(7), 743-757.

Humphreys, M. & Hoque, K. (2007). Have the lecturers lost their voice? Involvement and participation in the devolved further education sector. *International Journal of Human Resource Management, 18*(7), 1199-1213.

Idaszak, J.R., & Drasgow, F. (1987). A revision of the job diagnostic survey: Elimination of a measurement artefact. *Journal of Applied Psychology*, 72, 69-74.

Iverson, R. D., & Donna, M. (1999). Affective normative and continuance commitment: Can the right kind of commitment be managed. *Journal of Management Studies, 36*(3), 307-333.

Jayakumar, P. B. (2020, July 23). *Budget 2020: Education gets front seat in Sitharaman's aspiring India*. Business Today. Retrieved August, 2021, from https://www.businesstoday.in/union-budget-2020/decoding-thebudget/budget-2020-education-gets-front-seat-sitharaman-aspiringindia/story/395249.html

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, *33*(4), 692-724.

Kang, M., Shin, D. H., & Gong, T. (2016). The role of personalization, engagement, and trust in online communities. *Information Technology & People, 29*(3), 580-596.

Kapur, D., & Mehta, P. B. (2007*). Indian higher education reform: From half-baked socialism to half-baked capitalism.* Brookings NCAER India Policy Forum.

Kassahun, T. (2005). Level of organisational commitment: Its correlates and predictors. *Indian Journal of Industrial Relations, 41*(1), 29-63.

Kontoghiorghes, C., & Frangou, K. (2009). The association between talent retention, antecedent factors, and consequent organizational performance. *SAM Advanced Management Journal*, *74*(1), 29.

Kumar, B., Pavan., & Giri, V. N. (2009). Effect of age and experience on job satisfaction and organisational commitment. *The ICFAI University Journal of Organisational Behaviour, 8*(1), 28-36.

Kumar, R., & Sia, S. K. (2012). Employee engagement: Explicating the contribution of work engagement. *Management and Labor Studies, 37*(1), 31-43. 10.1177/0258042X1103700104

Lew, T. Y. (2009). The relationships between perceived organizational support, felt obligation, affective organizational commitment and turnover intention of academics working with private higher educational institutions in Malaysia. *European Journal of Social Sciences, 9*(1), 72-87.

Livingston,J. (2011). Defining and measuring faculty engagement: Validation of the faculty engagement survey [Doctoral dissertation, Azusa Pacific University]. ProQuest Digital Dissertations. (3467979).

Locke, E.A. & Taylor, M.S. (1990). Stress, coping, and the meaning of work. In Brief, A., & Nord, W.R. (Eds), *Meanings of Occupational Work* (pp. 135-170). Lexington Books.

Luthans, F., Baack, D., & Taylor, L. (1987). Organisational commitment: Analysis of antecedents. *Human Relations, 40*(4), 219-236.

Luthans, K. W., Luthans, B. C., & Palmer, N. F. (2016). A positive approach to management education: The relationship between academic PsyCap and student engagement. *Journal of Management Development*, *35*(9), 1098-1118.

Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology, 1,* 3-30.

Macey, W. H., Schneider, B., Barbera, K. M., & Young, S. A. (2009). *Employee engagement: Tools for analysis, practice, and competitive advantage*. Wiley-Blackwell.

Maheshwari, R., & Mathur, M. (2020). Linking leader-member exchange and innovative work behaviour through faculty engagement: Rethinking management education in the era of VUCA world. *Our Heritage Journal, 68*(1), 3289-3306.

Maslach, C., & Leiter, M. P., (1997). *The truth about burnout: How organizations causes personal stress and what to do about it*. Jossey-Bass.

Mathieu, J.E., & Zajac, D. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organisational commitment. *Psychological Bulletin, 108*, 171-194.

May, D.R., Gilson, R.L., & Harter, L.M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organisational Psychology, 77*(1), 11-37.

Mayer, R.C., & Schoorman. F.D. (1998). Differentiating antecedents of organisational commitment: A test of march and simon's model. *Journal of Organisational Behaviour, 19*(1), 15-28.

Meyer, J. P & Allen, N. (1997). *Commitment in the workplace: Theory research and application.* Thousand Oaks, Sage.

Meyer, J.P., & Allen, N.J. (2004). TCM employee commitment survey academic users guide. Department of Psychology, The University of Western Ontario.

Mishra, P.K. (1992). Does organisational climate help improving commitments? *Social Science International, 8*(1-2), 37-43.

Mohapatra, M., & Sharma, B. R. (2010). Study of employee engagement and its predictor in an Indian public sector undertaking. *Global Business Review, 11*(2), 281-301. 10.1177/097215091001100210

Nakamura, J., & Csikszentmihalyi, M. (2005). Engagement in a profession: The case of undergraduate teaching. *Daedalus, 134*(3), 60-67.

Ngo, H., & Tsang, A., Ngar, W. (1998). Employment practices and organisational commitment: Differential aspects for men and women. *International Journal of Organisational Analysis, 6*(3), 251-266.

Niehoff, B.P., Enz. C.A., & Grover, R.A. (1990). The impact of top management actions on employee attitudes and perceptions. *Group and Organisational Studies, 15*(3), 337-352.

O'Meara, K. A., Sandmann, L. R., Saltmarsh, J., & Giles, D. E. (2011). Studying the professional lives and work of faculty involved in community engagement. *Innovative Higher Education, 36,* 83-36. 10.1007/s10755-010-9159-3

Organ, D. W. (1994). Personality and organizational citizenship behavior. *Journal of management, 20*(2), 465-478.

Palich, L.E., Hom, P.W. & Griffeth, R.W. (1995). Managing in the international context: Testing cultural generality of sources of commitment to multinational enterprises, *Journal of Management, 21*(4), 671- 690.

Palmer, P. J. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life.* Jossey-Bass.

Paradise, A. (2008). Influences engagement ASTD. *Training and Development, 62*(1), 54-59.

Patrick, B. C., Hisley, J., & Kempler, T. (2000). What's everybody so excited about? The effects of teacher enthusiasm on student intrinsic motivation and vitality. *Journal of Experimental Education, 68*, 217-236.

Perrin, T. (2003). *Working today: Understanding what drives employee engagement.* www.towersperrin.com/hrservices/webcache/towers/Unitedstaestes/Publications/Talent_Report_2003/Talent_2003.pdf.

Raju, P. L. (2004). Talent magnet: How to attract and retain star employee. *Human Resource Management Review, August,* 11-13.

Ramlall, S. (2003). Managing employee retention as a strategy for increasing organizational competitiveness. *Applied HRM Research, 8*(2), 63-72.

Randal, D.M., & Cote, J. A. (1991). Interrelationships of work commitment constructs. *Working and Occupation. 18*, 194-211

Remo, N. (2012). *Comparing two models of employee engagement: An examination of antecedents and outcome variables* [Doctoral dissertation, University of Windsor].

Reoi, T. J., & Sanders-Rerio, J. (2011). Thinking about workplace engagement: Does supervisor and coworker incivility really matter? *Advances in Developing Human Resource, 13*(4), 462-478. 10.11771/1523422311430784

Rhoads, G. (2012). *Faculty engagement to enhance student attainment. National commission on higher education attainment*. University of Arizona. Retrieved from https://www.acenet.edu/news-room/Documents/Faculty-Engagement-to-Enhance-Student-Attainment--Rhoades.pdf

Rich, B.L., Lepine, J.A. & Crawford, E.R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal, 53*(3), 617-635.

Richman, A. (2006), Everyone wants an engaged workforce: How can you create it? *Workspan, 49*(1), 36-39.

Roberts, K. J. (2009). Capacity building for new model universities. *Excellence in higher education (4)*, 108-118.

Rochi, W.S., & S. Swardlow. (1999). Training and its impact on organisational commitment among lodging employees. *Journal of Hospitality and Tourism Research, 23*(2), 176-195.

Rooper, K. (2009). *The relationship between employees' perceptions of talent management practices and levels of engagement: A Botswana organisation case study*, (Master Thesis, 2009).

Rothausen, T.J., Gonzalez, J.A., Clarke, N. E., & O'Dell, L. L. (1998). Family-friendly backlash: Fact or fiction? The case of organisation's on-site child care centres. *Personnel Psychology, 51*(3), 687-697.

Rowley, G., & Purcell, K. (2001). As cooks go, she went: Is labour churn inevitable? *International Journal of Hospitality Management, 20*, 163-185.

Sak, A. M. & Gruman, J. A. (2014). What do we really know about employee engagement? *Human Resource Development Quarterly, 25*(2), 155-182. 10.1002/hrdq.21187

Sak, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology, 21*(7), 600-619.

Saks, A., & Rotman, J. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology, 21*(7), 600-619.

Schaufeli, W. B., & Bakker, A. B. (2003). *UWES – Utrecht work engagement scale: Test manual.* Department of Psychology, Utrecht University.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior, 25*, 293-315.

Schaufeli, W.B., Bakker, A.B., & Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *Journal of Organisational Behaviour, 30*(7), 893- 917.

Schneider, B., Macey, W.H. and Barbera, K.M. (2009), Driving customer satisfaction and financial success through employee engagement. *People and Strategy, 32*(2), 23-27.

Selmer, J., Jonasson , C., & Lauring, J. (2013). Group conflict and faculty engagement: Is there a moderating effect of group trust? *Journal of Higher Education Policy and Management, 35*(1), 95-109.

Sharma, B. R. & Rama, J. J. (2001).Determinants of organisational commitment in a manufacturing organisation in the private sector. *Indian Journal of Industrial Relations,* 37(2), 199-216.

Sharma, Radha R. & Sharma, Baldev R. (2003). Organisational commitment and motivation among managerial staff. *Productivity, 44*(2), 251-257.

Sharma., &Singh. (1991). Determinants of organisational commitment. *Management and Labour Studies, 16*(2), 63-75.

Shaw, D.J., John, E.D., Jenkins, G.D. Jr and Nina, G. (1998). An organization-level analysis of voluntary and involuntary turnover. *Academy of Management Journal, 41*(5), 511-525.

Shrivastava, P.K. & Dolke, A.M. (1978). *Personality and organisational correlates of work and organisational identification*. ATIRA.

Shuck, B., & Wollard, K. (2010). Employee engagement and HRD: A seminal review of the foundations. *Human Resource Development Review, 9*(1), 89-110.

Smeby, J. C. (2003). The impact of massification of university research. *Tertiary Education and Management, 9*(2), 131-144.

Stairs, M. (2008). Work happy: Developing employee engagement to deliver competitive advantage. *Selection and Development Review, 21*(5).

Sturges, J., Guest, D., Conway, N., & Keynes, M. (2002). A longitudinal study of the relationship between career management and organisational

commitment among graduates in the first ten years at work. *Journal of Vocational Behaviour, 23*(6), 731-748.

Tao, M., Takagi, H., Masahiro, I., & Kei, M. (1998). A study of antecedents of organisational commitment. *Japanese Psychological Research, 40*(4), 198-205.

Tight, M. (2003). *Researching higher education (eds).* The society for research into Higher Education and Open University press.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). University of Chicago Press.

Trowler, P., & Wareham, T. (2008). *Tribes, territories, research and teaching: Enhancing the teaching-research nexus*. The Higher Education Academy.

Truss, K., Soane, E., Edwards, C., Wisdom, K., Croll, A., & Burnett, J. (2006). *Working life: Employee attitudes and engagement.* Chartered Institute of Personal and Development.

Ugwu, F. O., Onyishi, I. E., & Rodríguez-Sánchez, A. M. (2013). Linking organizational trust with employee engagement: The role of psychological empowerment. *Personnel Review, 43*(3), 377-400. 10.1108/PR-11-2012-0198

Walker, J. W. (2001). Perspectives. *Human Resource Planning, 24*, 6-10.

Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of management*, *34*(1), 89-126.

Wang, P. and Walumbwa, F. (2007). Family-friendly programs, organizational commitment, and work withdrawal: The moderating role of transformational leadership. *Personnel Psychology, 60*, 397-427.

Weigl, M., Hornung, S., Parker, S., Petru, R., Glaser, J., & Angerer, P. (2010). Work engagement accumulation of task, social, personal resources: A three-wave structural equation model. *Journal of Vocational Behavior 77*(1), 140-153

Whitener, E. M. (2001). Do "high commitment" human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modeling. *Journal of Management, 27(50),* 515-535. https://journals.sagepub.com/doi/10.1177/014920630102700502

Whittington, J. L., & Galpin, T. J. (2010). The engagement factor: Building a high-commitment organization in a low-commitment world. *Journal of Business Strategy, 31*(5), 14-24. https://www.emerald.com/insight/content/doi/10.1108/02756661011076282/full/html

Willis, C. (2000). Go for your goals. *Working Woman, March*, 6-7.

Wright, P.L. (1990). Teller job satisfaction and organisational commitment as they relate to career orientations. *Human Relations, 43*(4), 369-381.

Wuttaphan, N. (2016). Factors affecting faculty engagement: A review literature. *HROD Journal*, *8(2),* 92-118.

Chapter 3

RESEARCH METHODOLOGY

Contents

3.1 Introduction

This chapter intends to focus on the methodology that has been applied for the smooth conduct of the research work. This section incorporates the research problem, research questions, objectives, research hypotheses, and scope of the study, which is followed by research methodology, research design, variables used, a conceptual framework, a pilot study, reliability tests, data analysis, an operational definition, the period of the study, and the limitations of the study. In addition, the section also covers the reliability and validity analysis of the questionnaire.

3.2 Research Problem

Employee engagement has gained widespread acceptance in the corporate world in recent years, and corporates are rapidly incorporating innovative techniques to engage their employees, whereas in the academic world, the term

"engagement" is theoretically taught and understood but not practiced. However, Universities try to reap some benefits, such as faculty retention and development and increased productivity and performance, by enhancing their satisfaction level. The Government of India is ahead in reforming the educational sector by giving due consideration to the "quality of faculty". Regulatory bodies such as NAAC and UGC also focus on the improvement of teaching and research activities by providing a congenial environment. They also try to determine the institutions with potential for excellence and provide all kinds of assistance to reach global standards.

The higher education system in India is undergoing a drastic change and has gained momentum in recent years. All the activities that have been performed earlier by universities were opened for the colleges as well. The roles of faculty members, which were traditionally confined to teaching, are now expected to include prominent roles in teaching, research, and service. Some of the faculty members would be able to show a balanced performance in these three core areas, while for others, these competing demands may foster negative results and impact their overall performance (Wright, 2005). The emotional connectedness of the faculty members towards their duties and the institution must be determined in terms of their performance. Many foreign Universities focus on the development of their faculty members to the standards set by them and link the growth of their economies with the achievements made in higher education.

Faculty members are considered to be an important element in shaping the future of a country. Making them engaged not only results in the improvement of oneself but also will be beneficial for both the institution where they belong and for the country as a whole. Accreditation bodies such as NAAC mandate and prioritize the faculty's role and contribution towards the institution in their 7 criteria of assessment for grading. They also ensure that the faculty members develop commitment towards the institution and society along with satisfaction of their own needs.

Till date, no research has concentrated on all the aspects of faculty engagement, covering the determinants, dimensions, types, outcomes, and steps taken by the regulatory bodies in creating engagement. In this study, faculty

engagement is considered as a multi-dimensional construct encompassing teaching, research, and service engagement with the factors that influence engagement. Many of the studies focus on one or two types of components while ignoring others. Here, the researcher tries to incorporate all the major factors that have an impact on engagement after considering the Kerala context. The research will definitely be a great help to the faculty members, policymakers, institutions, and regulatory bodies in making policies and issuing guidelines. The higher education sector will largely benefit from knowing the factors that are capable of enhancing engagement among faculty members. The work also elaborates on the practices and steps taken by the authorities to enhance the engagement level. So, the authorities could focus on the implementation and execution of programmes and practices that result in positive organizational outcomes.

3.3. Research Questions

On the basis of the stated research problem, the researcher has formulated the following set of questions:

1. What are the steps taken by the regulatory bodies to enhance faculty engagement?

2. What are the factors that lead to engagement among faculty members of arts and science colleges?

3. Whether there exists any difference in the engagement level among faculty members of Aided, Autonomous and Government colleges?

4. What are the outcomes of faculty engagement?

3.4 Objectives of the Study

The present study, entitled "A study on faculty engagement with special reference to arts and science colleges of Kerala," is undertaken with the following specific objectives:

1. To understand the steps taken by the regulatory bodies to enhance faculty engagement.

2. To evaluate the contributing factors in creating engagement among faculty members.

3. To measure the difference regarding engagement level among faculty members of Government, Aided and Autonomous colleges.

4. To develop a standard model for engaging faculty members in Government, Aided and Autonomous colleges.

5. To analyze the outcomes of faculty engagement.

3.5 Hypotheses of the Study

Based on the objectives set up by the researcher, the following hypotheses have been formulated and empirically tested:

H1: There exists a significant difference among personal factors and the dimensions of faculty engagement.

H2: There exists a significant relationship between organizational factors and the dimensions of faculty engagement.

H3: There exists a significant relationship between psychological factors and the dimensions of faculty engagement.

H4: There exists a significant relationship between economic factors and the dimensions of faculty engagement.

H5: There exists a significant relationship between social factors and the dimensions of faculty engagement.

H6: There exists a significant relationship between management factors and the dimensions of faculty engagement.

H7: There exists a significant difference among type of institutions and the dimensions of faculty engagement.

H8: There exists a significant relationship between the dimensions of faculty engagement and faculty engagement.

H9: There exists a significant relationship between faculty engagement and its outcomes.

3.6 Scope of the Study

The scope defines the boundaries of the research. The elements that characterize the scope of the study are:

a. Population: The engagement level of faculty members in arts and science colleges is analysed. The researcher has chosen the faculty members belonging to the University of Calicut to study the factors contributing to faculty engagement, understand the components and dimensions of faculty engagement, and to analyse the outcomes of faculty engagement. The population is finite and able to extract the number of faculty members of Aided, Autonomous and Government colleges.

b. Place of study: The study was conducted in Kerala.

c. Period of the study: The research interest was to analyze the present level of engagement of faculty members in Government, Aided and Autonomous arts and science colleges. The period of data collection was from May 2021 to August 2021.

d. Data sources: The major source of data was primary data collected from faculty members. The details of faculty members were collected through the respective college websites, and information were extracted from the Deputy Director's Office and the Department of Collegiate Education.

3.7. Research Methodology

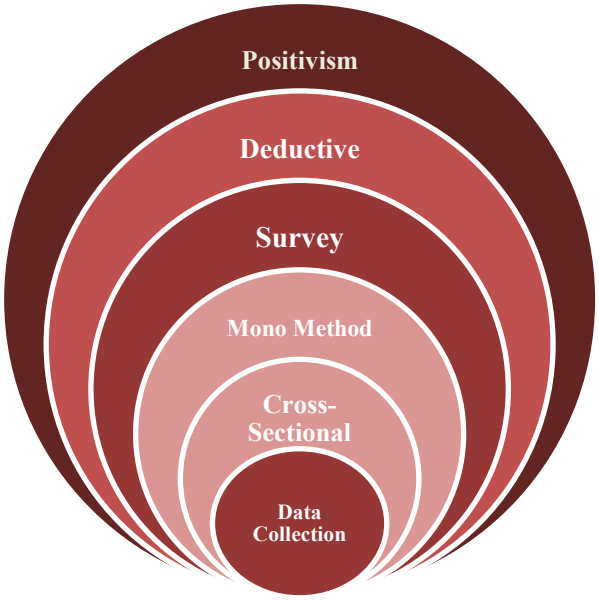
An effective methodology is one that elaborates on the stages through which a researcher moves while performing the research. The researcher uses the 'Research Onion' theoretical model to explain the methodology used in the study. It aims at creating an organized methodology through which students can easily adapt and accommodate it in numerous research contexts. (Bryman, 2012). An effective progression through which methodology can be nurtured is clearly evident in each layer of the research onion. The research onion has been proposed by (Saunders et al. 2016), who pictorially explain the various aspects of research that are considered to be interrelated and interdependent.

In this study, the researcher is utilizing the research onion model to visualize the methodology adopted. Hence, the selection of research philosophy,

which chooses the approach and which in turn influences the research strategy, methodological choices, time horizon, and at the end, the research design, is vividly described in this section.

Figure 3.1

Research Onion (Saunders, Lewis, & Thornbill, 2009)



3.7.1 Research Philosophy

Research philosophy can be defined as a set of assumptions through which research will be carried out. It is an underlying definition of the nature of knowledge and a set of beliefs concerning the nature of reality that are being investigated. (Bryman, 2012). It differs on the basis of the goals set by the researcher and the way in which the goals are being achieved. (Goddard & Melville, 2004). The assumptions in the philosophy act as a base for formulating the research questions, developing objectives and hypotheses, choosing research methods, and even interpreting the results. (Crotty, 1998). The combination of assumptions results in the formation of research philosophies, which could be chosen after considering the context of the study. Positivism, critical realism, interpretivism, and pragmatism are the four most commonly adopted research philosophies.

The researcher has adopted "positivism" as the research philosophy in this study. Positivism assumes the independent existence of reality in the constructs being studied, which justifies the research methodology. The methodology informs about the nature of phenomena being observed, and it seems to be consistent between subjects. (Newman, 1998). Quantitative criteria have been used by the researcher to interpret knowledge in this field, along with positivism as the research philosophy.

3.7.2 Research Approach

The research approach, being the constituent of the second ring in the research onion, critically covers the aspects of theory testing, theory building, and theory modification. The approach is determined on the basis of the research philosophy chosen by the researcher, either for building theory or justifying the findings of the study. It can even influence the methodological choices, strategy, and research design. (Babbie, 2010). A research approach is formed for the purpose of generating knowledge.

The researcher tries to inculcate the existing theories of faculty engagement, and hence, the deductive approach is being utilized in this research. The deductive approach is particularly suited to the research philosophy of positivism, which permits formulating the hypotheses and statistically testing whether expected results are fitted to an accepted level of probability. (Snieder & Larner, 2009). The knowledge is developed from general to specific, establishment of general theories is made first, and the knowledge gained from the research process is statistically tested for confirmation. (Kothari, 2004). This approach tries to examine whether the observed phenomena fit with the expectations built on the basis of previous research. (Wiles, Crow, & Pain, 2011).

3.7.3 Research Strategy

A research strategy is developed for how the researcher intends to carry out the work. (Saunders, Lewis, & Thornhill, 2007). The approaches to research strategy include experimental research, action research, case study research, interviews, surveys, and a systematic literature review. The researcher used the

"survey' method for interpreting data to satisfy the research objectives. Here, researchers seek answers to "what,""who,""when, "where, "why," and 'how' types of research questions. The survey produces quantitative data that can be tested empirically and examined for cause and effect between different types of data. Surveys tend to be applied in quantitative research projects and involve the collection of data from a sample of individuals. (Bryman & Bell, 2011).

3.7.4 Research Methodological Choices

The choices involve the selection and use of quantitative, qualitative, and mixed methods of research design. The researcher has made use of the mono-quantitative method in the research. The mono-research method uses only one research approach for the study, that is, a single data collection technique may be utilised, which is followed by corresponding qualitative and quantitative analysis in order to draw conclusions.

3.7.5 Time Horizon

The time horizon is the timeframe within which the project is intended to be completed and is not dependent on a specific research approach or methodology. (Saunders et al., 2007). Research onion has specified two types of time horizons: the cross-sectional and the longitudinal. (Bryman, 2012). This research uses the cross-sectional time horizon, as it is the one that is already established and the data must be collected at a certain point of time. It is applied when a particular phenomenon is being investigated at a particular point of time.

3.8 Research Design

The present study, titled "A study on faculty engagement with special reference to arts and science colleges of Kerala," is considered to be descriptive and analytical in nature. The study collects responses from the selected faculty members of arts and science colleges in Kerala. The study is considered descriptive as it tends to describe the characteristics of the population. Hence, it is mentioned as descriptive. The study also formulates a set of hypotheses, which are tested using appropriate statistical tools; hence, it can also be called an analytical one.

3.8.1 Sources of Data

The researcher has utilized both secondary and primary data for the research work.

a. Secondary Data: Secondary data required for the study were extracted from various published sources, such as research articles, earlier studies, books in connection to the area of study, research publications, dissertations, theses, Government publications, reports, newspapers, and websites of the University Grants Commission (UGC), National Assessment and Accreditation Council (NAAC), Kerala State Higher Education Council (KSHEC), Directorate of Collegiate Education (DC), Deputy Directorate of Collegiate Education (DD), and others.

b. Primary Data: In the study, the researcher tries to identify the engagement level of faculty members of Government, aided, and autonomous arts and science colleges in Kerala through a structured questionnaire.

3.8.2 Sample Design

a. Population: The population of this research work comprises all faculty members of arts and science colleges under the University of Calicut, Kerala.

b. Sample: A sample of 355 faculty members was required for the study. The data were collected from 390 faculty members of arts and science colleges by adopting multi-stage sampling and final selection of samples using systematic probability sampling.

c. Sampling Technique: The researcher has adopted multi-stage probability sampling to evaluate the engagement level of faculty members of arts and science colleges in Kerala. In the initial phase, the researcher collected a list of Universities in Kerala. From the list, the University of Calicut has been chosen to draw the samples because of its larger number of affiliated colleges compared to other Universities in the state.

A list of Government, Aided and Autonomous arts and science colleges was extracted from the website of collegiate education. The researcher decided to

collect data from three autonomous colleges, which were selected through the lottery method. St. Thomas' College (Autonomous), Thrissur; St. Joseph's College (Autonomous), Devagiri; and M.E.S. Mampad College were chosen for collecting data. Among the Government arts and science colleges, Sri. C. Achuthamenon College, Kutanellur; S.N.G.C. College, Pattambi; P.T.M. Government College, Perinthalmanna, Government college, Madapally, Government college, Koyilandy, were chosen; and among the Aided arts and science colleges, PSMO College, Tirurangadi; NSS College, Manjeri; NSS College, Ottapalam; Sree Vivekananda College, Kunnamkulam; Sri Vyasa N.S.S. College, Wadakkanchery, Sreekrishnapuram VT Bhattathiripad College, Sree Krishna College, Guruvayoor were chosen to collect data.

A list of faculty members working with each college was created by visiting the college websites. The list was in turn cross-checked and verified by filing an RTI with the DD and DC offices. After making the required corrections, a final list with respect to faculty members in arts and science colleges was generated. The researcher has adopted systematic probability sampling for the final selection of samples. The questionnaire was distributed to them, and the responses were collected.

d. Sample size determination: The population of the research work is considered to be 'finite' and Yamane's sample size formulae for finite populations have been applied to calculate the sample size.

$$\text{Sample size (n)} = \frac{N}{1+N\,(e)^2}$$

Where, n = required sample size

N = Population Size

e = margin of error

After substituting the values, e = 0.05 and N = 3187, the required sample size obtained is 355. Therefore, the researcher finalized the sample size of the study at 390. A proportionate number of faculty members from each type of institution—that is, Government, Aided, and Autonomous colleges were drawn. The following table illustrates the samples drawn for the study:

Table 3.1

Selection of a sample of faculty members from arts and science colleges in Kerala

SI. No	Type of Institution	Number of faculty members at the University of Calicut	Number of faculty members drawn as samples
1.	Government	**1144**	**140**
2.	Aided	**1503**	**184**
3.	Autonomous	**540**	**66**
	Total	**3187**	**390**

Source: Compiled through information retrieved from RTI and college websites.

3.8.3 Design of the Questionnaire

The questionnaire is divided into five sections, namely, profile, determinants of faculty engagement, teaching, research, and service engagement, and faculty engagement and its outcomes. The profile comprises the personal factors of faculty members, which include gender, age, years of experience, type of institution, and designation. The second section consists of statements that measure the factors that influence faculty engagement, and the following one measures the level of engagement among faculty members in teaching, research, and service. The statements to measure faculty engagement and its outcomes are provided in the next two sections.

The modification and refinement of the questionnaire were made after consulting the experts and conducting the pilot study. The questionnaire has been distributed for final data collection with a covering note mentioning the necessary instructions.

3.9 Variables Used

This section describes the constructs and variables that were selected based on the theoretical orientation of the researcher. The researcher has made use of relevant previous research work and theories in order to build statements relating to the variables. Here, the researcher tabulates the major variables used for the study, along with their sub-variables, and how the variables are being measured in the study.

Table 3.2

List of Variables used

SI. No	Variables	Sub-variables	Method of measurement
1.	Personal	1.Age 2.Gender 3. Type of Institution 4.Years of experience 5. Designation	Nominal
2.	Organisational	1. Organisational culture and policy. 2. Department Culture 3. Autonomy 4. Accountability 5. Recognition 6. Innovation.	Scale
3.	Psychological	1. Meaningfulness 2. Involvement 3. Personal trust and value 4. Challenging work 5. Work Pressure	Scale
4.	Economic	1. Rewards and Benefits. 2. External Funding and Funder's requirements.	Scale
5.	Social	1. Leadership 2. Relationship with head and peers. 3. Interactivity	Scale
6.	Management	1. Training & Development 2. Performance Appraisal 3. Talent Management	Scale
7.	Teaching Engagement	1.Teaching & learning strategies 2. e-contents and MOOC' 3. Supportive environment 4. Counselling 5. Participation 6. Examination and evaluation activities 7. Feedback from students 8. Mentoring 9. Remedial teaching	Scale
8.	Research Engagement	1.Presentations 2. Publications 3. h-index 4. Contribution towards society 5. Professional networking	Scale

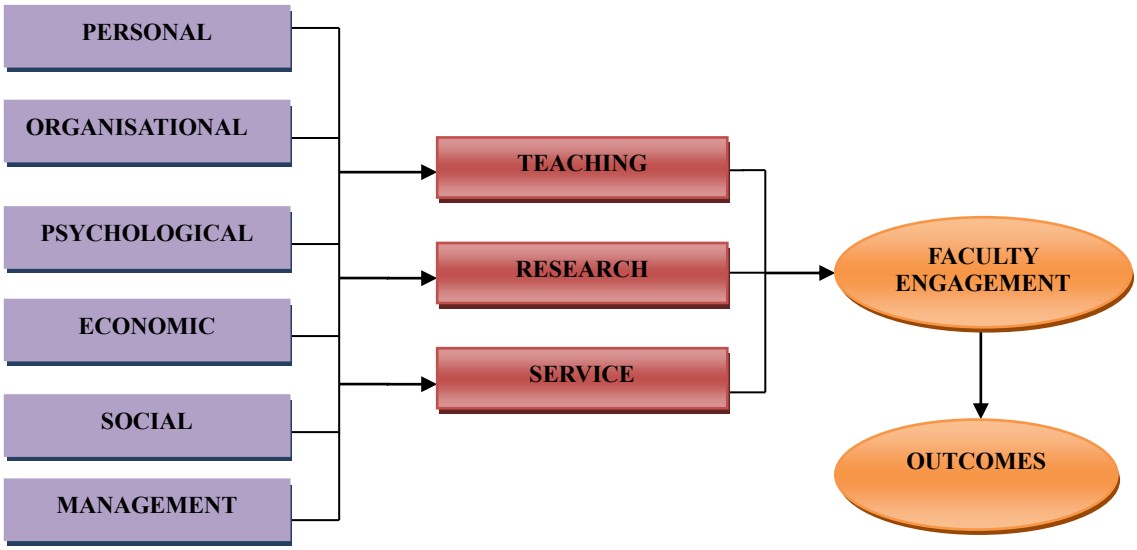
SI. No	Variables	Sub-variables	Method of measurement
		6. Aptitude 7. Allocation of time 8. Research skills	
9.	Service Engagement	1.Administrative support 2. Involvement in committees 3. Extension programmes and community engagement 4. Energised 5. Confidence 6. Initiative 7. Immersion	Scale
10.	Faculty Engagement	1. Vigor 2. Dedication 3. Absorption	Scale
11.	Outcomes	1. Organisational Citizenship Behaviour (OCB) 2. Job Satisfaction 3. Employee Retention 4. Innovative Behaviour	Scale

Source: Secondary Data

3.10 Conceptual Framework

Fig 3.2

Conceptual Framework



On the basis of review of the literature, concepts that act as major predictors of faculty engagement were identified. Based on the observations made on the various concepts, a conceptual framework was developed. The variables of the study include personal, organizational, psychological, economic, social, and management factors that act as independent ones. Teaching, research, and service are the dimensions of engagement through which a faculty member's engagement level is measured. A faculty member who is engaged seems to show the behaviours of vigor, dedication, and absorption, which are being measured. At the end, outcomes of faculty engagement are measured, which comprise organizational citizenship behaviour, employee retention, innovative behaviour, and job satisfaction.

The concept developed in the study through a literature review is vividly presented in the conceptual model. The framework intends to widen the scope of various concepts used in the study.

3.11 Pilot Study

A draft questionnaire was distributed to experts in this field to confirm the content's validity. To assure the reliability and validity of the instrument, a pilot questionnaire was administered to a convenient sample of 50 faculty members. This process helps in assessing the general appearance of the questionnaire in order to eliminate and modify the statements that affect the quality of the instrument. Based on this, modifications and corrections were made, and a final questionnaire was prepared. The researcher could also be able to understand the dimensions of the research after completing the pilot study.

3.12 Reliability Tests

The researcher has made use of the following tests to assure the reliability and validity of the questionnaire:

3.12.1 Normality Test

The population must be normally distributed in terms of the variable characteristics under the study in order to apply parametric tests. The population needs to be symmetrical, and the researcher must check whether the data to be

analysed is symmetrical in nature. The multivariate statistics assume the combination of variables follows a multivariate normal distribution. For this purpose, each variable is individually tested, and if each variable is found to be individually normal, multivariate normality is also assumed.

The Kolmogorov-Smirnov test was applied to check the univariate normality of the variables under consideration. The statisticians used to perform skewness and kurtosis tests to assume the normality of some variables. Skewness measures the symmetry/asymmetry of the distribution, and Kurtosis intends to measure the peakedness of a distribution.

If the skewness and kurtosis values are in the range of 2.58 and 1.96, normality can be assumed. (Black, Hair, Babin & Anderson, 2006). The data will be normal when the values of skweness fall between -3 to +3 and the values of kurtosis fall between -10 and +10. (Chou & Bentler, 1995). In the study, none of the values in the distribution are above the limit, so it is possible to assume univariate normality. Hence, the researcher can go for a parametric test for analysis, assuming the normality of the data.

3.12.2 Validity Test

Validity can be defined as the extent to which a measuring instrument measures what it is supposed to measure. (Carmines & Zeller, 1990). In order to assure meaningful analysis, the research instrument should be tested for validity. A draft questionnaire was prepared after assessing content validity and face validity.

a. Content validity: It is the ability of a scale to measure the intended concept, that is, the extent to which a scale accurately represents the concept of interest. It refers to the degree to which it provides an adequate depiction of the conceptual domain that it is designed to cover (Hair et al., 1998). The evidence in the case of content validity is subjective and logical rather than statistical. It can be assured if the items representing various constructs of an instrument are substantiated by a comprehensive literature review. (Bohrnstedt, 1983).

b. Face Validity: If the statements pertaining to the construct are related to the intended purpose of measuring, face validity can be assured. (Kaplan & Scauzzo,

1998). Subjective and logical assessment of the individual constructs and the related statements are made by the rating of the subject experts. In addition, the face validity of an instrument can be achieved through a thorough review of the instrument by experts in the field. (Hair et al., 1998).

The draft questionnaire prepared after the literature review was distributed to six senior professors who are experts in the field of HR. A brief outline about the purpose of the study, its scope, and the researcher's intention were given to them for easy evaluation. The experts scrutinized the questionnaire and made comments based on their impressions regarding the suitability and relevance of the statements mentioned in the questionnaire. After a critical examination, experts have suggested necessary alterations such as rewording, replacing, removing, adding, and simplifying the statements included in the study. The researcher modified the draft questionnaire on the basis of the expert's feedback, resulting in the development of a new questionnaire for the pilot study.

3.12.3 Reliability Analysis

Table 3.3

Reliability (Cronbach's Alpha) of the Measurement Scale Used for the Study

FACTORS	CRONBACH'S VALUE	NO. OF ITEMS
Organisational Factors	0.967	22
Psychological Factors	0.949	20
Economic Factors	0.879	8
Social Factors	0.931	8
Management Factors	0.941	11
Total Factors	0.987	69
Teaching Engagement	0.962	9
Research Engagement	0.888	8
Service Engagement	0.951	7
Dimensions	0.972	24
Faculty Engagement	0.965	8
Outcomes	0.974	15
Total	**0.993**	**116**

Source: Primary Data

Table 3.3 shows that the Cronbach's alphas for the scaled statements were 0.967 for organizational factors, 0.949 for psychological factors, 0.879 for economic factors, 0.931 for social factors, 0.941 for management factors, 0.962 for teaching engagement, 0.888 for research engagement, 0.951 for service engagement, 0.965 for faculty engagement, and 0.974 for outcomes of faculty engagement. All the constructs have crossed the threshold limit of more than 0.70, which indicates the internal consistency of the scale used for the study. Hence, the questionnaire is considered to be highly reliable.

3.13 Data Analysis

The data procured from the sample of faculty members of arts and science colleges were processed, and both descriptive and inferential analysis have been performed. The researcher has employed IBM SPSS Statistics 21 for data analysis. For testing the hypotheses, an independent sample t-test, a one-way ANOVA, post hoc analysis using Tamhane or Tukey HSD, correlation, and multiple regression were applied.

Following tools were utilised to analyze the data:

Table 3.4

Statistical Tools used for analysis

Sl. No.	Tool	Description
1.	Frequency	To have a glance at the entire data conveniently.
2.	Percentage	To determine the relationship between the series.
3.	Mean	A single value to represent an entire data set.
4.	Standard Deviation	An indication of how far the individual responses deviate from the mean.
5.	Independent sample t-test	To analyze the mean comparison of two independent groups.
6.	One-way ANOVA	To analyze the statistically significant difference between the means of three or more independent groups.
7.	Tamhane's Post-Hoc Test	When the assumption of equal variance is rejected, it

Sl. No.	Tool	Description
		helps in identifying the pairwise differences.
8.	Tukey HSD-Post Hoc	When the assumption of equal variance is accepted, it is adopted for measuring the pair-wise difference among groups.
9.	Correlation Analysis	To measure the strength of the relationship between two variables.
10.	Multiple Regression Analysis	To predict the value of a dependent variable on the basis of the values of independent variables

3.14 Operational Definition

a. Faculty: Faculty refers to the full-time faculty members of arts and science colleges in Kerala who participate in teaching, research, and service. Individuals who teach both undergraduate and postgraduate level courses were included in the study. Faculty members at the University level were excluded from the data collection and analysis because of their dominant emphasis on research.

b. Faculty Engagement: Faculty engagement is the commitment of the employees to their work, and it is a self-driven process, with an aim to attain psychological satisfaction and fulfil their physical requirements. A faculty member who seems to be engaged reflect vigor, dedication, and absorption in their behaviour. A faculty member is considered to be engaged when he/she is involved in teaching, research and service.

c. Factors affecting Faculty Engagement: This denotes the determinants for engaging the faculty members. From the available literature, the researcher has grouped the factors under six headings, which consist of personal factors, organizational factors, psychological factors, economic factors, social factors, and management factors. At what rate these factors influence the teaching, research, and service engagement of faculty members is measured in the study.

d. Teaching Engagement: It can be defined as the connection that a faculty member has towards teaching and related activities. This intends to measure the

commitment of faculty members to the teaching process that they are into. Nine items were developed in order to measure the interest of faculty members in teaching, which are teaching and learning strategies, e-contents and MOOC's, supportive environment, counselling, participation, examination and evaluation activities, feedback from students, mentoring, and remedial teaching.

e. Research Engagement: Research engagement measures the willingness and interest that a faculty member shows in research and related activities. Eight items that relate to research engagement are developed, which are presentations, publications, h-index, contribution towards society, professional networking, aptitude, allocation of time, and research skills.

f. Service Engagement: Service engagement is the interest of the faculty members to be part of service-oriented activities that are beneficial for students, the institution, and society at large. Seven statements that are capable of measuring the level of service engagement are included in the questionnaire. Administrative support. Involvement in committees, extension programmes and community engagement, energised, confidence, initiative, and immersion are used for this purpose.

g. Regulatory Body: An external organization that has been empowered by legislation to oversee and control the educational process and outputs relevant to it. It frames guidelines and develops policies and procedures for educational institutions. UGC, NAAC, KSHEC, and SAAC are the regulatory bodies that come under the purview of the current study.

h. Outcomes of Faculty Engagement: Outcomes are the end results that are achieved when a faculty member is engaged. From the literature review, four outcomes that are most relevant are chosen and consist of organizational citizenship behaviour (OCB), job satisfaction, employee retention, and innovative behaviour.

3.15 Period of Study

The data collection has been done with the help of a structured questionnaire and secondary sources like journals, books, articles, websites, theses,

and dissertations. The period in which the primary data were collected is from 30 April 2021 to 31 August 2021.

3.16 Limitations of the Study

Social science research has its own inherent limitations, which forces the researcher to face severe difficulties during the conduct of the research. The major limitations of the study are listed below:

1. The data were qualitative in nature and needed to be quantified to achieve the purpose of the study.

2. As the researcher has adopted the scaling technique, the limitations of the technique will be applicable to the study.

3. The limitations of the sampling method will have an impact on the study.

4. The study has excluded private and self-financing arts and science colleges, which are more numerous as compared to other categories of arts and science colleges.

5. The study does not cover the entire faculty members of Kerala.

3.17 Conclusion

The present chapter depicts the blueprint of the research work titled ‘A study on faculty engagement with special reference to Arts and Science colleges of Kerala'. The chapter starts by stating the research problem, which is followed by the development of research questions, objectives, and research hypotheses. The scope of the study is vividly described in this section. The researcher has adopted the research onion model to report the research methodology and has included all relevant elements. The chapter also incorporates the design of the questionnaire, the conceptual framework, reliability tests, data analysis, the operational definition, the period of the study, and its limitations.

REFERENCES

Babbie, E. (Ed.). (2010). *The practice of social research*. (12th ed.). Wadsworth.

Baumgartner, H., & Homburg, C. (1996). Applications of structural equation modeling in marketing and consumer research: A review. *International journal of Research in Marketing, 13*(2), 139-161.

Bohrnstedt, G. W., & Felson, R. B. (1983). Explaining the relations among children's actual and perceived performances and self-esteem: A comparison of several causal models. *Journal of Personality and Social Psychology*, *45*(1), 43.

Bryman, A. (Ed.). (2012). *Social research methods* (5th ed.). Oxford University Press.

Bryman, A., & Bell E. (2015). *Business research methods*. Oxford University Press.

Bryman, A., & Bell, E. (Eds.). (2011). *Business research methods* (3rd ed.). Oxford University Press.

Candy, P. C. (2000). Reaffirming a proud tradition: Universities and lifelong learning. *Active Learning in Higher Education, 1*(2), 101-125.

Carmines, E. G. (1990). Zeller. RA (1979) Reliability and validity assessment. JL Sullivan (ed.), *Quantitative Applications in the Social Sciences.* SAGE.

Chou, C. P., & Bentler, P. M. (1995). Estimates and tests in structural equation modeling. In R.H. Hoyle (Ed.). *Structural equation modeling: Concepts, issues and applications* (pp. 37-55). Sage.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process.* Sage.

Flick, U. (2011). *Introducing research methodology: A beginner's guide to doing a research project.* Sage.

Goddard, W. & Melville, S. (Eds.). (2004). *Research Methodology: An introduction* (2nd ed.). Blackwell Publishing.

Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate data analysis with readings.* Prentice-Hall.

Hulland, J., Chow, Y. H., & Lam, S. (1996). Use of causal models in marketing research: A review. *International journal of research in marketing*, *13*(2), 181-197.

Kothari, C. R. (2004). *Research methodology: methods and techniques*. New Age International.

May, T. (2011). *Social research: Issues, methods and research*. McGraw-Hill International.

Monette, D.R., Sullivan, T.J., & DeJong, C. R. (Eds.). (2005). *Applied social research: A tool for the human services* (6th ed.). Brooks Publishing.

Newman, I. (1998). *Qualitative-quantitative research methodology: Exploring the interactive continuum.* Southern Illinois University Press.

Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research methods for business students* (6th ed.). Pearson.

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.

Saunders, M.N.K., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (8th ed.). Pearson.

Setia, M., S. (2016). Methodology series module 3: Cross-sectional studies. *Indian Journal of Dermatology, 61,* 261-4.

Silverman, D. (2013). *Doing qualitative research: A practical handbook*. Sage.

Snieder R. & Larner, K. (2009). The art of being a scientist: A guide for graduate students and their mentors. Cambridge University Press.

Wiles, R., Crow, G., & Pain, H. (2011). Innovation in qualitative research methods: A narrative review. *Qualitative Research, 11*(5), 587-604.

Wright, M. (2005). Always at odds? Congruence in faculty beliefs about teaching at a research university. *The Journal of Higher Education, 76,* 331-353.

Chapter 4

ROLE OF REGULATORY BODIES TO ENHANCE FACULTY ENGAGEMENT

Contents

4.1 Introduction

The present chapter imparts information on the measures taken by the regulatory bodies of higher education in order to enhance the engagement level and development of faculty members. The role of regulatory bodies such as ministry of education, UGC, NAAC, KSHEC, SAAC, and others are being discussed in the purview of faculty engagement.

4.2 Regulatory Bodies of Higher Education in India: A Glance

India being the land of supreme knowledge, Indian education is seen as a benchmark for its quality and ease of access. This has been possible through a number of regulatory bodies that are responsible for maintaining the standard of education in the country. All types of HEIs in India, private or public, are bound to adhere to the stringent regulations for maintaining uniformity. The Government of India has established numerous regulatory bodies, including specialized ones, that certify institutions and accredit them on the basis of many factors. This is a quality-assurance measure that encourages institutions to stay updated, maintain quality, or even improve their standards where their accreditation levels prove to be low. The University Grants Commission (UGC) is the regulatory body in the country that is responsible for prescribing rules to govern educational institutions in the areas of admissions, appointments, syllabus, salaries, infrastructure, etc. The All India Council for Technical Education (AICTE) regulates and governs technical as well as management colleges. The Association of Indian Universities (AIU) acts together for evaluating syllabuses, coursework, and certifications. In addition to these regulatory bodies, to maintain the quality of educational institutions, the

National Assessment and Accreditation Council (NAAC) has been set up to assess and accredit the HEIs of the country. Accreditation by NAAC has become mandatory for HEIs to receive grants from the federal or state governments. The National Board of Accreditation (NBA) is another accrediting board that focuses on technical and management courses. Legal institutions are regulated by the Bar Council of India (BCI), medical institutions are regulated by the Medical Council of India (MCI), and to oversee teacher education in India, the National Council for Teacher Education (NCTE) has been set up.

The Ministry of Education, UGC, NAAC, KSHEC, and SAAC are the most prominent bodies that govern the arts and science colleges of the state. Hence, the researcher tries to summarize the importance and role of these regulatory bodies.

4.2.1. Ministry of Education

The education system of a country plays a prominent role in balancing the socio-economic setup of the country. The citizens should be nurtured by building a strong foundation in education. The Ministry of Education (MoE) was formed on September 26, 1985, through the 174th amendment to the Government of India (Allocation of Business) Rules, 1961. At present, the ministry works under two departments: (1) The Department of School Education and Literacy, which is responsible for the development of school education and literacy in the country, (2) The Department of Higher Education oversees the functioning of the higher education system in the country.

Department of Higher Education strives to create world-class opportunities in the field of higher education and research so that Indian students are provided with a platform to interact with world-class eminent researchers and enhance their knowledge. The government also took the initiative to establish joint ventures and memorandum of understanding that benefit students. The Department also plans and develops policies for the overall infrastructural development of the higher education sector of our country. The department focuses on the following functions: a. Enhancement of the gross enrolment ratio by expanding access through all modes b. Promoting the participation of these sections of society whose GER is

lower than the national average. c. To improve quality and promote academic reforms. d. Setting up new educational institutions and also expanding the capacity of and improving the existing institutions. e. Use of technology in higher education f. Development of vocational education and skill development g. Development of Indian languages h. International collaboration in the field of education.

4.2.1.1 Higher Education Councils

Ministry of Higher Education formed councils to support the activities in order to build a strong higher education system and research culture in the country. The following are the councils that function under the Department of Higher Education:

a. Indian Council of Social Science Research (ICSSR): ICSSR was established in 1969 to promote social science research and strengthen different disciplines. The council also focuses on improving the quality and quantity of research and utilizing it for policy formulation. The ICSSR's role is to develop institutional infrastructure, identify, procure, and develop research talent, develop research programs, support professional organizations, and establish links with social scientists in other countries. The council also disburses maintenance and development grants to various research institutes and regional centres across the country. Since 1976, the council has carried out surveys of research in different disciplines of social science. Further, in order to develop local research talents and support research activities, regional centres have been set up by the ICSSR.

b. Indian Council of Philosophical Research (ICPR): ICPR is an autonomous body for the promotion of philosophical research, established in 1977 under the Ministry of Education, Government of India. The council was formed on the belief that Indian philosophy deserves special attention and needs to be given more prominence along with other areas of research. Prominent and influential philosophers, along with social scientists and representatives of the UGC, ICSSR, ICHR, INSA, the Central Government, and the Government of Uttar Pradesh, serve as members of the council.

c. Project of History of Indian Science, Philosophy, and Culture (PHISPC): PHISPC was formed in 1990 under ICPR. This council was formed with the primary aim of undertaking interdisciplinary study and tracing the interconnections between Indian science, Indian philosophy, and Indian culture. Later in 1977, PHISPC was separated from ICPR to enjoy greater freedom to finish the research work within the stipulated period and without much interference. It is now affiliated with the Centre for Studies in Civilizations (CSC).

d. Indian Council of Historical Research (ICHR): ICHR was established in 1972 as an autonomous organization under the Societies Registration Act. The council aims to assemble historians together, provide a platform for exchange of ideas and views between them, promote rational presentation and interpretation of history, sponsor research programmes relating to history, and assist institutions and organizations that are engaged in historical research. Science and technology, economics, art, literature, philosophy, epigraphy, numismatics, archaeology, the socio-economic formation process, and all other disciplines that have a strong historical connection were included in this context.

e. Mahatma Gandhi National Council of Rural Education (MGNCRE): It was established on October 19, 1995, as a registered autonomous society fully funded by the Central Government. It aims to promote rural education in line with the vision of Mahatma Gandhi on education to transform rural areas as envisaged in the New Education Policy, 1986. The council identifies various programmes to assist financially and to render continuous support to appropriate institutions.

4.2.2 University Grants Commission

The UGC was incorporated as a statutory body of the Government of India through an Act of Parliament in 1956 for coordinating, determining, and maintaining the standard of University education in India. The UGC has decentralized its operations by setting up regional centres in order to ensure effective region-wise coverage throughout the country. It is the only grant-giving agency in the country with the responsibilities of providing funds and those of coordination, determination, and maintenance of standards in institutions of higher education. The UGC focuses on:

a. Promoting and coordinating University education.

b. Determining and maintaining standards of teaching, examination, and research in Universities.

c. Framing regulations on minimum standards of education.

d. Monitoring developments in the field of collegiate and University education; disbursing grants to the Universities and colleges.

e. Serving as a vital link between the Union and State Governments and institutions of higher learning.

f. Advising the central and state Governments on the measures necessary for improving University education.

4.2.3 National Assessment and Accreditation Council

NAAC was established as an independent body under the UGC in 1994 with the aim of maintaining quality in higher education in the country. The NAAC assesses and accredits central, state, private, and deemed-to-be Universities, institutes of national importance, and affiliated and autonomous colleges. Higher education institutions are only eligible for accreditation after two rounds of graduates or six years of existence, whichever comes first.

Process of Accreditation under NAAC

Starting with the letter of intent, background information about the institute, the programs that it offers, its history, recognition, and staff details must be submitted for the process of accreditation. Those institutions that apply for accreditation for the first time are required to submit an Institutional Eligibility for Quality Assessment form. The form requires background information on the program, staff, faculty, students, and facilities. Once the required forms are submitted, a peer team visits the institution, and an accreditation decision is made after the team's reports and grade sheets have been assessed. The institution can also file an appeal if they are not satisfied with the accreditation grade. Evaluation is done by the NAAC based on the seven criteria, which are: curricular aspects; teaching, learning, and evaluation; research, innovation, and extension;

infrastructure and learning resources; student support and progression; governance, leadership, and management; and institutional values and best practices. In accordance with the way it functions, the points for each of the criteria are allotted differently for Universities, autonomous colleges, and affiliated colleges. A university receives more points for research, consultancy, and extension criteria, whereas affiliated and autonomous colleges receive more points for teaching, learning, and evaluation criteria. The following table gives the breakup of points for evaluation of affiliated colleges, autonomous colleges, and Universities.

Table 4.1

NAAC's 7 Criteria Assessment for Universities, Autonomous, and Affiliated Colleges

Criteria	Universities	Autonomous colleges	Affiliated colleges	
			UG	PG
1. Curricular aspects	150	150	100	100
2. Teaching, learning, and evaluation	200	300	350	350
3. Research, innovation, and extension	250	150	110	120
4. Infrastructure and learning resources	100	100	100	100
5. Student support and progression	100	100	140	130
6. Governance, leadership, and management	100	100	100	100
7. Innovation and best practices	100	100	100	100
TOTAL	**1000**	**1000**	**1000**	**1000**

Source: National Assessment and Accreditation Council

NIRF, the National Institutional Ranking Framework, by the Ministry of Education, Government of India, is a methodology adopted to rank higher education institutions in India. The framework for NIRF was approved by MHRD and launched by the Minister of Human Resource Development on September 29, 2015. The institutions have been ranked in 11 different categories: overall, University, colleges, engineering, management, pharmacy, dental, research, architecture, medical, and law. Several parameters have been used for ranking purposes, like resources, research, and stakeholder perception. These parameters have been grouped into five clusters, and weightages are assigned to these clusters. The weights depend on the type of institution. Teaching, learning, and resources, research, productivity, impact, and IPR, graduation outcome, outreach and inclusivity, and perception are the five parameters used for ranking colleges.

4.2.4 Kerala State Higher Education Council

KSHEC is an apex-level statutory body, instituted under the Kerala State Higher Education Council Act, 2007, and the Kerala State Higher Education Council (Amendment) Act, 2018, of the state legislature of Kerala. The council acts as the principal policy provider and trend setter of higher education for the state of Kerala and continuously strives to assure equity and excellence in the higher education sector. The council frames policies and develops rules after yielding the collective opinion of all the stakeholders in the sector, that is, academicians, administrators, and students. Hence, the council follows a democratic structure and is participatory in its approach. Following are the main objectives of KSHEC:

i. Render advice to the Government, Universities and other institutions of higher education in the state.

ii. Coordinate the roles of Government, Universities and apex regulatory agencies in higher education within the state.

iii. Formulate and initiate new concepts, programmes, and replicable models in higher education.

iv. Provide common facilities in higher education without impinging upon the autonomy of other institutions of higher education.

The council will perform the following roles in order to achieve its objectives:

a. Review and coordinate the implementation of policies in all higher education institutions in the state, including Universities, research institutions, and colleges.

b. Network various programmes in higher education undertaken and promoted by the Central and State Governments and by national level regulatory bodies,

c. Undertake independent work for the generation and dissemination of new ideas in higher education.

d. Provide common facilities for all Universities, research institutions, colleges, and other centres of higher learning.

e. Provide for the generation and optimum utilization of funds for the expansion and development of higher education, and

f. Undertake such other programmes for promoting the objectives of social justice and excellence in education.

Three centres, namely, Centre for Research on Policies in Higher Education, Centre for Curriculum Development and Examination and Centre for Human Resource Development and Capacity Building have been set up by KSHEC.

4.2.5 State Assessment and Accreditation Council

The Kerala State Higher Education Council Act, 2007, envisages the establishment of a state-level assessment centre at the council. The primary goal of SAAC objectively and transparently assess and assign state level accreditation and grades to all higher education institutions in the state, including Universities, Government, Aided, Autonomous colleges, and self-financing institutions, using a set of global, national, and state specific parameters. It also plans to rank the HEIs of the state, employing metrics from the Kerala Institutional Framework, and to enhance and ensure the readiness of the HEIs of the state to go for NAAC accreditation and grading. SAAC also imparts training and guidance for state and national level accreditation. It will also sensitize the Universities and colleges to

the changes taking place internationally and bring them into complete harmony with the shifting paradigms across the world.

SAAC is the first state-level accreditation agency in the country to incorporate state-specific parameters. Activities of SAAC will be functioning under the Kerala State Higher Education Council (KSHEC), which will be coordinated by a five-member academic advisory committee. The stages of SAAC are: the preparation of a self-study report by institutions, an on-site visit by peer teams for validating it, and recommendations put forth by the academic advisory committee before the KSHEC's executive and governing bodies for final decision. It will be made mandatory for all higher education institutions to seek accreditation by SAAC, six years after their establishment or after two-degree batches graduate, whichever is earlier. In addition to this, new colleges will have to apply for assessment and accreditation prior to the commencement of their academic operations. The maximum institutional cumulative grade point average (CGPA) has been fixed at 4, with colleges with a score ranging from 3.5 to 4.0 being awarded a grade of A++ and the lowest range being 1.51 to 2.0 with a C grade. Those institutions that secure CGPAs below 1.5 will be denied accreditation. SAAC also intends to measure and propose ways to enhance academic standards, rank institutions, and ensure their readiness to seek NAAC accreditation and grading. The Government of Kerala has stated its intentions to adopt tough measures, including denial of assistance and permission to commence new courses, against colleges that failed to obtain SAAC accreditation. In addition to the 7 criteria of assessment proposed by NAAC, the state accreditation body incorporates 3 core values such as ensuring social inclusiveness, striving for equity and excellence, and fostering a scientific temper and secular outlook.

4.3 Guidelines to Enhance Faculty Engagement

4.3.1 Guidelines proposed by the UGC

a. Guidelines for providing grants: Major Research Project: In order to promote teaching and research in emerging areas of social sciences, languages, humanities, literature, pure sciences, engineering & technology, pharmacy, agricultural sciences, medical and other allied subjects, the UGC supports the University and

college teachers in fulfilling their individual research requirements in their specialized area. The scheme can be availed of by permanent or regular, working or retired teachers in universities or colleges only. Faculty members who work on a permanent basis in self-financing institutions may also apply, provided they meet the conditions stipulated by UGC and the fees charged by the colleges are in accordance with the regulations framed by the state or University or the applicable law. Only one project or scheme can be availed of at a time by the retired or working faculty member. The faculty member can accept the offer of another project only after the successful completion of the current one, irrespective of whether he or she is the principal investigator or co-investigator. If UGC finds any violations in the proceedings, the PI or co-investigator and the institution are liable to refund the amount provided by UGC and may also be forbidden from participating in any other UGC programmes in the future. The total responsibility of the project lies with the PI or co-investigator along with the host institution. A minimum of one year's gap is necessary to undertake another research project by a faculty member. Based on the completed project, the PI is bound to publish at least two papers in a reputed journal, either in the form of books, articles, or presentations in seminars. A retired faculty member can apply up to the age of 67 along with a co-investigator, who should be a permanent faculty member in the same department where the project is to be done. The institutions that forward the proposal should have adequate research facilities, and the university should assess the proposal, which may be forwarded by the registrar of an affiliated University.

The quantum of assistance for a Major Research Project is Rs. 20,00,000 for science disciplines, including medical, engineering and technology, pharmacy, and agriculture, and is Rs. 15,00,000 for humanities disciplines, including social science, literature, arts, languages, law, and allied disciplines. An honorarium of Rs. 18,000 will be provided to the retired teachers up to 70 years of age and if the PI attains 70 years of age during the tenure of the project, he/she will not be eligible for any honorarium afterwards, till the completion of the project. Moreover, the retired PIs are assigned with a research fellow and must take part in full time research. (UGC, 2012)

b. Guidelines for providing grants to University/College teachers—Minor Research Project: This scheme covers all the researchers in all streams who work as teachers in Universities or colleges. Financial assistance is provided to fulfil individual requirements to exhibit excellent research in specialized areas. Permanent or regular working teachers, preferably Assistant Professors, who wish to do research work along with teaching or who are working for a doctoral degree under an approved research supervisor will be supported. The permanent teachers of self-financing colleges who meet all the stipulations set by UGC can also apply under this scheme. A faculty member who is working can only avail themselves of one project or one scheme at a time and will have to complete the first one before accepting the other one. Failure to follow the rules stipulated by the regulatory body will make PI and the institution liable to repay all the amounts received from the UGC in all such schemes and even may lead to debarring from participating in UGC projects in the future. The total responsibility lies with the PI and the host institution. A faculty member can undertake another project only after taking a one-year break, and it is mandatory to publish two papers in a reputed journal on the basis of the completed project. Adequate research facilities must be ensured by the colleges or Universities while forwarding the research proposal.

The quantum of assistance for a Minor Research Project will be Rs. 5,00,000 for science disciplines like engineering and technology, pharmacy, agriculture, medicine, and other allied disciplines, and Rs. 3,00,000 for humanities, social sciences, language, arts, literature, law, and other allied disciplines. (UGC, 2012).

c. Guidelines for Organizing Conferences, Workshops, and Seminars in Colleges: Financial assistance will be provided for organizing conferences, seminars, and workshops at the state, national, and international levels in various disciplines and areas. The scheme provides a platform for researchers, faculty members, and students to share their knowledge, research findings, and experiences, thereby attaining higher standards. Through this scheme, an in-depth analysis of subjects and knowledge enhancement are possible. The colleges that come under the

purview of Section 2(f) and are fit to receive central assistance under Section 12(B) of the UGC Act of 1956

A college may be assisted in hosting state or national level seminars as part of the annual conference of a recognized academic association or academic body, or activities in collaboration with recognized academic associations, academic bodies, or academic professional institutes, voluntary organizations, NGO's, registered societies, trusts, and associations of business or industry, and this should be mentioned while applying for the seminar or conferences. A call for research papers and participation will be made through academic websites and journals. Financial assistance will be provided to one department for one activity only in a financial year, and the college can conduct up to five state- or national-level activities. The assistance is limited to Rs. 1,00,000 for state-level activities and Rs. 150,000 for national-level activities.

In the case of international seminars and conferences, financial assistance under the General Development Assistance Scheme, with prior clearance from the Ministry of External Affairs, is confined to postgraduate departments in a college. Only one international conference can be conducted in a year by the college by enclosing the certificate from the GOI while submitting the proposal. It is a must to have the participation of a foreign delegate, and the assistance is limited to Rs. 2,00,000 only. Payment for travel from outside India is not permitted under this scheme. The grant may be used for pre-conference printing, publication of proceedings, travel allowances within India, and hospitality.

d. Guidelines for the Development of Faculty Development Programme for Colleges: The programme intends to enhance the academic and intellectual environment for the faculty members so they can grab opportunities for pursuing research and make active participation in seminars, conferences, and workshops. Updating research knowledge and developing pedagogical skills is possible through active participation in the FDP. Award of Teacher Fellowship for doing an M. Phil. or Ph. D. Participation of teachers in Academic Conferences in India (PTAC) and short-time visits of young faculty members to reputed institutions for not less than two weeks and not more than two months come under the purview of

Faculty Development Programmes (FDP). Assistance will be provided to the faculty members of those colleges that are included in the list maintained by the UGC under sections 2(f) and 12B of the UGC Act, 1956.

The faculty members should be permanent or regular in the case of Government /Aided colleges for the award of teacher fellowships for doing an M.Phil. or Ph.D., and faculty members of self-financing colleges can also avail of the fellowship if they fulfil the eligibility criteria for the appointment of assistant professors as stipulated by UGC. The faculty members should not be more than 50 years of age and should have at least 3 years of teaching experience while submitting the application for the fellowship. Preference will be given to those faculty members who have not availed themselves of any other teacher fellowship. The faculty member must have been registered for an M.Phil. or Ph.D. programme in the subject concerned and submit an undertaking stating the thesis will be submitted within the tenure of the fellowship or at least within six months from the period of fellowship completion. The faculty members are also permitted to register for an M.Phil. or Ph.D. programme in the institution where they are working in the concerned subjects, assuring that adequate facilities for the smooth conduct of research are being provided. All emoluments will be disbursed to the faculty members, and the protection of seniority by the parent institution is assured during the fellowship period.

e. Fellowship for superannuated faculty members: Retired educators and faculty members will be given an opportunity to access new research possibilities. Selected candidates will be given Rs. 50,000 per month along with an annual contingency amounting to Rs. 50,000. The candidates should be at least 50 years of age and have a minimum of 10 years of employment remaining at the University from the date of their application to be eligible to apply. Candidates must also have completed two sponsored national or international Government or private research projects as per UGC guidelines. Candidates should also have supervised the Ph.D. dissertations of five full time candidates.

f. Research grant for in-service faculty members: This grant aims to give regularly appointed faculty members access to research opportunities. Under this scheme,

200 candidates will be selected, and each will be able to earn Rs. 10 lakhs for a duration of two years. The candidates should have successfully supervised the full-time Ph.D. dissertation of 10 candidates, and at least 3 of these candidates should have received their degrees in the preceding 10 years for eligibility. They should have also managed at least 3 sponsored research projects by national or international organizations as the main investigator. More importantly, the candidates should not exceed the age of 67. (UGC, 2012).

g. Dr. D.S. Kothari Research Grant for Newly Recruited Faculty Members: The grant is meant as a chance for recently appointed faculty members to conduct research. A total of 132 candidates would be selected for a period of two years, and the total amount given to candidates would be Rs. 10,00,000. The candidates should be newly appointed assistant professors against permanent posts and should have a Ph.D. degree to apply. Candidates must also have conducted a minimum of five research papers, and they would be required to apply within a period of two years of their date of joining. (UGC, 2022).

4.3.2 Schemes Propounded by the Department of Higher Education

a. National Research Professorship: Distinguished academicians and scholars are duly honoured, in recognition of their knowledge contribution in concerned subjects, under the 1949 scheme of the National Research Professorship instituted by the Government of India. Eminent personalities who have attained 65 years of age, have made outstanding contributions, and have the capacity and capability to engage further in productive research are considered for the post of National Research Professors. They could be able to guide and strengthen the younger researchers and build a strong foundation for them in their area of research.

b. Initiatives of the XI Plan: In order to strengthen science-based higher education and research in Universities and colleges, the scheme supports the research programmes of university and college teachers in various disciplines. Permanent, regular, working or retired faculty members of Universities and colleges recognized under Sec. 2(f) and declared fit to receive grants under Section 12(B) of the UGC Act, 1956, are the only candidates eligible to apply under the scheme.

4.3.3 Schemes introduced by the Kerala State Higher Educational Council

KSHEC formulates and implements an array of schemes and activities to enhance quality and excellence and to ensure equity along with their statutory duties. The council advises both the Government and Universities on policy matters relating to higher education. The activities that are performed under the schemes will be either under the centres of the council or outside the scope of the centres of the council. Following are the ongoing activities under KSHEC:

a. Cluster of Colleges: It is an arrangement for mutual sharing of human and physical resources among neighbouring colleges, through which available resources can be used in an optimal manner for quality enhancement. The colleges within the cluster can share their existing infrastructure and human resources and can create new facilities in common.

b. Erudite Scheme: The "Scholar in Residence Scheme," called Erudite, was introduced by the Government of Kerala as part of improving the quality of higher education and research in the Universities of the state. This scheme enables the academic community to interact with outstanding scholars, and the council has been nominated as the nodal agency for implementing the scheme. This is an ongoing project of the KSHEC, which functions as per the guidelines framed by the council and is administered with a special fund provided by the Government. Once the scheme was introduced, the only beneficiaries were Universities but it has since been extended to Government and Aided colleges. Another dimension to the scheme was added called ‘Brain Gain’ to combat "Brain Drain’.

c. International Relations Group: As part of the internationalization of higher education, the Department of Higher Education set up an international relations group with the KSHEC. This group envisages many programmes like the International Masters Programme, Academic Tourism, Collaboration Projects in India, Training and Exchange Programmes for Teachers and Students with Universities, and the India Semester programme. The initial expenses incurred by Universities were covered by KSHEC.

d. Journal: Higher Education for the Future: The KSHEC publishes a biannual journal in collaboration with SAGE Publications Private Limited, named Higher Education for the Future. The journal intends to shape the next generation of higher education based on national and international experience. A wide spectrum of issues relating to research, pedagogy, accreditation, assessment, policy, quality enhancement, best practices, and all related areas in higher education are addressed. The journal is a member of the Committee on Publication Ethics (COPE) and follows the 6th edition of the APA style manual.

e. Research Projects: Under this scheme, financial assistance is provided to academicians to do research pertaining to higher education where there is further scope for research. An amount of Rs. 2,00,000 for long term research and an amount of Rs. 1,00,000 for short-term research are provided as assistance. Faculty members from University departments, government colleges, and Aided colleges are eligible to receive assistance under this scheme.

f. Workshops training: The council conducts workshops and training programmes on various matters, subjects, and issues for stakeholders on a regular basis. Faculty training programmes arranged for young faculty members, a workshop on gender sensitization for the coordinators of the women cells in Universities and colleges, conferences of principals, an international student meet, a training programme for non-teaching staff, and student seminars are some of the programmes organized by the council. The council also organizes monthly public lectures by renowned academicians and eminent personalities from various streams. Financial assistance for conducting workshops and seminars on various topics relating to higher education has been provided to Universities and colleges.

Teaching pedagogy, philosophy of science, Edu-Tech-Hands-on Training, online education in higher education institutions, MOODLE, outcome-based education, etc. are the present training programmes.

g. Outcome-Based Education (OBE) workshops by KSHEC: It is a part of KSHEC's faculty and curriculum development programme addressing pedagogical measures relating to higher education, that is, outcome-based education, course

design, instructional design, and assessment for good learning. Extensive training for faculty members and the board of studies has been offered through KSHEC.

4.4 Conclusion

This chapter summarizes the role of regulatory bodies in higher education, their objectives, and functioning. Moreover, the chapter also discusses about the guidelines issued by the regulatory bodies to enhance engagement level of faculty members in teaching, research, and service. From the information collected, it can be observed that more focus has been given by the regulatory bodies in engaging faculty members in research-oriented activities and absence of policies which inculcate teaching and service engagement among faculty members.

REFERENCES

Department of Higher Education. (n.d.). https://www.education.gov.in/higher_education

Department of Higher Education. (n.d.). Initiatives of XI plan. Ministry of Education. https://www.education.gov.in/new-initiatives-xi-plan

Department of Higher Education. (n.d.). National research professorship. Ministry of Education. https://www.education.gov.in/national-research-professorship-nrp

Kerala State Higher Education Council. (n.d.). https://www.kshec.kerala.gov.in/index.php/home/about-us2

Kerala State Higher Education Council. (n.d.). Ongoing programmes. https://www.kshec.kerala.gov.in/index.php/activities/ongoing

Kerala State Higher Education Council. (n.d.). State assessment and accreditation centre. https://kshec.org/saac.php

Ministry of Education. (n.d.). https://www.education.gov.in/higher_educationcouncils

National Assessment and Accreditation Council. (n.d.). Assesment and accreditation. NAAC. http://naac.gov.in/index.php/en/assessment-accreditation#process

National Assessment and Accreditation Council. (n.d.). http://naac.gov.in/index.php/en/assessment-accreditation#eligibility

National Institutional Ranking Framework. (n.d.). Overview. Ministry of Education. https://www.nirfindia.org/About

National Institutional Ranking Framework. (n.d.). Parameters. Ministry of Education. https://www.nirfindia.org/Parameter

University Grants Commission. (2012), Guidelines for the special scheme of faculty development programme for colleges for the twelfth plan (2012-2017). UGC. https://www.ugc.gov.in/pdfnews/7156840_Guideline__FDP.pdf

University Grants Commission. (2012). Minor research project for teachers: 12th plan guidelines. UGC. https://www.ugc.gov.in/pdfnews/6733319_12th-plan-Minor.pdf

University Grants Commission. (2012). Research project for teachers: 12th plan guidelines. UGC. https://www.ugc.gov.in/pdfnews/7716504_12th-plan-guidelines.pdf

University Grants Commission. (2022). Guidelines for dr. Kothari research grant for newly recruited faculty members (2022)https://frg.ugc.ac.in/download/Guidelines-Newly%20rectt%20faculty.pdf

University Grants Commission. (n.d.). Genesis. https://www.ugc.gov.in/page/Genesis.aspx

University Grants Commission. (n.d.). Guidelines for fellowship for superannuated faculty members (2022). UGC. https://frg.ugc.ac.in/download/Guidelines-Superannuated%20faculty.pdf

University Grants Commission. (n.d.). Guidelines for organising conferences workshops seminars in colleges during eleventh plan (2007-2012). UGC. https://www.ugc.gov.in/oldpdf/xiplanpdf/conferenceseminars08.pdf

University Grants Commission. (n.d.). Guidelines for research grant for in-service faculty members (2022). UGC. https://frg.ugc.ac.in/download/Guidelines-In%20service%20faculty.pdf

Chapter 5

CONTRIBUTING FACTORS OF FACULTY ENGAGEMENT

Contents

5.1 Introduction

The present chapter contains the second objective of the study to evaluate the contributing factors in creating engagement among faculty members in Arts and Science colleges of Kerala. The contributing factors such as Personal, Organisational, Psychological, Economic, Social, and Management are identified by the researcher through literature review. The relationship between these factors and dimensions of faculty engagement are established in this chapter. Teaching, Research and Service engagement are considered as the dimensions of faculty engagement.

5.2 Profile of the Sample Faculty Members

Appraisal of the profile of sample faculty members is considered to be relevant. The data required for the study was collected from 390 faculty members of arts and science colleges in Kerala. Table 5.1 illustrates the gender, age, type of institution, years of experience and designation.

Table 5.1

Profile of the sample faculty members

Variables		Frequency	Percent
Gender	Male	162	41.50
	Female	228	58.50
	Total	**390**	**100**
Age	Below 30	7	1.80
	30-45	312	80.00
	Above 45	71	18.20

Variables		Frequency	Percent
	Total	**390**	**100**
Experience	Less than 10 years	179	45.90
	10-20 years	179	45.90
	More than 20 years	32	8.20
	Total	**390**	**100**
Institution	Government	140	36
	Aided	184	47.10
	Autonomous	66	16.90
	Total	**390**	**100**
Designation	Assistant Professor	351	90
	Associate Professor	39	10
	Total	**390**	**100**

Source: Primary Data

5.2.1 Gender

The faculty members considered for the study are grouped according to their gender. Out of 390 faculty members, 162 (41.50%) are male and remaining 228 (58.50%) are female. It can be inferred that there is a fair representation of both male and female faculty members.

5.2.2 Age

Age is considered to be a strong predictor of life cycle changes that affect all aspects of an individual. Hence, it is important to analyse the faculty members according to their age. Classification of dataset on the basis of age plays a significant role in measuring the level of engagement. Table 5.1 shows that out of 390 faculty members, 7 (1.80%) are in the age category of below 30 years, 312 (80%) from 30-45 years and 71 (18.20%) from the age category of above 45 years. So, majority of the faculty members covered under the study belong to the age group of 30-45 years.

5.2.3 Experience

Experience of the faculty members could be considered as a super critical factor which explains the engagement level of faculty members. There is a general notion that faculty members who are more experienced have a high level of

engagement as compared to less experienced ones. From 390 faculty members considered for the study, it can be noticed that equal representation of experience in less than 10 years and in 10-20 years (45.90%) in each category. The faculty members with experience of more than 20 years are 32 (8.20%).

5.2.4 Institution

Arts and science colleges in the state can be broadly classified into Government, Aided and Autonomous. For ascertaining the level of engagement, classification of sample faculty members on the basis of type of institution is made. It can be found that almost half of the faculty members 184 (47.10%) belong to Aided arts and science colleges, 140 (36%) from Government arts and science colleges and remaining 66 (16.90%) from Autonomous arts and science colleges.

5.2.5 Designation

The standard professional titles in arts and science colleges are assistant professor and associate professor. To compare the level of engagement on the basis of designation, it is necessary to classify the respondents on this basis. Out of 390 faculty members, 351 (90%) are in the grade of assistant professor and 39 (10%) are in the post of associate professor. Hence, it can be concluded assistant professors outnumber associate professors.

5.3 Contributing Factors of Faculty Engagement

Engaging faculty members can be considered as a crucial element in the current scenario. Continuing in the profession with same energy level and commitment is a challenging task. Many factors influence in engaging the faculty members and there comes the role of contributing factors of faculty engagement which needs keen attention. It is necessary to know the factors that contribute to faculty engagement. The factors that have been identified are personal factors, organisational factors, psychological factors, economic factors, social factors, and management factors, to measure the level of engagement of faculty members, dimensions that have been considered by the researcher is teaching, research and service. Following section measures the relationship between these factors and dimensions of faculty engagement. The statistical tools employed be the researcher

in this section are independent sample t-test, One-way ANOVA, its post-hoc and correlation analysis.

5.3.1 Personal Factors and Dimensions of Faculty Engagement

The personal factors of the faculty members are considered to know whether there exists any significant difference among faculty members with regard to dimensions of faculty engagement. The personal factors that are considered are:

(1) Gender
(2) Age
(3) Years of Experience
(4) Designation

5.3.1.1 Personal Factors and Teaching Engagement

A. Gender-wise analysis of Teaching Engagement in Arts and Science colleges

Male and Female faculty members may have different level of teaching engagement. Descriptive analysis has been done to know the mean score of males and females with regard to teaching engagement in arts and science colleges. Then, independent sample t-test is applied to analyse the significant difference between the mean of male and female faculty members. Levene's test has been employed to test the homogeneity of variances.

Table 5.2

Gender-wise analysis of Teaching Engagement in Arts and Science colleges

Gender	N	Mean	SD	t-value	Max Score	*p*-value	Remarks
Female	228	31.2675	9.5083	-1.884	45	0.060	Equal variances not assumed
Male	162	32.9506	8.0624				
Total	**390**	**31.9667**	**8.9638**				

Source: Primary Data

From the table 5.2, it is clear that the engagement level in teaching among male and female faculty members is not having any significant difference as the p-

value is greater than 0.05. It can be seen that out of the maximum score of 45, the mean score of male and female faculty members together is 31.9667 with a Standard Deviation is 8.9638.

The mean score of the teaching engagement among female faculty members are 31.2675 (SD 9.5083) and among male faculty members are 32.9506 (SD 8.0624) which indicates that there is no significant difference between male and female faculty members towards teaching engagement. Since, the assumption of equal variance is rejected, the researcher considers the results generated out of assumption of unequal variance.

B. Gender-wise analysis of Teaching Engagement in different types of institutions

The researcher also tests whether any significant difference exists between male and female faculty members with respect to teaching engagement in different types of institutions. The assumption of equal variance is accepted in case of Government and Autonomous colleges and it is rejected in case of Aided colleges. The results are presented in Table 5.3.

Table 5.3

Gender-wise analysis of Teaching Engagement on the basis of type of institutions

Type of Institutions	Gender	N	Mean	SD	t-value	Max Score	p-value	Remarks
Government	Female	98	30.92	9.52	-0.49	45	0.63	Equal variances assumed
	Male	42	31.76	9.22				
	Total	**140**	**31.1714**	**9.40912**				
Aided	Female	90	31.86	9.51	-1.82*	45	0.07	Equal variances not assumed
	Male	94	34.12	7.09				
	Total	**184**	**33.01**	**8.41**				
Autonomous	Female	40	30.80	9.63	0.06	45	0.95	Equal variances assumed
	Male	26	30.65	8.92				
	Total	**66**	**30.74**	**9.29**				

*Source: Primary Data, *significant at 5%level.*

From Table 5.3, it can be deduced that in all three types of institutions, no significant difference exists between male and female faculty members as their p-value is greater than 0.05. It can be seen that out of the max score of 45, the mean score of male and female faculty members belonging to Government Arts and Science colleges taken together is 31.1714 with a SD of 9.41, of Aided Arts and Science colleges are 33.01 and SD value is 8.41 and for Autonomous arts and science colleges is 30.74 and SD is 9.29.

The mean score of the teaching engagement among female faculty members and among male faculty members of Government colleges are 30.92 (SD 9.52) &31.76 (SD 9.22), Aided colleges are 31.86 (SD 9.51) and 34.12 (SD 7.09) and of Autonomous colleges are 30.8 (SD 9.63) and 30.65 (SD 8.92) respectively which confirms that there is no significant difference between male and female faculty members belonging to different types of institutions towards teaching engagement.

C. Age-wise analysis of Teaching Engagement in Arts and Science colleges of Kerala

Level of engagement may vary across age among the faculty members. There is a common notion that the aged faculty members are more committed towards teaching compared to younger ones. In order to know the mean score of age groups in relation to teaching engagement of faculty members belonging to arts and science colleges, descriptive analysis has been performed. Then, ANOVA is applied to check whether there is any significant difference among age category of faculty members belonging to arts and science colleges of Kerala. Table 5.4 presents the age category wise test of homogeneity of teaching engagement among faculty members of arts and science colleges.

Table 5.4

Age category wise test of Homogeneity of Teaching Engagement

Variable	Levene's Statistic	Sig. value
Teaching Engagement	2.288	0.103

Source: Primary Data

Table 5.4 shows that the p value is greater than 0.05. Hence, the assumption of equal variance can be accepted and the value of ANOVA can be considered for the study. The results of ANOVA are exhibited in Table 5.5.

Table 5.5

Age- category wise analysis of Teaching Engagement in Arts and Science colleges

Age	N	Mean	SD	Max value	F value	p-value	Remarks
Below 30	7	36.1429	2.5548	45	0.807	0.447	ANOVA
30-45	312	31.8333	8.9993				
Above 45	71	32.1408	9.8111				
Total	**390**	**31.9667**	**8.9638**				

Source: Primary Data

The results indicate that there is no significant difference among the age categories of faculty members with regard to teaching engagement as the p value is 0.447. Faculty members belonging to the age group below 30 have the highest mean score of 36.1429 (SD 2.5548) and faculty members who are in the age category of '30-45' have the lowest mean score of 31.8333 (SD 8.9993). From this, it can be understood that young faculty members are more engaged towards teaching compared to other two age categories. Since, the p value is greater than 0.05 it can be concluded that there exists no significant difference among age categories of faculty members of arts and science colleges as a whole with respect to teaching engagement.

D. Age-wise analysis of Teaching Engagement with respect to different types of institutions

To be more specific, a descriptive analysis among the age-group of faculty members belonging to different type of institutions with respect to teaching engagement is performed. To determine the significant difference among the age group of faculty members belonging to different type of institutions, one-way ANOVA is applied. Table 5.6 presents the age-wise test of homogeneity of variances for teaching engagement among faculty members belonging to different types of institutions.

Table 5.6

Age category wise test of Homogeneity of Teaching Engagement – Institution-wise analysis

Type of Institution	Variable	Levene's Statistic	p –value
Government	Teaching Engagement	1.089	0.340
Aided	Teaching Engagement	0.134	0.715
Autonomous	Teaching Engagement	6.241	0.003

Source: Primary Data

From the table 5.6, it is clearly evident that the p value is greater than 0.05 for Government and Aided institutions. Hence, the assumption of equal variance is accepted and value of ANOVA is considered in the study. As the p value is 0.003, the assumption of equal variance is rejected for Autonomous colleges and the value of Welch is taken instead of ANOVA. Table 5.7 presents the results of One-way ANOVA and Welch.

Table 5.7

Age- category wise analysis of Teaching Engagement – Institution-wise analysis

Type of Institution	Age	N	Mean	SD	Max value	F value	p-value	Remarks
Government	Below 30	3	36.0000	4.00000	45	0.441	0.644	ANOVA
	30-45	116	31.1638	9.23692				
	Above 45	21	30.5238	10.9161				
	Total	**140**	**31.1714**	**9.40912**				
Aided	Below 30	-	-	-	45	0.013	0.909	ANOVA
	30-45	143	33.0490	8.25161				
	Above 45	41	32.8780	9.06420				
	Total	**184**	**33.0109**	**8.41414**				
Autonomous	Below 30	4	36.2500	1.50000	45	8.561**	0.002	Welch
	30-45	53	30.0189	10.06611				
	Above 45	9	32.5556	4.36208				
	Total	**66**	**30.7424**	**9.28740**				

Source: Primary Data, ** *statistically significant at 1% significant level*

Table 5.7 shows the significant difference among different age groups of faculty members belonging to different types of institutions with respect to teaching engagement. The results indicate that there exists no significant difference among age groups of faculty members belonging to Government and Aided colleges with regard to teaching engagement as the p value is greater than 0.05. Whereas, the p value of autonomous institution is 0.002, which makes it evident that significant difference exists among the faculty member's age categories with regard to teaching engagement. To examine the exact difference among the age group of faculty members, post hoc test is used.

Age Category-wise Multiple Comparisons: Teaching Engagement

Welch F tests show that there is significant difference among the age group of faculty members belonging to Autonomous colleges with regard to teaching engagement. Post Hoc test is used to explore the exact difference among the age group of faculty members. Since, the equality of variance is rejected; Tamhane's T test is applied for multiple comparisons. The results are given in Table 5.8.

Table 5.8

Age wise Post Hoc Test- Teaching Engagement - Autonomous colleges

Age (I)	Age (J)	Mean Difference (I-J)	Std. Error	p- value
Below 30	30-45	6.23113	1.57300**	0.001
	Above 45	3.69444	1.63606	0.131
30-45	Below 30	-6.23113	1.57300**	0.001
	Above 45	-2.53669	2.00649	0.521
Above 45	Below 30	-3.69444	1.63606	0.131
	30-45	2.53669	2.00649	0.521

Source: Primary Data, ** *statistically significant at 1% significant level.*

The results show that there is significant difference among 'Below 30' age category with '30-45' age category. The mean differences make it evident that faculty members in autonomous colleges, belonging to the age group of 'Below 30' are more engaged than faculty members belonging to the category of '30-45'.

E. Experience-wise analysis of Teaching Engagement in Arts and Science colleges of Kerala

A common belief that exists among the public is that the experience enhances the engagement level of faculty members. An experienced faculty member seems to be more involved and committed compared to a less-experienced faculty member. In order to know the mean score of experience of faculty members belonging to arts and science colleges in relation with teaching engagement, descriptive analysis has been done. Then, One-way ANOVA is performed to check whether there is any significant difference among experience of faculty members with respect to teaching engagement. Table 5.9 presents the experience wise test of homogeneity of teaching engagement among faculty members.

Table 5.9

Experience wise Test of Homogeneity of Variances of Teaching Engagement

Variable	Levene's Statistic	Sig.value
Teaching Engagement	1.595	0.204

Source: Primary Data

Table 5.9 shows that the p value is greater than 0.05 which indicates that the assumption of equal variance is accepted. Hence, F value of ANOVA is considered for the study. The results of ANOVA are exhibited in Table 5.10

Table 5.10

Experience-wise analysis of Teaching Engagement in Arts and Science colleges

Experience	N	Mean	SD	Max value	F-value	p-value	Remarks
Less than 10	179	32.1620	8.7088	45	0.173	0.841	ANOVA
10-20	179	31.6872	9.3971				
More than 20	32	32.4375	8.0520				
Total	**390**	**31.9667**	**8.9638**				

Source: Primary Data

Table 5.10 indicates that the p value of the test is greater than 0.05, which assures that there exists no significant difference among the faculty member's

experience with regard to teaching engagement. The mean score is maximum for the faculty members having experience more than 20 years with a value of 32.4375 (SD 8.0520) and the lowest mean is possessed by the faculty members with experience ranging from 10-20 years. It can be inferred that the faculty members in arts and science colleges with more than 20 years of experience tends to be more engaged towards teaching compared to less experienced ones.

F. Experience-wise analysis of Teaching Engagement with respect to different types of Institutions

A descriptive analysis of faculty members belonging to different types of institutions with regard to years of experience is done for a more specific analysis. One-way ANOVA is performed in order to determine the significant difference among the experience of faculty members belonging to different types of institutions with respect to teaching engagement. Table 5.11 depicts the faculty members' experience-wise test of homogeneity of variances relating to teaching engagement.

Table 5.11

Experience wise Test of Homogeneity of Variances of Teaching Engagement – Institution-wise analysis

Type of Institution	Variable	Levene's Statistic	p- value
Government	Teaching Engagement	1.356	0.261
Aided	Teaching Engagement	0.507	0.603
Autonomous	Teaching Engagement	7.471**	0.001

Source: Primary Data, ** statistically significant at 1% significant level.

Table 5.11 reveals that the p value of the test is greater than 0.05 for Government and Aided institutions relating to teaching engagement and hence the assumption of equal variance is accepted. The ANOVA's F value is considered for the study. The p value of the test is less than 0.05 for Autonomous colleges which leads to rejection of assumption of equal variance. So, instead of ANOVA, Welch's F value is considered in the study. The results are presented in Table 5.12.

Table 5.12

Experience-wise analysis of Teaching Engagement – Institution-wise analysis

Type of Institution	Experience	N	Mean	SD	Max value	F-value	p-value	Remarks
Government	Less than 10	70	30.826	9.087	45	0.440	0.645	ANOVA
	10-20	58	31.086	10.063				
	More than 20	12	33.583	8.29				
	Total	**140**	**31.171**	**9.40912**				
Aided	Less than 10	83	32.6368	8.7604	45	0.361	0.697	ANOVA
	10-20	86	33.5465	8.0097				
	More than 20	15	32.0000	9.0947				
	Total	**184**	**33.0109**	**8.4141**				
Autonomous	Less than 10	26	34.2308	7.08411	45	3.637*	0.049	Welch
	10-20	35	28.1143	10.4706				
	More than 20	5	31.0000	4.06202				
	Total	**66**	**30.7424**	**9.28740**				

Source: Primary Data, * statistically significant at 5% significant level

Table 5.12 shows that significant difference among different years of experience of faculty members with regard to Teaching Engagement. The results indicate that there exists no significant difference among experience of faculty members belonging to Government and Aided colleges with regard to Teaching Engagement as the p value is greater than 0.05. The p value of Welch F test of the teaching engagement in autonomous colleges pertains to 0.049, which indicates that there exists significant difference among experience of faculty members with regard to teaching engagement. To measure the exact difference among the experience of faculty members, Post Hoc Test is used.

Years of Experience-wise Multiple Comparisons: Teaching Engagement

From Welch F test it was inferred that there is significant difference among the years of experience of faculty members belonging to Autonomous colleges with respect to teaching engagement. In order to examine the exact difference

among the years of experience of faculty members, post hoc test is used. Tamhane's post hoc test is used to check the pair wise differences among the experience of faculty members with regard to their teaching engagement.

Table 5.13

Experience wise Post Hoc Test – Teaching Engagement of Autonomous colleges

Experience (I)	Experience (J)	Mean Difference (I - J)	Std. Error	p- value
Less than 10 Years	10-20	6.11648	2.25001*	0.026
	More than 20	3.23077	2.28696	0.468
10-20 Years	Less than 10	-6.11648	2.25001*	0.026
	More than 20	-2.88571	2.53622	0.618
More than 20 Years	Less than 10	-3.23077	2.28696	0.468
	10-20	-2.88571	2.53622	0.618

Source: Primary Data, ** statistically significant at 1% significant level.

The results indicate that there exists a significant difference between faculty members having experience of 'Less than 10' years with faculty members with experience of '10-20' years as the p value is less than 0.05. While analysing, it is understood that faculty members having less experience are more engaged towards teaching.

G. Designation-wise analysis of Teaching Engagement in Arts and Science colleges

Designation is titled to a faculty member on the basis of experience, performance and commitment towards the work allotted. A faculty member who is allotted with higher grades of title is more likely to be engaged towards teaching. Here, the researcher is anxious to know whether faculty members with different designations have different level of teaching engagement. Hence, independent sample t-test along with descriptive analysis was performed. Table 5.14 presents the results of t-test.

Table 5.14

Designation-wise analysis of Teaching Engagement in Arts and Science colleges

Designation	N	Mean	SD	t-value	Max score	p-value	Remarks
Assistant Professor	351	31.8746	9.0248	-0.608	45	0.544	Equal variances assumed
Associate Professor	39	32.7949	8.4609				
Total	**390**	**31.9667**	**8.9638**				

Source: Primary Data

From the table 5.14, it can be seen that out of the maximum score of 45, the mean score of assistant and associate professors taken together is 31.9667 (SD 8.9638), which indicates that on an average the faculty members are engaged by 71% towards teaching. The teaching engagement among assistant professors has a mean score of 31.8746 (SD 9.0248) and the mean score among associate professors is 32.7949 (SD 8.4609). Independent sample t-test is applied to check whether significant difference exists among mean scores of assistant and associate professors in respect to teaching engagement. Since, the p value is 0.544 which is greater than 0.05, it is assumed to have equal variance. It can be concluded that there exists no significant difference between assistant and associate professors with regard to teaching engagement.

H. Designation-wise analysis of Teaching Engagement in different types of institutions

The researcher also tests whether significant difference exists between assistant professor and associate professor with respect to teaching engagement in different types of institutions. In all types of institutions, the equal variance assumption is accepted and the results which assume equal variances have been considered for the study. The results are presented in the table 5.15.

Table 5.15

Designation-wise analysis of Teaching Engagement on the basis of types of institutions

Type of Institution	Designation	N	Mean	SD	t-value	Max score	p-value	Remarks
Government	Assistant Professor	127	30.9055	9.5380	-1.046	45	0.298	Equal variances Assumed
	Associate Professor	13	33.7692	7.8862				
	Total	**140**	**31.1714**	**9.4091**				
Aided	Assistant Professor	162	33.0617	8.29330	0.222	45	0.825	Equal variances assumed
	Associate Professor	22	32.6364	9.45941				
	Total	**184**	**33.0109**	**8.41414**				
Autonomous	Assistant Professor	62	30.7581	9.53455	0.053	45	0.958	Equal variances assumed
	Associate Professor	4	30.5000	4.50925				
	Total	**66**	**30.7424**	**9.28740**				

Source: Primary Data

From the table 5.15, it is understood that Teaching Engagement does not have any significant difference between assistant professors and associate professors as the p value is greater than 0.05 among different types of institutions. While analysing the mean score of associate professors is 33.7692 (SD 7.8862) which is more than that of assistant professors with value of 30.9055 (SD 9.5380). This means that associate professors are more engaged towards teaching in Government arts and science colleges.

In case of Aided colleges, the mean score is high for assistant professors with a value of 33.0617 (SD 8.29330) compared to associate professors with a mean value of 32.6364 (SD 9.45941). This indicates that in an aided college, assistant professors tend to be more engaged towards teaching. For autonomous colleges, the mean score of assistant professors pertain to a value of 30.7581 (SD 9.53455) and of associate professors pertains to 30.5000 (SD 4.50925). Since, the p values are greater than 0.05 for every type of institution, it can be concluded that

there exists no significant difference between different designations of faculty members with respect to Teaching Engagement.

5.3.1.2 Personal Factors and Research Engagement

A. Gender wise analysis of Research Engagement in Arts and Science colleges of Kerala

Male and Female faculty members may have different level of research engagement. Descriptive statistics has been extracted to know the mean score of male and female faculty members belonging to arts and science colleges with regard to research engagement. Then, independent sample t-test is used to measure the significant difference between the male and female faculty members towards research engagement. Homogeneity of variance has been tested using Levene's test. Table 5.16 represents the results of t-test on the basis of different types of institutions.

Table 5.16

Gender wise analysis of Research Engagement in Arts and Science colleges

Gender	N	Mean	SD	t-value	Max Score	p-value	Remarks
Female	228	26.3465	7.2730	-1.392	40	0.165	Equal variances assumed
Male	162	27.3457	6.5591				
Total	**390**	**26.7615**	**6.9940**				

Source: Primary Data

Table 5.16 clearly depicts that out of the maximum score of 40, the mean score of male and female faculty members taken together is 26.7615 (SD 6.9940), which indicates that on an average the faculty members are engaged in research. The research engagement among male faculty members has a mean score of 27.3457 (SD 6.5591) and among female faculty members is 26.3465 (SD 7.2730). Independent sample t-test is applied to check whether significant difference exists among mean scores of male and female faculty members with respect to research engagement. Since, the p value is greater than 0.05 equal variances can be assumed and it can be concluded that there exists no significant difference among male and female faculty members regarding research engagement.

B. Gender-wise analysis of Research Engagement with respect to different types of Institutions

The researcher also checks whether any significant difference exists between male and female faculty members with respect to research engagement in different types of institutions using independent sample t-test. The assumption of equal variance is accepted in case of Government, Aided, and Autonomous colleges. The results are presented in Table 5.17.

Table 5.17

Gender wise analysis of Research Engagement on the basis of type of institutions

Type of Institutions	Gender	N	Mean	SD	t-value	Max Score	p-value	Remarks
Government	Female	98	25.1429	7.4695	-0.992	40	0.323	Equal variances assumed
	Male	42	26.5000	7.2859				
	Total	**140**	**25.5500**	**7.4150**				
Aided	Female	90	27.4111	6.7088	-0.268	40	0.789	Equal variances assumed
	Male	94	27.6702	6.3894				
	Total	**184**	**27.5435**	**6.5309**				
Autonomous	Female	40	26.9000	7.7353	-0.356	40	0.723	Equal variances assumed
	Male	26	27.5385	6.0414				
	Total	**66**	**27.1515**	**7.0737**				

Source: Primary Data

From the Table 5.17, it is clear that all the three types of institution do not have any significant difference between male and female faculty members as their p value is greater than 0.05. The mean score of research engagement of the male faculty members belonging to Government colleges being 26.5000 with a standard deviation of 7.2859 is higher than that of female faculty members with mean 25.1429 and a standard deviation of 7.4695. This implies that male faculty members are more engaged to research. Similarly, in case of aided and autonomous colleges, the mean score of male faculty members are higher compared to their female counterparts, which reassures that male faculty members seems to be more engaged in research.

C. Age-wise analysis of Research Engagement in Arts and Science colleges of Kerala

Level of research engagement may vary across age among the faculty members. There is a common notion that the young faculty members are more interested towards research as compared to elder ones. Descriptive analysis has been performed to know the mean score of faculty members belonging to different age groups. Then, One-way ANOVA is applied to check whether there is any significant difference among age category of faculty members belonging to arts and science colleges with respect to research engagement. Table 5.18 presents the age category wise test of homogeneity of research engagement among faculty members.

Table 5.18

Age category wise test of Homogeneity of Research Engagement

Variable	Levene's Statistic	Sig.value
Research Engagement	2.059	0.129

Source: Primary Data

From the table 5.18, it can be found out that the p value of Levene's statistic is greater than 0.05, the assumption of equal variance is accepted. Hence, ANOVA can be used to check the significance of difference among age of faculty members with regard to research engagement. Table 5.19 spells out the results of ANOVA.

Table 5.19

Age- category wise analysis of Research Engagement in Arts and Science colleges

Age	N	Mean	SD	Max value	F value	p-value	Remarks
Below 30	7	31.2857	2.7516	40	1.614	0.200	ANOVA
30-45	312	26.5962	6.9613				
Above 45	71	27.0423	7.3240				
Total	**390**	**26.7615**	**6.9940**				

Source: Primary Data

The results indicate that there exists no significant difference among the age categories of faculty members with respect to research engagement as the p value is greater than 0.05. The mean score is maximum for the faculty members in the age category of below 30 which is 31.2857 (SD 2.7516), whereas, the mean score is minimum for the faculty members in the age category of 30-45 which pertains to 26.5962 (SD 6.9613). This indicates that the faculty members in the age group of below 30 is found to be more engaged towards research even the difference is not found to be significant.

D. Age-wise analysis of Research Engagement in different types of Institutions

A descriptive analysis among the age-group of faculty members belonging to different type of institutions with respect to research engagement is performed for a more specific analysis. One-way ANOVA is applied to test the significant difference among the age group of faculty members with regard to research engagement in different types of institutions. Table 5.20 presents the age category wise test of homogeneity of variances of research engagement among faculty members belonging to different types of institutions.

Table 5.20

Age category wise test of Homogeneity of Research Engagement– Institution-wise analysis

Type of Institution	Variable	Levene's Statistic	Sig. value
Government	Research Engagement	3.685*	0.028
Aided	Research Engagement	0.113	0.737
Autonomous	Research Engagement	4.310	0.018

Source: Primary Data, * statistically significant at 5% significant level.

Table 5.20 shows the significant difference among different age group of faculty members with respect to research engagement. The results indicate that the equality of variance assumption is accepted in case of Aided colleges, since the p value is more than 0.05. Hence, ANOVA is applied to test the significance of difference among different age group of faculty members belonging to Aided colleges with regard to research engagement. Since, the p value is less than 0.05

for Government colleges and Autonomous colleges; the assumption of equal variance is rejected. Hence, Welch's F value is considered in the study instead of ANOVA. The results are presented in Table 5.21.

Table 5.21

Age- category wise analysis of Research Engagement– Institution-wise analysis

Type of Institution	Age	N	Mean	SD	Max value	F value	p-value	Remarks
Government	Below 30	3	31.3333	3.0550	40	4.652	0.059	Welch
	30-45	116	25.2931	7.0118				
	Above 45	21	26.1429	9.6295				
	Total	**140**	**25.5500**	**7.4150**				
Aided	Below 30	-	-	-	40	0.013	0.908	ANOVA
	30-45	143	27.5734	6.5051				
	Above 45	41	27.4390	6.7009				
	Total	**184**	**27.5435**	**6.5309**				
Autonomous	Below 30	4	31.2500	2.9860	40	2.995	0.095	Welch
	30-45	53	26.8113	7.6862				
	Above 45	9	27.3333	3.1622				
	Total	**66**	**27.1515**	**7.0737**				

Source: Primary Data

Table 5.21 shows that the significant difference among different age categories of faculty members with regard to research engagement. The results indicate that there exists no significant difference among age group of faculty members belonging to different types of institutions with regard to research engagement, as the p value is greater than 0.05. The p value of welch test is 0.059 and 0.095 for research engagement in Government & Autonomous colleges respectively. The p value of ANOVA is 0.908 for Aided colleges. While observing the mean score, it can be inferred that faculty members in the category of below 30 is more engaged in Government and Autonomous colleges with mean values of 31.3333 (SD 3.0550) and 31.2500 (SD 2.9860) respectively. Faculty members in

the age category of 30-45 seems to be more engaged to research compared to other categories with a mean value of 27.5734 (SD 6.5051) in Aided colleges.

E. Experience wise analysis of Research Engagement in Arts and Science colleges of Kerala

Increase in experience may contribute to research engagement. The chances are high that experienced faculty members exhibit a greater involvement in research activities compared to less experienced ones. Descriptive analysis has been used for tabulating the mean score of experience of faculty members belonging to arts and science colleges in relation with research engagement. Afterwards, One-way ANOVA is applied to know whether there is any significant difference among experience of faculty members with respect to research engagement. Table 5.22 presents the experience-wise test of homogeneity of research engagement among faculty members belonging to arts and science colleges.

Table 5.22

Experience-wise Test of Homogeneity of Research Engagement

Variable	Levene's Statistic	Sig.value
Research Engagement	0.137	0.872

Source: Primary Data

Since the p-value of Levene's test is greater than 0.05, the assumption of equal variance is accepted. Hence, ANOVA can be used to measure the significant difference among faculty members experience with regard to Research Engagement. The results of ANOVA are presented in Table 5.23.

Table 5.23

Experience-wise analysis of Research Engagement in Arts and Science colleges

Experience	N	Mean	SD	Max value	F-value	p-value	Remarks
Less than 10	179	26.5978	6.9650	40	0.146	0.864	ANOVA
10-20	179	26.8324	7.0340				
More than 20	32	27.2813	7.1221				
Total	390	26.7615	6.9940				

Source: Primary Data

Table 5.23 indicates that the p value of the test is greater than 0.05, which indicates that there exists no significant difference among experience of faculty members with regard to research engagement. The mean score is higher for faculty members having experience of more than 20 years with a mean value of 27.2813 with a standard deviation of 7.1221 and the faculty members who are with an experience of less than 10 years possess the lowest mean score of 26.5978 with a standard deviation of 6.9650. This indicates that the faculty members with more years of experience seems to be more engaged towards research, even the difference is not found to be significant.

F. Experience-wise analysis of Research Engagement in different types of Institutions

For a more specific analysis, descriptive analysis of research engagement with respect to years of experience of faculty members belonging to different types of institution is performed. In addition, to check whether significant difference exists among faculty members having different years of experience with regard to research engagement, One-way ANOVA is used. Table 5.24 represents the results of Levene's test which is used to examine the faculty members' experience wise homogeneity of variances with regard to research engagement.

Table 5.24

Experience-wise Test of Homogeneity of Research Engagement– Institution-wise analysis

Type of Institution	Variable	Levene's Statistic	Sig. value
Government	Research Engagement	0.352	0.704
Aided	Research Engagement	0.572	0.565
Autonomous	Research Engagement	2.115	0.129

Source: Primary Data

Since the p value of the Levene's statistic is greater than 0.05 for all types of institutions relating to research engagement, the assumption of equal variance is accepted. Hence, ANOVA's F value is considered in the study. The results of ANOVA related to experience wise analysis of research engagement is presented in Table 5.25.

Table 5.25

Experience-wise analysis of Research Engagement – Institution-wise analysis

Type of Institution	Experience	N	Mean	SD	Max value	F-value	p-value	Remarks
Government	Less than 10	70	24.8571	7.0057	40	0.909	0.405	ANOVA
	10-20	58	25.9310	7.7660				
	More than 20	12	27.7500	8.0805				
	Total	**140**	**25.5500**	**7.4150**				
Aided	Less than 10	83	26.9880	6.7868	40	0.751	0.473	ANOVA
	10-20	86	28.1744	6.0821				
	More than 20	15	27.0000	7.6532				
	Total	**184**	**27.5435**	**6.5309**				
Autonomous	Less than 10	26	30.0385	6.1285	40	4.100*	0.021	ANOVA
	10-20	35	25.0286	7.4930				
	More than 20	5	27.0000	2.7386				
	Total	**66**	**27.1515**	**7.0737**				

Source: Primary Data, * statistically significant at 5% significant level

Table 5.25 shows that the significant difference among different years of experience of faculty members in different types of institutions with regard to research engagement. The results reveal that the p values being 0.405 and 0.473, there exists no significant difference in experience among the faculty members of Government and Aided colleges with respect to research engagement. The results also indicate that there exists significant difference among experience of faculty members in Autonomous colleges as the p value is less than 0.05. To examine the exact difference among the experience of faculty members in autonomous colleges, Post Hoc test is used for multiple comparisons. It can also be found that in Government colleges, the faculty members with experience of more than 20 years seems to be more engaged towards research with a mean score of 27.7500. While in case of Aided colleges, the faculty members belonging to 10-20 years of

experience and in Autonomous, faculty members who have the experience with less than 10 years found to be more engaged towards research.

Years of Experience-wise Multiple Comparisons: Research Engagement

As the significant difference among faculty members experience with regard to research engagement is figured out while considering Autonomous colleges. Post Hoc-test is done to explore the exact difference among the experience of faculty members. Since the equal variances are assumed, Tukey HSD test is used to check the pair wise differences among the experience of faculty members in Autonomous colleges with regard to research engagement. Table 5.26 spells out the post-hoc results.

Table 5.26

Experience wise Post Hoc Test – Research Engagement

Experience (I)	Experience (J)	Mean Difference (I - J)	Std. Error	p-value
Less than 10 Years	10-20	5.00989	1.74990*	0.015
	More than 20	3.03846	3.30050	0.629
10-20 Years	Less than 10	-5.00989	1.74990*	0.015
	More than 20	-1.97143	3.23133	0.815
More than 20 Years	Less than 10	-3.03846	3.30050	0.629
	10-20	1.97143	3.23133	0.815

Source: Primary Data, * statistically significant at 5% significant level

Table 5.26 clearly mentions that there exists significant difference between faculty members who are having the experience of less than 10 years with faculty members with an experience of 10-20 years, as the p values are less than 0.05. While, analysing it can be found that the faculty members with an experience of less than 10 years seems to be more engaged towards research in Autonomous colleges.

G. Designation-wise analysis of Research Engagement in Arts and Science colleges of Kerala

Designation entitled to faculty members may contribute towards research engagement. Their commitment towards research activities may get enhanced when they are promoted to higher grades of title. Descriptive analysis and

independent sample t-test were performed to know whether faculty members holding different titles have variation in engagement level in research. Table 5.27 depicts the results of independent sample t-test.

Table 5.27

Designation-wise analysis of Research Engagement of Arts and Science colleges

Designation	N	Mean	SD	t-value	Max score	p-value	Remarks
Assistant professor	351	26.6752	6.9957	-0.731	40	0.465	Equal Variances Assumed
Associate Professor	39	27.5385	7.0219				
Total	**390**	**26.7615**	**6.9940**				

Source: Primary Data

The Table 5.27 state that out of the maximum score of 40, the mean score of Assistant and Associate Professor taken together is 26.7615 with a standard deviation of 6.9940, which indicates on an average the faculty members, are engaged by 67% towards research. The research engagement among assistant professor has a mean score of 26.6752 (SD 6.9957) and the mean score among Associate Professor is 27.5385 (SD 7.0219). Independent sample t-test is used to check whether significant difference exists among mean scores of Assistant and Associate Professor with respect of Research Engagement. Since, the p value is 0.465 which is greater than 0.05, it is assumed to have equal variance. It can be concluded that there exists no significant difference between designations with regard to Research Engagement.

H. Designation-wise analysis of Research Engagement in different types of Institutions

The researcher is also curious to check whether significant difference exists between assistant and associate professors with respect to research engagement. Independent sample t-test is used for this purpose. Assumption of equal variance is

accepted in all types of institutions and considered for the study. The results are presented in Table 5.28.

Table 5.28

Designation-wise analysis of Research Engagement on the basis of types of institutions

Type of Institution	Designation	N	Mean	SD	t-value	Max score	p-value	Remarks
Government	Assistant Professor	127	22.8571	7.2958	-1.413	40	0.160	Equal variances assumed
	Associate Professor	13	28.3077	8.3004				
	Total	**140**	**25.5500**	**7.4150**				
Aided	Assistant Professor	162	27.5679	6.4921	0.693	40	0.891	Equal variances assumed
	Associate Professor	22	27.3636	6.9662				
	Total	**184**	**27.5435**	**6.5309**				
Autonomous	Assistant Professor	62	27.2258	7.2844	0.334	40	0.740	Equal variances assumed
	Associate Professor	4	26.0000	1.8257				
	Total	**66**	**27.1515**	**7.0737**				

Source: Primary Data

From the Table 5.28, it is understood that research engagement does not have any significant difference between assistant professor and associate professor as the p value is greater than 0.05 among the different types of institutions. The mean score of Associate Professor is 28.3077 (SD 8.3004) seems to be higher than that of Assistant Professor with a mean score of 22.8571 (SD 7.2958) in case of Government Arts and Science colleges. In case of Aided colleges, the mean score is almost same for both Assistant and Associate Professors with a value of 27.5679 (SD 6.4921) and 27.3636 (SD 6.9662) respectively. The Assistant Professor of

Autonomous college scores high with a mean value of 27.2258 (SD 7.2844) compared to Associate Professor with a mean score of 26.0000 (SD 1.8257). Since, the p values are greater than 0.05 for each type of institution, it can be concluded that there exists no significant difference between different designations with regard to Research Engagement.

5.3.1.3 Personal Factors and Service Engagement

A. Gender-wise analysis of Service Engagement in Arts and Science colleges

Male and Female faculty members may have different level of Service Engagement. Descriptive analysis has been performed to know the mean score of males and females with regard to Service Engagement. Then, Independent sample t-test has been applied to measure the significant difference between the mean of male and female faculty members towards Service Engagement. Table 5.29 represents the results of Independent Sample t-test.

Table 5.29

Gender wise analysis of Service Engagement in Arts and Science colleges

Gender	N	Mean	SD	t-value	Max Score	p-value	Remarks
Female	228	23.2500	6.8587	-1.141	35	0.254	Equal variances not assumed
Male	162	23.9938	5.9474				
Total	**390**	**23.5590**	**6.4982**				

Source: Primary Data

From the Table 5.29, it is clear that engagement level in service-oriented activities between male and female faculty members are not having any significant difference as the p value is greater than 0.05. It can be seen that out of the maximum score of male and female faculty members together is 23.5590 with a standard deviation of 6.4982.

The mean score of the Service Engagement among Female faculty members is 23.2500 (SD 6.8587) and among the male faculty members are 23.9938 (SD 5.9474) which indicates that there exists no significant difference between male and female faculty members towards Service Engagement.

B. Gender-wise analysis of Service Engagement in different types of Institutions

The researcher also assess whether any significant difference exists between male and female faculty members with regard to service engagement in different types of institutions by applying independent sample t-test. The assumption of equal variance is accepted with respect to all types of institutions. The results are shown in Table 5.30.

Table 5.30

Gender wise analysis of Service Engagement on the basis of Types of Institutions

Type of Institutions	Gender	N	Mean	SD	t-value	Max Score	p-value	Remarks
Government	Female	98	22.8571	6.8938	-0.171	35	0.865	Equal variances assumed
	Male	42	23.0714	6.5941				
	Total	140	22.9214	6.7824				
Aided	Female	90	23.6000	6.6835	-1.250	35	0.213	Equal variances assumed
	Male	94	24.7234	5.4128				
	Total	184	24.1739	6.0771				
Autonomous	Female	40	23.4250	7.2779	0.328	35	0.744	Equal variances assumed
	Male	26	22.8462	6.5341				
	Total	66	23.1970	6.9486				

Source: Primary Data

From the Table 5.30, it is clear that the engagement level in service among male and female faculty members of Government, Aided and Autonomous colleges are not having any significant difference as the p value is greater than 0.05. It can be seen that out of the maximum score of 35, the mean score of male and female faculty members taken together, belonging to Government colleges are 22.9214 with a standard deviation of 6.7824, for Aided colleges are 24.1739 with a standard deviation of 6.0771 and for Autonomous colleges are 23.1970 with a standard deviation of 6.9486.

The mean score of Service Engagement among female faculty members and among male faculty members of Government colleges are 22.8571 (SD 6.8938) & 23.0714 (SD 6.5941), Aided colleges are 23.6000 (SD 6.6835) & 24.7234 (SD 5.4128) and for Autonomous colleges are 23.4250 (SD 7.2779) and 22.8462 (SD 6.5341) respectively which indicates there exists no significant difference between male and female faculty members belonging to different types of institutions towards Service Engagement.

C. Age-wise analysis of Service Engagement in Arts and Science colleges of Kerala

Level of Service Engagement may vary across age among the faculty members of Arts and Science colleges in Kerala. A common notion that exists is that young faculty members get more involved into service-oriented activities. Descriptive analysis has been performed to know the mean score of faculty members belonging to different age groups. Then, One-way ANOVA is applied to check whether there exists any significant difference among age category of faculty members with respect to service engagement. Following table presents the age category wise test of homogeneity of service engagement among faculty members.

Table 5.31

Age category wise test of Homogeneity of Service Engagement

Variable	Levene's Statistic	Sig.value
Service Engagement	1.047	0.352

Source: Primary Data

From the Table 5.31, it can be found out that the p value of the Levene's statistic is greater than 0.05, the assumption of equal variance is accepted. Hence, ANOVA can be used to check the significance of difference among age of faculty members with regard to Service Engagement. Table 5.32 spells out the results of ANOVA.

Table 5.32

Age- category wise analysis of Service Engagement in Arts and Science colleges

Age	N	Mean	SD	Max value	F value	p-value	Remarks
Below 30	7	26.1429	3.1320	35	0.823	0.440	ANOVA
30-45	312	23.3974	6.5165				
Above 45	71	24.0141	6.6450				
Total	**390**	**23.5590**	**6.4982**				

Source: Primary Data

The results indicate that there exists no significant difference among age categories of faculty members with respect to Service Engagement as the p value is greater than 0.05. The mean score is maximum for the faculty members in the age category of below 30 which is 26.1429 (SD 3.1320), whereas, the minimum score is for the faculty members in the age category of 30-45 which pertains to 23.3974 (SD 6.5165). This indicates that the faculty members in the age group of below 30 years is found to be more engaged towards service even though, the difference is not found to be significant.

D. Age-wise analysis of Service Engagement in different types of Institutions

To be specific, descriptive analysis among the age group of faculty members belonging to different types of institutions with regard to service engagement has been performed. For determining the significant difference among the age group of faculty members belonging to different types of institutions, One-way ANOVA is applied. Table 5.33 presents the age-wise test of homogeneity of variances in service engagement among faculty members belonging to different types of institutions.

Table 5.33

Age category wise test of Homogeneity of Service Engagement – Institution-wise analysis

Type of Institution	Variable	Levene's Statistic	Sig.value
Government	Service Engagement	1.037	0.357
Aided	Service Engagement	0.006	0.938
Autonomous	Service Engagement	3.330*	0.042

Source: Primary Data, * statistically significant at 5% significant level

From the Table 5.33, it is clearly evident that the p value is 0.357 and 0.938 for Government and Aided institutions, which is greater than 0.05. Hence, the assumption of equal variance is accepted and ANOVA is considered for the study. In case of Autonomous colleges, the p value is 0.042, which is less than 0.05. Hence, the assumption of equal variance is rejected for Autonomous colleges and the value of Welch is taken instead of ANOVA.

Table 5.34 presents the results of One-way ANOVA and Welch tests.

Table 5.34

Age- category wise analysis of Service Engagement – Institution-wise analysis

Type of Institution	Age	N	Mean	SD	Max value	F value	p-value	Remarks
Government	Below 30	3	26.3333	3.2145	35	0.385	0.681	ANOVA
	30-45	116	22.8362	6.6200				
	Above 45	21	22.9048	8.0554				
	Total	**140**	**22.9214**	**6.7824**				
Aided	Below 30	-	-	-	35	0.013	0.911	ANOVA
	30-45	143	24.1469	5.9976				
	Above 45	41	24.2683	6.4227				
	Total	**184**	**24.1739**	**6.0771**				
Autonomous	Below 30	4	26.0000	3.5590	35	2.142	0.173	Welch
	30-45	53	22.6038	7.4790				
	Above 45	9	25.4444	3.4681				
	Total	**66**	**23.1970**	**6.9486**				

Source: Primary Data

Table 5.34 shows that the significant difference among different age categories of faculty members with regard to Service Engagement. The results indicate that there exists no significant difference among age group of faculty members belonging to different types of institutions with respect to Service Engagement, as the p value is greater than 0.05. The p value of Welch test also shows a value greater than 0.05. While observing the mean score, it can be inferred that faculty members in the category of below 30 is found to be more engaged in Government colleges with a mean score of 26.3333 (SD 3.2145) and in Autonomous colleges also with a mean score of 26.0000 (SD 3.5590). In Aided colleges, age category above 45 scores high with a mean of 24.2683 (SD 6.4227).

E. Experience-wise analysis of Service Engagement in Arts and Science colleges of Kerala

Experience may lead to engagement in service-oriented activities. The researcher is curious to know whether there is any significant difference among experience of faculty members in Arts and Science colleges with respect to Service Engagement. Descriptive analysis has been made to know the mean score of experience of faculty members in relation with service engagement. One-way ANOVA is performed to confirm the significant difference. Table 5.35 presents the experience wise test of homogeneity of service engagement among faculty members of Arts and Science colleges in Kerala.

Table 5.35

Experience-wise Test of Homogeneity of Service Engagement

Variable	Levene's Statistic	Sig.value
Service Engagement	1.723	0.180

Source: Primary Data

Table 5.35 shows that the p value is greater than 0.05. Hence, the assumption of equal variance can be accepted and the value of ANOVA is considered for the study. Following table exhibits the results of ANOVA.

Table 5.36

Experience-wise analysis of Service Engagement in Arts and Science colleges

Experience	N	Mean	SD	Max value	F-value	p-value	Remarks
Less than 10	179	23.6034	6.1337	35	0.170	0.844	ANOVA
10-20	179	23.4134	6.9060				
More than 20	32	24.1250	6.2874				
Total	**390**	**23.5590**	**6.4982**				

Source: Primary Data

The results indicate that there exists no significant difference among the experience of faculty members with regard to Service Engagement as the p value is greater than 0.05. The mean score is higher for the faculty members with more than 20 years of experience which is 24.1250 (SD 6.2874) and the lowest mean score is for the faculty members in the age group of 10-20 years which pertains to 23.4134 (SD 6.9060). This indicates that the faculty members with more experience seems to be more engaged towards service-oriented activities, even the difference is not found to be significant.

F. Experience-wise analysis of Service Engagement on the basis of types of Institutions

A descriptive analysis of faculty members belonging to different types of institutions with regard to years of experience is performed. One-way ANOVA is done in order to determine the significant difference among the experience of faculty members belonging to different types of institutions with respect to service engagement. Table 5.37 depicts the results of test of homogeneity of variances relating to service engagement.

Table 5.37

Experience-wise Test of Homogeneity of Service Engagement – Institution-wise analysis

Types of Institution	Variable	Levene's Statistic	Sig. value
Government	Service Engagement	0.980	0.378
Aided	Service Engagement	0.107	0.938
Autonomous	Service Engagement	4.013*	0.023

Source: Primary Data, *statistically significant at 5% significant level

The above table reveals that the p value of test is greater than 0.05 for Government and Aided institutions relating to Service Engagement and hence the assumption of equal variance is accepted. Hence, ANOVA's F value is considered for the study. In case of Autonomous colleges, the p value of the test is less than 0.05 which leads to rejection of assumption of equal variance. So, instead of ANOVA, Welch's F value is considered in the study. Results of ANOVA & Welch are presented in Table 5.38.

Table 5.38

Experience-wise analysis of Service Engagement – Institution-wise analysis

Type of Institution	Experience	N	Mean	SD	Max value	F-value	p-value	Remarks
Government	Less than 10	70	22.9857	6.4437	35	0.385	0.681	ANOVA
	10-20	58	22.5000	7.2891				
	More than 20	12	24.5833	6.4449				
	Total	**140**	**22.9214**	**6.7824**				
Aided	Less than 10	83	23.6988	6.0258	35	0.784	0.458	ANOVA
	10-20	86	24.7674	5.9934				
	More than 20	15	23.4000	6.9158				
	Total	**184**	**24.1739**	**6.0771**				
Autonomous	Less than 10	26	24.9615	5.5819	35	2.073	0.165	Welch
	10-20	35	21.6000	7.8335				
	More than 20	5	25.2000	4.5497				
	Total	**66**	**23.1970**	**6.9486**				

Source: Primary Data

Table 5.38 shows that significant difference among different years of experience of faculty members with regard to Service Engagement. The results indicate that there exists no significant difference among experience of faculty members belonging to Government, Aided and Autonomous colleges with regard to Service Engagement as the p value is greater than 0.05. Faculty members with experience of more than 20 years is found to be more engaged towards service-

oriented activities with a mean score of 24.5833 (SD 6.4449) in Government colleges. In case of Aided colleges, the faculty members who are experienced in the range of 10-20 years seems to be more engaged towards service with a mean score of 24.7674 (SD 5.9934). While, in Autonomous colleges, faculty members with more than 20 years of experience seems to be more engaged with a mean score of 25.2000 (SD 4.5497).

G. Designation-wise analysis of Service Engagement in Arts and Science Colleges

The designation of faculty members of arts and science colleges may have an effect in the commitment level exhibited on Service oriented activities. They tend to involve more in service when promoted with higher titles. Descriptive analysis has been done to know the mean score of assistant and associate professors with regard to Service Engagement. Then, Independent Sample t-test has been performed to measure the significant difference between the mean of assistant professors and associate professors towards Service Engagement. Table 5.39 describes the results of t-test.

Table 5.39

Designation- wise analysis of Service Engagement in Arts and Science colleges

Designation	N	Mean	SD	t-value	Max score	p-value	Remarks
Assistant Professor	351	23.5043	6.5009	-0.498	35	0.619	Equal variances assumed
Associate Professor	39	24.0513	6.5371				
Total	**390**	**23.5590**	**6.4982**				

Source: Primary Data

From the Table 5.39, it is clear that the engagement level in service between designation of faculty members are not having any significant difference as the p value is greater than 0.05. It can be seen that out of the maximum score of 35, the mean score of assistant professor and associate professor taken together is 23.5590 with a standard deviation value of 6.4982.

The mean score of the Service Engagement among Assistant Professors is 23.5043 (SD 6.5009) and among Associate Professors are 24.0513 (SD 6.5371) which indicates that there exists no significant difference between assistant and associate professors towards service engagement.

H. Designation- wise analysis of Service Engagement with respect to different types of Institutions

The researcher is keen to know whether significant difference exists between assistant professor and associate professors with regard to service engagement in different types of institutions. The assumption of equal variance is accepted in all types of institutions, and the results which assume equal variances have been considered in the study. The results are presented in Table 5.40.

Table 5.40

Designation- wise analysis of Service Engagement on the basis of types of institutions

Type of Institution	Designation	N	Mean	SD	t-value	Max score	p-value	Remarks
Government	Assistant Professor	127	22.6850	6.8065	-1.292	35	0.198	Equal variances assumed
	Associate Professor	13	25.2308	6.3265				
	Total	**140**	**22.9214**	**6.7824**				
Aided	Assistant Professor	162	24.2840	5.9401	0.665	35	0.507	Equal variances assumed
	Associate Professor	22	23.3636	7.1083				
	Total	**184**	**24.1739**	**6.0771**				
Autonomous	Assistant Professor	62	23.1452	7.1077	-0.237	35	0.814	Equal variances assumed
	Associate Professor	4	24.0000	4.2426				
	Total	**66**	**23.1970**	**6.9486**				

Source: Primary Data

From the Table 5.40, it is understood that Service Engagement does not have any significant difference between Assistant Professor and Associate Professor, as the p value is greater than 0.05 among different types of institutions. While analysing the mean score of Government colleges, it has been found that Associate Professors (25.2308) are more engaged compared to Assistant Professor (22.6850) in service-oriented activities. In case of Aided colleges, Assistant Professor scores high mean value of 24.2840 compared to Associate Professor with a mean score of 23.3636 (SD 7.1083), which indicates Assistant Professors are more engaged towards service. For Autonomous colleges, the Associate Professor scores high with a mean value of 24.0000 and Assistant Professor scores high with a mean value of 23.1452. Since, the p value is greater than 0.05 for every type of institution, it can be concluded that there exists no significant difference between different designations of faculty members with respect to Service Engagement.

While testing first hypothesis, (Tables 5.2 to 5.40) with the help of independent sample t-test, One-way ANOVA and relevant post-hoc to test the difference among selected personal factors of faculty engagement and the dimension of faculty engagement, ***the null hypothesis is accepted except for age and years of experience in arts and science colleges.***

Significant difference exists among faculty members belonging to age group below 30 and 30-45 in teaching engagement and among faculty members with less than 10 years of experience and 10-20 years of experience in teaching and research engagement with respect to Autonomous arts and science colleges. While, in remaining instances no significant difference among personal factors and dimensions of faculty engagement.

5.3.2 Organisational Factors and Dimensions of Faculty Engagement

An organisation that emphasis on employee's happiness will definitely have a positive impact on their results. They always prefer a workplace that values them, engages with them in order to connect, collaborate and celebrate. The elements considered to evaluate the contribution of organisational factors on faculty engagement are organisational culture and policy, department culture, autonomy,

innovation, accountability, and recognition. The organisational culture and policy helps an educational institution for its overall development and performance. The organisational culture needs to be communicated, taught and transferred to members, helps in adapting the changed circumstances. It acts as a tool to enhance the functioning of an organisation and its prompt decision making. Department culture can be defined as the shared belief among the people working within the department. It includes norms to behave, attitude and a feeling of a shared identity and membership in the culture. Autonomy implies self-directing freedom. A faculty member with more autonomy will have a strong motivation which contributes towards engagement. Autonomy facilitates positive changes and helps them in perceiving more enthusiasm to continue in their profession. Innovation is the process of proactively adopting new methods and strategies in the area of work. To enhance the level of engagement, to develop the creativity and to create possibilities innovation is necessary. Accountability is an obligation to accept the responsibility for their actions, behaviours, decisions and performance. A faculty who is accountable will be more engaged to work and enhances employee morale. Recognition is considered to be a feeling that something has been achieved and been duly considered. It is a state of being recognised by the peer groups and others for the contribution made in their work. Mere recognition induces the engagement level. Twenty five statements have been developed by the researcher for measuring the role of organisational factors in creating teaching, research and service engagement among faculty members of arts and science colleges of Kerala.

The respondents were asked to rate these statements. The ratings provided by them were analysed with the help of mean and standard deviation accordingly. The result, thus obtained is presented in Table 5.41.

Table 5.41

Mean and Standard Deviation of Organisational Factors

Indicator Code	Indicators	Mean	Standard Deviation
OC1	Faculty members must be well connected with mission, vision and policies of an organisation.	4.3462	0.8366
OC2	Clear communication of policy is necessary for effective functioning.	4.5949	0.9726
OC3	Authorities must consider employees opinion while formulating policies.	4.5205	0.8946
OC4	Reputation of an institution is reflected through its organisation culture and policy.	4.3333	0.8494
Organisational Culture and Policy		**17.7949**	**2.8309**
DC1	Adequate resources and support are available to perform duties.	4.6359	0.83972
DC2	Encouraging employees to voice their opinions promotes openness.	4.3846	0.87863
DC3	A good culture keeps faculty members more engaged.	4.7128	0.84512
DC4	Quick resolution of problems is necessary in department.	4.7231	0.82707
Department Culture		**18.4564**	**3.03567**
AUT1	Independent thoughts and actions should be promoted in an institution.	4.5308	0.81302
AUT2	More interference during the work erodes engagement.	4.3154	0.80200
AUT3	Freedom to choose the subject contributes to higher level of performance.	4.5026	0.84156
AUT4	Possible to think independently and critically to resolve issues.	4.6154	0.87570
Autonomy		**17.9641**	**2.76849**
INN1	Development of creativity and problem-solving skills are possible through innovation.	4.6872	0.56876
INN2	Innovation is possible by handling problems in a different way.	4.7718	0.57517
INN3	Authorities welcome and implement innovative ideas.	4.7769	0.64850

Indicator Code	Indicators	Mean	Standard Deviation
Innovation		**14.2359**	**1.47498**
ACC1	Engaged faculty will show a high sense of belongingness towards the profession.	4.2615	0.61121
ACC2	High standards of teaching can be assured through accountability.	4.8564	0.53167
ACC3	Institutional social responsibility should be reflected in the activities performed.	4.8333	0.57846
Accountability		**13.9513**	**1.39599**
RC1	Peer-to-peer recognition induces more than monetary reward.	4.6821	0.86725
RC2	Proper recognition increases productivity and reduces attrition rates.	4.6103	0.81559
RC3	Passion and activities must be recognised properly.	4.5744	0.86542
RC4	Faculty members are recognised sufficiently for the work they perform.	4.5282	0.79715
Recognition		**18.3949**	**3.05611**

Source: Primary Data

From the analysis of the Table given above, it can be understood that the most influencing element of organisational factor is department culture with mean 18.4564 (SD 3.03567), followed by recognition with a mean value of 18.3949 and SD of 3.05611. Autonomy comes in the third position with a mean score of 17.9641 with a standard deviation of 2.76849. The least contributing element seems to be accountability with a mean value of 13.9513 (SD 1.39599).

To know whether there exists any significant relationship between organisational factors and dimensions of faculty engagement, the data collected were analysed using Karl Pearson's correlation coefficient.

5.3.2.1 Organisational Factors and Teaching Engagement

Teaching engagement is one of the dimensions of faculty engagement. The relationship between organisational factors and teaching engagement with respect to arts and science colleges are analysed and depicted in Table 5.42.

Table 5.42

Relationship between Organisational Factors and Teaching Engagement in Arts and Science colleges

SI. No	Variables	r value	p- value	N
a.	Organisational culture and policy	0.948**	0.000	390
b.	Department culture	0.828**	0.000	390
c.	Innovation	0.750**	0.000	390
d.	Accountability	0.808**	0.000	390
e.	Recognition	0.781**	0.000	390
f.	Autonomy	0.811**	0.000	390
	Organisational Factors	**0.905****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

The table 5.42 clearly depicts the correlation coefficient (r) values of the organisational factors in relation with teaching engagement of faculty members of arts and science colleges along with the significant values and number of samples taken into consideration. It can be observed that the organisational factors are highly correlated with teaching engagement with an r value of 0.905. The components organisational culture and policy, department culture, innovation, accountability, recognition and autonomy also show a high correlation with teaching engagement with r values of 0.948, 0.828, 0.750, 0.808, 0.781 and 0.811 respectively. Since, the p value of all the components shows a value less than 0.05, it can be concluded that there exists a significant relationship between organisational factors and teaching engagement.

It is necessary to measure the relationship between organisational factors and teaching engagement with respect to different types of institutions to know the strength and direction of relationship between these variables. Table 5.43 exhibits the results.

Table 5.43

Relationship between Organisational Factors and Teaching Engagement – Institution-wise analysis

SI. No	Variables	r value	p-value	N	Type of Institution
a.	Organisational culture and policy	0.939**	0.000	140	
b.	Department culture	0.835**	0.000	140	
c.	Innovation	0.711**	0.000	140	
d.	Accountability	0.784**	0.000	140	Government
e.	Recognition	0.759**	0.000	140	
f.	Autonomy	0.818**	0.000	140	
Organisational Factors		**0.907****	**0.000**	**140**	
a.	Organisational culture and policy	0.961**	0.000	184	
b.	Department culture	0.804**	0.000	184	
c.	Innovation	0.794**	0.000	184	
d.	Accountability	0.847**	0.000	184	Aided
e.	Recognition	0.790**	0.000	184	
f.	Autonomy	0.805**	0.000	184	
Organisational Factors		**0.904****	**0.000**	**184**	
a.	Organisational culture and policy	0.936**	0.000	66	
b.	Department culture	0.878**	0.000	66	
c.	Innovation	0.730**	0.000	66	
d.	Accountability	0.773**	0.000	66	Autonomous
e.	Recognition	0.861**	0.000	66	
f.	Autonomy	0.835**	0.000	66	
Organisational Factors		**0.910****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.43 shows the relationship between organisational factors and Teaching Engagement in Government, Aided and Autonomous colleges.

Correlation is the test used to measure the extent of relation between these two variables. Since, the p value is less than 0.05. It can be concluded that there exists a significant relationship between organisational factors and teaching engagement in all types of institutions.

The Pearson's correlation coefficient (r) shows a value of 0.907 for organisational factors and teaching engagement in a Government college, which indicates a high correlation between two variables. The components of organisational factors such as organisational culture and policy, department culture, autonomy, recognition, innovation, and accountability also show a high relation with r values of 0.939, 0.835, 0.711, 0.784, 0.759, and 0.818 respectively.

In Aided colleges, the r value for organisational factors with teaching engagement is 0.904. The sub-variables are also highly correlated with values of 0.961 for organisational culture and policy, 0.804 for department culture, 0.794 for innovation, 0.847 for accountability, 0.790 for recognition and 0.805 for autonomy. In addition, autonomous colleges are also having a high relation between Organisational factors and Teaching Engagement with an 'r' value of 0.910. All the components that come within organisational factors are highly correlated with teaching engagement with r values of 0.936, 0.878, 0.730, 0.773, 0.861, and 0.835 respectively.

5.3.2.2 Organisational Factors and Research Engagement

Research engagement is another dimension of faculty engagement, considered by the researcher. The relationship between organisational factor and research engagement in arts and Science College is being measured using Karl Pearson's correlation coefficient. The results of correlation are presented in Table 5.44.

Table 5.44

Relationship between Organisational Factors and Research Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Organisational culture and policy	0.723**	0.000	390
b.	Department culture	0.704**	0.000	390
c.	Innovation	0.575**	0.000	390
d.	Accountability	0.610**	0.000	390
e.	Recognition	0.674**	0.000	390
f.	Autonomy	0.692**	0.000	390
Organisational Factors		**0.740****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.44 clearly depicts the relationship between Organisational Factors and Research Engagement. The Pearson's Correlation Coefficient 'r' is 0.740 which indicates a high positive correlation between Organisational Factors and Research Engagement. The components Organisational culture & policy and Department culture are also highly correlated with 'r' values of 0.723 and 0.704 respectively. Other components such as Innovation, Accountability, Recognition and Autonomy shows a moderate positive correlation with Research Engagement with values of 0.575, 0.610, 0.674 and 0.692 respectively. The p value measures the significance of relation between two variables, the value being 0.000, it can be concluded that there exists a significant relationship between Organisational Factors and Research Engagement.

In addition, the researcher has analysed the relationship between organisational factors and research engagement on the basis of institutions, through which the intensity of relationship can be measured. Institution-wise correlation results of organisational factors and research engagement is presented in table 5.45.

Table 5.45

Relationship between Organisational Factors and Research Engagement – Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Organisational culture and policy	0.692**	0.000	140	
b.	Department culture	0.681**	0.000	140	
c.	Innovation	0.549**	0.000	140	
d.	Accountability	0.584**	0.000	140	Government
e.	Recognition	0.647**	0.000	140	
f.	Autonomy	0.676**	0.000	140	
Organisational Factors		**0.723****	**0.000**	**140**	
a.	Organisational culture and policy	0.744**	0.000	184	
b.	Department culture	0.701**	0.000	184	
c.	Innovation	0.602**	0.000	184	
d.	Accountability	0.652**	0.000	184	Aided
e.	Recognition	0.667**	0.000	184	
f.	Autonomy	0.692**	0.000	184	
Organisational Factors		**0.742****	**0.000**	**184**	
a.	Organisational culture and policy	0.748**	0.000	66	
b.	Department culture	0.770**	0.000	66	
c.	Innovation	0.571**	0.000	66	
d.	Accountability	0.577**	0.000	66	Autonomous
e.	Recognition	0.736**	0.000	66	
f.	Autonomy	0.734**	0.000	66	
Organisational Factors		**0.760****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.45 shows the relationship between Organisational Factors and Research Engagement in Government, Aided and Autonomous colleges. Karl Pearson's correlation coefficient is used to measure the extent of relation between these two variables. Since, the p value is less than 0.05, it can be concluded that there exists significant relationship between Organisational Factors and Research Engagement in all types of institutions.

The r value shows a value of 0.723 in case of Government colleges, 0.742 for Aided colleges and 0.760 for Autonomous colleges, which indicates a high correlation between Organisational Factors and Research Engagement. The components of Organisational Factors such as Organisational culture and policy, Departmental culture, Autonomy, Recognition, Innovation and Accountability are moderately correlated with values of 0.692, 0.681, 0.549, 0.584, 0.647, and 0.676 respectively in Government colleges. The sub variables such as Organisational culture and policy and Department culture are highly correlated with Research Engagement in case of Aided colleges. While the components, Innovation, Accountability, Recognition and Autonomy are moderately related with 'r' values of 0.602, 0.652, 0.667 and 0.692 respectively. For Autonomous colleges, the Organisational culture and policy, Departmental Culture, Recognition and Autonomy are highly correlated with r values of 0.748, 0.770, 0.736 and 0.734. While, Innovation and Accountability shows a moderate correlation with Research Engagement 'r' values being 0.571 and 0.577 respectively.

5.3.2.3 Organisational Factors and Service Engagement

The relationship between organisational factor and service engagement is measured using Pearson's correlation coefficient, service engagement being the third dimension of faculty engagement. Table 5.46 shows the results of correlation in arts and science colleges of Kerala.

Table 5.46

Relationship between Organisational Factors and Service Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Organisational culture and policy	0.845**	0.000	390
b.	Department culture	0.805**	0.000	390
c.	Innovation	0.659**	0.000	390
d.	Accountability	0.722**	0.000	390
e.	Recognition	0.758**	0.000	390
f.	Autonomy	0.788**	0.000	390
Organisational Factors		**0.849****	**0.000**	**390**

*Source: Primary Data, ** statistically significant at 1% significant level.*

From the table above, it is clear that there exists a high positive relation between Organisational Factors and Service Engagement with an r value of 0.849. The individual components of organisational factors such as Organisational culture & policy, Department culture, Autonomy, Accountability and Recognition also shows a high positive relation with service engagement with r values of 0.845, 0.805, 0.788, 0.722 and 0.758 respectively. Innovation is the only component which is moderately correlated with service engagement with an r value of 0.659. As the p value is less than 0.05, it can be concluded that there exists a significant relationship between Organisational Factors and Service Engagement.

It would be better to perform an institution-wise analysis relating organisational factors and service engagement for deeper understanding. Table 5.47 depicts the correlation coefficient results on the basis of different types of institutions.

Table 5.47

Relationship between Organisational Factors and Service Engagement – Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Organisational culture and policy	0.865**	0.000	140	Government
b.	Department culture	0.799**	0.000	140	
c.	Innovation	0.643**	0.000	140	
d.	Accountability	0.729**	0.000	140	
e.	Recognition	0.728**	0.000	140	
f.	Autonomy	0.788**	0.000	140	
Organisational Factors		**0.856****	**0.000**	**140**	
a.	Organisational culture and policy	0.849**	0.000	184	Aided
b.	Department culture	0.804**	0.000	184	
c.	Innovation	0.695**	0.000	184	
d.	Accountability	0.749**	0.000	184	
e.	Recognition	0.779**	0.000	184	
f.	Autonomy	0.799**	0.000	184	

Sl. No	Variables	r value	p-value	N	Type of Institution
Organisational Factors		**0.855****	**0.000**	**184**	
a.	Organisational culture and policy	0.789**	0.000	66	Autonomous
b.	Department culture	0.833**	0.000	66	
c.	Innovation	0.605**	0.000	66	
d.	Accountability	0.641**	0.000	66	
e.	Recognition	0.806**	0.000	66	
f.	Autonomy	0.784**	0.000	66	
Organisational Factors		**0.818****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.47 shows the relationship between Organisational Factors and Service Engagement in Government, Aided and Autonomous colleges. Karl Pearson's correlation is used to measure the extent of relation between these two variables. Since, the p value is less than 0.05, it can be concluded that there exists a significant relationship between Organisational Factors and Service Engagement in all types of institutions.

The Pearson's correlation coefficient (r) shows a value of 0.856 for the Organisational Factors and Service Engagement in Government colleges, which indicates a high correlation between two variables. The components of Organisational factors such as Organisational Culture and policy, Department culture, Accountability, Recognition and Autonomy also shows a high relation with r values of 0.865, 0.799, 0.729, 0.728, and 0.788 respectively. Whereas, one of the components that is, Innovation is moderately correlated with Service Engagement with an 'r' value of 0.643.

In Aided colleges, the r value for Organisational Factors with Service Engagement is 0.855. The sub-variables are also highly correlated with values of 0.849 for Organisational culture & policy, 0.804 for Department culture, 0.749 for Accountability, 0.779 for Recognition and 0.799 for Autonomy. The component, Innovation is moderately correlated with an 'r' value of 0.695.

In case of Autonomous colleges also shows a high relation between Organisational Factors and Service Engagement with an 'r' value of 0.818. The components are also highly correlated with Service Engagement with r values of Organisational Culture & policy (0.789), Department culture (0.833), Recognition (0.806) and Autonomy (0.784). The components, Innovation and Accountability are moderately correlated with r values of 0.605 and 0.641 respectively.

The Table 5.41 to 5.47 analysed with the help of Karl Pearson's correlation coefficient at one percent level of significance to test the relationship between organisational factors and dimensions of faculty engagement, ***supported and proved the second hypothesis stated:***

H2: There exists a significant relationship between Organisational factors and the Dimensions of faculty engagement.

5.3.3 Psychological Factors and Dimensions of Faculty Engagement

Engaging faculty members has a strong emphasis on being psychologically present in circumstances that will lead to commitment and involvement towards the work they perform. As the employees need to be psychologically connected for high productivity as they give their best as per their potential and capacity. The elements considered to measure the contribution of psychological factors on faculty engagement are meaningfulness, personal trust and value, involvement, work pressure and challenging work. Meaningfulness can be defined as the positive and significant contributions of the job to one's life and the satisfaction that an individual derives from their job. Meaningfulness of work plays a significant role in improving an employee's capacity to achieve institutional objectives. Trust and value provide a sense of security through which the members feel safe with each other, feels comfortable to open up, take appropriate risks and will be ready to expose vulnerabilities. Moreover, it empowers ethical decision making, decreases stress level and hostility in the work environment and increases loyalty. Involvement refers to work structures and processes that allow employees to systematically give their input into decisions that will have an impact on their own work. It gives an employee a sense of belongingness to the institution and become more dependable. An employee tends to accept greater responsibility for

their work and will be able to achieve better results. It also increases the possibilities for creative thinking and problem-solving in the work place. Work pressure is an urge to complete work-related tasks within a specific period to acceptable levels. Recognising work has deadlines and quality expectations will create pressure which helps to perform well. Challenging work is the one that requires skill to achieve a goal that is worth pursuing which can be a great motivator for engaging employees and to retain interest in the work being done. Most employees desire to have meaningful and challenging work instead of unchallenging job which creates boredom.

The researcher has made use of twenty statements relating to psychological factors after literature review for measuring the importance of psychological factors in inculcating teaching, research, and service engagement. The statements rated by the respondents were analysed using mean and standard deviation. Table 5.48 shows the results of descriptive statistics relating to psychological factors.

Table 5.48

Mean and Standard Deviation of Psychological Factors

Indicator Code	Indicators	Mean	Standard Deviation
M1	Faculty members must be very clear in what he/she intends to do.	4.6256	0.58107
M2	Contributions from the faculty members have an influence on the outcome of an institution.	4.7077	0.58840
M3	Distinctiveness of institution is reflected in its performance.	4.7282	0.65559
Meaningfulness		**14.0615**	**1.43275**
PT1	Co-workers must support each other.	4.5795	0.84390
PT2	Able to rely on each other's in decision making.	4.5154	0.80072
PT3	It is possible to express ourselves in the institution.	4.6769	0.84124
PT4	Personal trust helps to reduce stress and burnout.	4.6846	0.84264
Personal trust and value		**18.4564**	**3.03567**
INV1	Involvement in work always results in positive outcomes.	4.0359	0.85670
INV2	Faculty members must be well connected with the interest of	3.7872	0.71943

Indicator Code	Indicators	Mean	Standard Deviation
	students.		
INV3	Sufficient authority must be given to participate in substantive decisions.	4.1282	0.96145
INV4	Increased feeling of personal control over schedule.	2.8923	0.81357
INV5	Able to participate directly to fulfil organisational mission.	3.2795	1.25074
Involvement		**18.1231**	**2.78635**
WP1	Able to spent time on research and other activities.	4.4231	0.80677
WP2	Possible to maintain a fit between duties and passion.	4.6205	0.83287
WP3	It is possible to maintain a work-life balance.	4.4615	0.79672
WP4	No clear delineation between work and home.	4.5718	0.92868
Work Pressure		**18.0769**	**2.81553**
CW1	Repetitive actions create boredom.	4.5103	0.84759
CW2	Able to identify the strength and weakness of students and act accordingly.	4.7205	0.84922
CW3	Able to infuse confidence level of students.	4.7231	0.78889
CW4	Should give equal priority for teaching, research and service.	4.4846	0.85956
Challenging work		**18.4385**	**2.84836**

Source: Primary Data

Table 5.48 provides the results of mean and standard deviation. It can be inferred that 'distinctiveness of institution is reflected in its performance' has the highest mean score among the psychological factors with a mean value of 4.7282 (SD 0.65559), followed by 'able to infuse confidence level of students' with a mean score of 4.7231 (SD 0.78889). The lowest mean score is 2.8923 with a standard deviation of 0.81357 for the statement 'increased feeling of personal control over schedule'.

In order to analyse the relationship between psychological factors and dimensions of faculty engagement, the researcher has made use of Pearson's correlation coefficient.

5.3.3.1 Psychological Factors and Teaching Engagement

Teaching, an important activity to be performed by a faculty member is considered in this study as one of the dimensions of faculty engagement. Table 5.49 shows the results of relationship between psychological factors and teaching engagement with respect to arts and science colleges of Kerala.

Table 5.49

Relationship between Psychological Factors and Teaching Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Personal Trust and Value	0.828**	0.000	390
b.	Meaningfulness	0.725**	0.000	390
c.	Involvement	0.838**	0.000	390
d.	Work Pressure	0.917**	0.000	390
e.	Challenging work	0.823**	0.000	390
Psychological Factors		**0.909****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

The table 5.49 depicts the correlation coefficient (r) value of psychological factors in relation with teaching engagement of faculty members belonging to arts and science colleges as a whole is 0.909. It can also be observed that the components personal trust and value, meaningfulness, involvement, work pressure and challenging work are highly correlated with teaching engagement with r values of 0.828, 0.725, 0.838, 0.917 and 0.823 respectively. As the p value shows a value less than 0.05, it can be concluded that there exists a significant relationship between psychological factors and teaching engagement in arts and science colleges of Kerala.

It is obvious to have a separate analysis of psychological factors relating to teaching engagement with respect to different types of institutions. Table 5.50 provides insights about the relationship between psychological factors and teaching engagement of Government, Aided and Autonomous arts and science colleges separately.

Table 5.50

Relationship between Psychological Factors and Teaching Engagement-Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Personal Trust and Value	0.835**	0.000	140	Government
b.	Meaningfulness	0.667**	0.000	140	
c.	Involvement	0.763**	0.000	140	
d.	Work Pressure	0.890**	0.000	140	
e.	Challenging work	0.790**	0.000	140	
Psychological Factors		**0.895****	**0.000**	**140**	
a.	Personal Trust and Value	0.804**	0.000	184	Aided
b.	Meaningfulness	0.782**	0.000	184	
c.	Involvement	0.913**	0.000	184	
d.	Work Pressure	0.944**	0.000	184	
e.	Challenging work	0.871**	0.000	184	
Psychological Factors		**0.928****	**0.000**	**184**	
a.	Personal Trust and Value	0.878**	0.000	66	Autonomous
b.	Meaningfulness	0.705**	0.000	66	
c.	Involvement	0.846**	0.000	66	
d.	Work Pressure	0.920**	0.000	66	
e.	Challenging work	0.797**	0.000	66	
Psychological Factors		**0.896****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

From the table 5.50, it is clearly observed that the relationship between psychological factors and teaching engagement are highly correlated with an 'r' value of 0.895 in case of Government colleges, 0.928 for Aided colleges and 0.896 for autonomous colleges. Personal trust & value (0.835), Meaningfulness (0.667), involvement (0.763), work pressure (0.890) and challenging work (0.790) being the components of psychological factors also shows a high correlation with

teaching engagement in case of Government colleges. The components of psychological factors also show a high correlation in case of aided colleges with teaching engagement, the r values being 0.804 for personal trust and value, 0.782 for meaningfulness, 0.913 for involvement, 0.944 for work pressure and 0.871 for challenging work. The r values obtained after performing correlation for autonomous colleges are 0.878 for personal trust and value, 0.705 for meaningfulness, 0.846 for involvement, 0.920 for work pressure and 0.797 for challenging work, which indicates a high relation with teaching engagement.

Since, the p values show a value less than 0.05 for all the components in all types of institutions, it can be concluded that there exists a significant relationship between psychological factors and teaching engagement.

5.3.3.2 Psychological Factors and Research Engagement

Research is yet another important task meant to be done by the faculty members in arts and science colleges of the state. The relationship between psychological factors and research engagement is analysed with the help of correlation and the results are presented in Table 5.51.

Table 5.51

Relationship between Psychological Factors and Research Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Personal Trust and Value	0.704**	0.000	140
b.	Meaningfulness	0.551**	0.000	140
c.	Involvement	0.641**	0.000	140
d.	Work Pressure	0.688**	0.000	140
e.	Challenging work	0.609**	0.000	140
Psychological Factors		**0.705****	**0.000**	**140**

Source: Primary Data, ** *statistically significant at 1% significant level.*

From Table 5.51, it is clearly observed that the relationship between Psychological Factors and Research Engagement are highly correlated with an 'r' value of 0.705. Personal Trust and value is the only component of psychological

factor which shows a high relation with Research Engagement. The remaining components such as Meaningfulness, Involvement, Work pressure and Challenging work are moderately correlated with 'r' values of 0.551, 0.641, 0.688 and 0.609 respectively. The p value is less than 0.05 which confirms that there exists a significant relationship between Psychological Factors and Research Engagement.

The relationship between psychological factors with research engagement needs to be measured for different types of institutions separately for getting more knowledge. Using correlation coefficient, the relationship is assessed and the results are depicted in Table 5.52.

Table 5.52

Relationship between Psychological Factors and Research Engagement-Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Personal Trust and Value	0.681**	0.000	140	Government
b.	Meaningfulness	0.509**	0.000	140	
c.	Involvement	0.570**	0.000	140	
d.	Work Pressure	0.649**	0.000	140	
e.	Challenging work	0.577**	0.000	140	
Psychological Factors		**0.679****	**0.000**	**140**	
a.	Personal Trust and Value	0.701**	0.000	184	Aided
b.	Meaningfulness	0.581**	0.000	184	
c.	Involvement	0.716**	0.000	184	
d.	Work Pressure	0.714**	0.000	184	
e.	Challenging work	0.638**	0.000	184	
Psychological Factors		**0.724****	**0.000**	**184**	
a.	Personal Trust and Value	0.770**	0.000	66	Autonomous
b.	Meaningfulness	0.568**	0.000	66	
c.	Involvement	0.655**	0.000	66	
d.	Work Pressure	0.726**	0.000	66	
e.	Challenging work	0.631**	0.000	66	
Psychological Factors		**0.724****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.52 shows the relationship between Psychological Factors and Research Engagement in Government, Aided and Autonomous colleges. Correlation is the test used to measure the extent of relation between these two variables. Since, the p value is less than 0.05, it can be concluded that there exists a significant relationship between Psychological Factors and Research Engagement in all types of institutions.

The 'r' shows a value of 0.679 for the Psychological Factors and Research Engagement in Government institutions, which indicates a moderate correlation between two variables. All the components of psychological factors such as Personal trust & value (0.681), Meaningfulness (0.509), Involvement (0.570), Work Pressure (0.649) and Challenging work (0.577) are also moderately correlated with Research Engagement.

In Aided colleges, the r value of Psychological Factors and Research Engagement is 0.724, which means there is a high correlation between Psychological Factors and Research Engagement. The sub-variables such as Personal Trust & value, Involvement and Work Pressure are highly correlated with an 'r' value of 0.701, 0.716 and 0.714 respectively. Whereas, Meaningfulness and Challenging Work shows a moderate correlation, r values being 0.581 and 0.638 respectively.

In addition, Autonomous colleges are also having a high relation between Psychological Factors and Research Engagement with an 'r' value of 0.724. The components of Psychological Factors such as Personal Trust & value and Work Pressure are highly correlated with r values of 0.770 and 0.726 respectively. Whereas, other components such as meaningfulness, involvement and challenging work are moderately correlated with r values of 0.568, 0.655 and 0.631 respectively.

5.3.3.3 Psychological Factors and Service Engagement

Third dimension of faculty engagement, being service engagement is taken for measuring the relationship with psychological factors. The Table 5.53 shows the 'r' values and p values of psychological factors and service engagement.

Table 5.53

Relationship between Psychological Factors and Service Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Personal Trust and Value	0.805**	0.000	390
b.	Meaningfulness	0.637**	0.000	390
c.	Involvement	0.749**	0.000	390
d.	Work Pressure	0.814**	0.000	390
e.	Challenging work	0.729**	0.000	390
Psychological Factors		**0.825****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

It is clearly evident from the Table 5.53, that the Pearson's Correlation Coefficient (r) is 0.825 which shows a high positive correlation between Psychological Factors and Service Engagement. The components which are also having high positive correlation with service engagement are Personal Trust & value, Involvement, Work Pressure and Challenging Work with r values of 0.805, 0.749, 0.814 and 0.729 respectively. Whereas, meaningfulness is moderately related to service engagement with an r value of 0.637. The p value is statistically significant that is, $p < 0.05$, which means there exists a significant relationship between Psychological Factors and Service Engagement.

It is necessary to have a separate analysis for establishing the relationship between psychological factors and service engagement on the basis of different types of institutions. Table 5.54 depicts the institution-wise analysis of psychological factors and service engagement by using Karl Pearson's correlation coefficient.

Table 5.54

Relationship between Psychological Factors and Service Engagement – Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Personal Trust and Value	0.799**	0.000	140	Government
b.	Meaningfulness	0.598**	0.000	140	
c.	Involvement	0.707**	0.000	140	
d.	Work Pressure	0.811**	0.000	140	
e.	Challenging work	0.718**	0.000	140	
Psychological Factors		**0.827****	**0.000**	**140**	
a.	Personal Trust and Value	0.804**	0.000	184	Aided
b.	Meaningfulness	0.691**	0.000	184	
c.	Involvement	0.816**	0.000	184	
d.	Work Pressure	0.831**	0.000	184	
e.	Challenging work	0.762**	0.000	184	
Psychological Factors		**0.843****	**0.000**	**184**	
a.	Personal Trust and Value	0.833**	0.000	66	Autonomous
b.	Meaningfulness	0.580**	0.000	66	
c.	Involvement	0.698**	0.000	66	
d.	Work Pressure	0.781**	0.000	66	
e.	Challenging work	0.683**	0.000	66	
Psychological Factors		**0.776****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

From the Table 5.54, it is clearly observed that the relationship between Psychological Factors and Service Engagement are highly correlated with an r

value of 0.827 in case of Government colleges, 0.843 in Aided colleges and 0.776 in Autonomous colleges.

The components of Psychological Factors such as Personal Trust & value, Involvement, Work Pressure and Challenging Work are highly correlated with r values of 0.799, 0.707, 0.811 and 0.718 respectively. Whereas, Meaningfulness is the only component which has a moderate relation with Service Engagement with an 'r' value of 0.598, in case of Government colleges. In Aided colleges, the components such as Personal Trust & vale, Involvement, Work Pressure and Challenging Work are also highly correlated with 'r' values of 0.804, 0.816, 0.831 and 0.762 respectively. Meaningfulness is the component which is having only a moderate relation with Service Engagement with an 'r' value of 0.691.

The components Personal Trust & value (0.833) and Work Pressure (0.781) are highly correlated with Service Engagement in case of Autonomous colleges. Whereas, Meaningfulness (0.580), Involvement (0.698) and Challenging Work (0.683) are moderately related with Service Engagement. As, the p values are less than 0.05 in case of all institutions, it can be concluded that there exists a significant relationship between Psychological Factors and Service Engagement.

Table 5.48 to 5.54 analysed with the help of Karl Pearson's correlation coefficient at one percent level of significance to test the relationship between psychological factors and dimensions of faculty engagement, ***supported and proved the third hypothesis stated:***

H3: There exists a significant relationship between Psychological factors and the Dimensions of faculty engagement.

5.3.4 Economic Factors and Dimensions of Faculty Engagement

Economic factors play a significant role to enhance commitment of faculty members. It induces the work force to put more effort for the growth of the institution which will turn beneficial to faculty members in the long run. Rewards & benefits and external funding & funder's requirements are the elements considered for measuring the contribution of economic factors towards faculty engagement. Rewards can be considered as a part of employment relationship where employees obtain all the tangible provisions and benefits. Salary that an

employee receives acts as the best predictor of his/her individual experience within that institution. The rewards may be in the form of cash, non-cash and psychological that an employee receives in relation to the contributions that they have made in that institution. External funding are those sources of finance that are made available by third parties to colleges, research institutions, individual researchers, and faculty members above and beyond the operational costs and investments from funding bodies.

The researcher has made use of eight statements for measuring the importance of economic factors in building engagement among faculty members of arts and science colleges of Kerala. Respondents rated statements which were analysed with the help of mean and standard deviation. Table 5.55 spells out the results of descriptive statistics.

Table 5.55

Mean and Standard Deviation of Economic Factors

Indicator Code	Indicators	Mean	Standard Deviation
RB1	Performance related pay encourages an employee to perform better.	4.2205	0.9418
RB2	Authorities revise salaries & pay scales and implement it on time.	3.8949	0.9944
RB3	More initiative is taken when there are sufficient rewards.	4.5154	0.8860
RB4	Reward act as a motivator.	4.5333	0.9740
Rewards and Benefits		**17.1641**	**2.8263**
EF1	Improvement in infrastructure contributes to faculty development.	4.6744	0.77168
EF2	All funding agencies are easily accessible and assured to be used whenever needed.	4.5821	0.85275
EF3	Sufficient schemes to promote research exist and it's accessible.	4.6718	0.84839
EF4	Proper collaboration between industries and institution to establish national level facilities is ensured by authorities.	4.7282	0.83187
External Funding and Funder's Requirements		**18.6564**	**2.90109**

Source: Primary Data

From the above table, it can be inferred that external funding and funder's requirements has highest mean score of 18.6564 (SD 2.90109) and hence, it is the most influential economic factor in creating engagement. Rewards and benefits follow with a mean score of 17.1641 (SD 2.8263). The researcher opines that it is necessary to have a proper collaboration between industries and institutions to establish national level facilities are ensured by authorities. Authorities must take effort to revise salaries and pay scales and implement it on time.

The researcher makes use of Pearson correlation coefficient to analyse the relationship between economic factors and dimensions of faculty engagement.

5.3.4.1 Economic Factors and Teaching Engagement

The relationship of economic factors are analysed with teaching engagement using Karl Pearson's correlation coefficient to know the intensity at which the economic factors are related to teaching engagement. Table 5.56 shows the results of correlation between economic factors and teaching engagement.

Table 5.56

Relationship between Economic Factors and Teaching Engagement n Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Rewards and Benefits	0.845**	0.000	390
b.	External funding and funder's requirements	0.798**	0.000	390
Economic Factors		**0.897****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

The above table signifies that there is a high positive relation between economic factors and teaching engagement with an 'r' value of 0.897. The components also show a high positive correlation with teaching engagement with r values of 0.845 and 0.798 respectively. It can also be inferred that there exists a significant relationship between economic factors and teaching engagement as the p value is less than 0.05.

More clarity could be obtained if the relationship between economic factors and teaching engagement is done on the basis of different types of institutions.

Hence, Table 5.57 depicts the institution-wise results of relationship between economic factors and teaching engagement.

Table 5.57

Relationship between Economic Factors and Teaching Engagement – Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Rewards and Benefits	0.857**	0.000	140	Government
b.	External funding and funder's requirements	0.771**	0.000	140	
Economic Factors		**0.893****	**0.000**	**140**	
a.	Rewards and Benefits	0.842**	0.000	184	Aided
b.	External funding and funder's requirements	0.805**	0.000	184	
Economic Factors		**0.900****	**0.000**	**184**	
a.	Rewards and Benefits	0.824**	0.000	66	Autonomous
b.	External funding and funder's requirements	0.861**	0.000	66	
Economic Factors		**0.899****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

The above table shows the relationship between economic factors and teaching engagement in different types of institutions. The Pearson's correlation coefficient (r) is 0.893 in case of Government colleges which indicates a high relation between Economic Factors and Teaching Engagement. The components of Economic Factors such as rewards & benefits with an r value of 0.857 and external funding & funder's requirements with an r value of 0.771 reassures high relation with Teaching Engagement.

In aided colleges, the relation between economic factors and teaching engagement are also found to be highly correlated and significant, the value being 0.900. The components are also highly correlated with teaching engagement with r value of 0.842 for rewards & benefits and 0.805 for external funding & funder's requirements. Rewards & Benefits (0.824) and external funding & funder's

requirements (0.861), being the components of economic factors shows a high relation with teaching engagement in case of autonomous colleges. The relation between economic factors and teaching engagement is found to be high with an r value of 0.899 for autonomous colleges. Since, the p value is 0.000 for all the components in case of all institutions, it can be concluded that there exists a significant relationship between Economic Factors and Teaching Engagement.

5.3.4.2 Economic Factors and Research Engagement

Research engagement, being the second important dimension of faculty engagement is analysed with economic factors. For measuring the relationship between economic factors and research engagement, the researcher has made use of Karl Pearson's correlation coefficient and the results are presented in Table 5.58.

Table 5.58

Relationship between Economic Factors and Research Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Rewards and Benefits	0.635**	0.000	390
b.	External funding and funder's requirements	0.681**	0.000	390
Economic Factors		**0.719****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.58 shows the relationship between Economic Factors and Research Engagement. It can be observed that the economic factors and research engagement are having a high positive correlation with an 'r' value of 0.719. Both, Rewards & Benefits and External funding & funder's requirements are moderately correlated with research engagement with r values of 0.635 and 0.681 respectively. As the p value is less than 0.05, it can be concluded that there exists a significant relationship between Economic Factors and Research Engagement.

An institution-wise analysis is performed for measuring the relationship of economic factors with research engagement. The results of correlation are shown in Table 5.59.

Table 5.59

Relationship between Economic Factors and Research Engagement- Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Rewards and Benefits	0.625**	0.000	140	Government
b.	External funding and funder's requirements	0.643**	0.000	140	
Economic Factors		**0.697****	**0.000**	**140**	
a.	Rewards and Benefits	0.657**	0.000	184	Aided
b.	External funding and funder's requirements	0.685**	0.000	184	
Economic Factors		**0.734****	**0.000**	**184**	
a.	Rewards and Benefits	0.618**	0.000	66	Autonomous
b.	External funding and funder's requirements	0.806**	0.000	66	
Economic Factors		**0.787****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

The table above shows the relationship between Economic Factors and Research Engagement in different types of institutions. The Pearson's Correlation Coefficient (r) is 0.697 in case of Government colleges which indicates a moderate correlation between Economic Factors and Research Engagement. The component of Economic Factors such as Rewards & Benefits and External funding & Funder's requirements reassures moderate relation with Research Engagement with an r value of 0.625 and 0.643 respectively.

In Aided colleges, the relation between Economic Factors and Research Engagement are found to be highly correlated and significant, value being 0.734. Whereas, the components Rewards & Benefits (0.657) and external funding & funder's requirements (0.685) are moderately correlated with Research Engagement.

Rewards & Benefits (0.618) is moderately correlated and External funding & funder's requirements (0.806) are highly correlated with Research Engagement

in case of Autonomous colleges. The Economic Factors are highly correlated with Research Engagement, r value being 0.787. Since, the p value is 0.000 for all economic components in all types of institutions, it can be concluded that there exists a significant relationship between Economic Factors and Research Engagement.

5.3.4.3 Economic Factors and Service Engagement

Service engagement is considered as one of the dimensions of faculty engagement and the relationship between economic factors and service engagement is analysed with help of correlation coefficient. Table 5.60 presents the results of correlation between economic factors and service engagement.

Table 5.60

Relationship between Economic Factors and Service Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Rewards and Benefits	0.748**	0.000	390
b.	External funding and funder's requirements	0.782**	0.000	390
Economic Factors		**0.836****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

The table 5.60 shows the relationship between Economic Factors and Service Engagement. The 'r' value is 0.836 which clearly states that the relation is highly positive. The components Rewards & Benefits and External funding & Funder's requirements are also having a high positive relation with Service Engagement with r values of 0.748 and 0.782 respectively. Since, the p value is less than 0.05, it can be concluded that the relationship between Economic Factors and Service Engagement is significant.

An institution-wise analysis of economic factors with service engagement is performed for getting deeper insights. Table 5.61 provides the results of relationship between economic factors and service engagement.

Table 5.61

Relationship between Economic Factors and Service Engagement – Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Rewards and Benefits	0.801**	0.000	140	Government
b.	External funding and funder's requirements	0.759**	0.000	140	
Economic Factors		**0.857****	**0.000**	**140**	
a.	Rewards and Benefits	0.733**	0.000	184	Aided
b.	External funding and funder's requirements	0.794**	0.000	184	
Economic Factors		**0.835****	**0.000**	**184**	
a.	Rewards and Benefits	0.668**	0.000	66	Autonomous
b.	External funding and funder's requirements	0.806**	0.000	66	
Economic Factors		**0.787****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

The above table shows the relationship between Economic Factors and Service Engagement in different types of institutions. The Pearson's correlation coefficient (r) is 0.857 in case of Government colleges which indicates a high relation between Economic Factors and Service Engagement. The components of Economic Factors such as Rewards & Benefits with an r value of 0.801 and external funding & Funder's requirements with an 'r' value of 0.759, which reassures high relation with Service Engagement.

In Aided colleges, the relation between Economic Factors & Service Engagement is also found to be highly correlated and significant, value being 0.835. The components are also highly correlated with Service Engagement with r value of 0.733 for Rewards & Benefits and 0.794 for external funding & Funder's requirements.

Rewards & Benefits (0.668) is the component which is moderately related with Service Engagement. External funding & Funder's requirements (0.806)

shows a high relation with Service Engagement in case of Autonomous colleges. The economic factors are highly correlated with Service Engagement, r value being 0.787. Since, the p value is 0.000 for all the components in case of all institutions, it can be concluded that there exists a significant relationship between Economic Factors and Service Engagement.

Table 5.55 to 5.61 analysed with the help of Karl Pearson's correlation coefficient at one percent level of significance to test the relationship between economic factors and dimensions of faculty engagement, ***supported and proved the fourth hypothesis stated:***

H4: There exists a significant relationship between Economic factors and the Dimensions of faculty engagement.

5.3.5 Social Factors and Dimensions of Faculty Engagement

Social Factors can be defined as interactions with other people, either co-workers or superiors or students. It enables the faculty members to engage within institution and each other at a social level, where the connections go beyond professional relationships. The elements considered to measure the contribution of social factors on faculty engagement are leadership, relationship with head & peers and personal networks. Leadership facilitates, strengthens, connects and inspires faculty members in order to increase the work engagement. With an effective leadership, resources can be increased which leads to creation of sense of belongingness that in turn leads to better team performance. Relationship with head and peers open up new opportunities for learning and sense of belongingness will rise, which enhances the engagement level. Following two statements measures the relationship with head and peers. Personal Networks is the group of contacts a person have. Networking among co-workers, superiors, management and others will lead to improvement in engagement level among faculty members through better organisational commitment and increase in job satisfaction. Eight statements were provided to the respondents to know the role of social factors in developing engagement among faculty members of arts and science colleges of Kerala. Table 5.62 depicts the results of mean and standard deviation of social factors.

Table 5.62

Mean and Standard Deviation of Social Factors

Indicator Code	Indicators	Mean	Standard Deviation
L1	Leaders should act as a protective shield for their followers.	4.8410	0.51742
L2	Proper training and mentoring programmes empower faculty members to develop their own leadership skill.	4.8077	0.58379
L3	Constructive feedback from the leaders arouses confidence in faculty members.	4.3077	0.60647
Leadership		**13.9564**	**1.38321**
RS1	Greater productivity could be achieved through healthy relations.	4.9385	0.26112
RS2	Through healthy interaction employees will get more done and happier.	4.9538	0.24405
Relationship with head and peers		**9.8923**	**0.41027**
PN1	Quality of interaction should be enhanced by involved ones.	4.8513	0.51550
PN2	Networking with other members will lead to better engagement.	4.8590	0.53476
PN3	It should be easy to communicate with members in various positions.	4.8641	0.52151
Personal Networks		**14.5744**	**1.47937**

Source: Primary Data

From Table 5.62, it can be observed that the statement 'It should be easy to communicate with members in various positions' has the highest mean score of 4.8641 with a standard deviation of 0.52151 and is followed by the statement 'networking with other members will lead to better engagement' with a mean value of 4.8590 (SD 0.53476). Constructive feedback from the leaders arouse confidence in faculty members is having the lowest mean score of 4.3077 and standard deviation of 0.60647.

To know the extent of relationship between social factors and dimensions of faculty engagement, correlation analysis was performed.

5.3.5.1 Social Factors and Teaching Engagement

Teaching engagement, being considered as one of the dimensions of faculty engagement, the relationship between social factors and teaching engagement is analysed with the help of correlation coefficient. The results of correlation are presented in Table 5.63.

Table 5.63

Relationship between Social Factors and Teaching Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Leadership	0.807**	0.000	390
b.	Relationship with head and peers	0.593**	0.000	390
c.	Personal Networks	0.714**	0.000	390
Social Factors		**0.765****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

From the table 5.63, it is clear that the relationship between Social Factors and Teaching Engagement is positive with an 'r' value of 0.765 which confirms a high relation between variables. Leadership and Personal networks, the components of social factors are also highly correlated with teaching engagement with r values of 0.807 and 0.714 respectively. While, Relationship with head& peers, another component of social factor is moderately correlated with teaching engagement, r value being, 0.593. It can also be concluded that there exists a significant relationship between social factors and teaching engagement as the p value is 0.000, which is less than the admissible value of 0.05.

A separate analysis to analyse the relationship between social factors and teaching engagement on the basis of different types of institutions is done and the results are presented under Table 5.64.

Table 5.64

Relationship between Social Factors and Teaching Engagement- Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Leadership	0.786**	0.000	140	Government
b.	Relationship with head and peers	0.669**	0.000	140	
c.	Personal Networks	0.681**	0.000	140	
Social Factors		**0.725****	**0.000**	**140**	
a.	Leadership	0.837**	0.000	184	Aided
b.	Relationship with head and peers	0.720**	0.000	184	
c.	Personal Networks	0.743**	0.000	184	
Social Factors		**0.797****	**0.000**	**184**	
a.	Leadership	0.788**	0.000	66	Autonomous
b.	Relationship with head and peers	0.701**	0.000	66	
c.	Personal Networks	0.730**	0.000	66	
Social Factors		**0.752****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.64 shows the relationship between Social Factors and Teaching Engagement in Government, Aided and Autonomous colleges. Karl Pearson's correlation coefficient is used to measure the extent of relationship between two variables. Since, the p value is less than 0.05, it can be concluded that there exists a significant relationship between Social Factors and Teaching Engagement in all types of institutions.

The r value is 0.725 for Government colleges, which indicates a high correlation between variables. The components leadership, relationship with head & peers and personal networks also show a high relation with r values of 0.786, 0.669 and 0.681 respectively. In aided colleges, the r value for social factors with

Teaching Engagement is 0. 797. The sub variables are also highly correlated with values of 0.837 for leadership, 0.720 for relationship with head & peers and 0.743 for personal networks. In addition, autonomous colleges are also having a high relation between social factors and teaching engagement with an r value of 0.752. Leadership (0.788), Relationship with head & peers (0.701) and Personal Networks (0.730), the components of social factors also signify a high relation with Teaching Engagement.

5.3.5.2 Social Factors and Research Engagement

Research, one of the important dimensions of faculty engagement is measured with social factor in order to establish the relationship between these two variables. Table 5.65 shows the results of correlation coefficient.

Table 5.65

Relationship between Social Factors and Research Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Leadership	0.610**	0.000	390
b.	Relationship with head and peers	0.462**	0.000	390
c.	Personal Networks	0.548**	0.000	390
Social Factors		**0.585****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

From the Table 5.65, it can be observed that the relationship between Social Factors and Research Engagement is moderately positive with an 'r' value of 0.585. The components leadership, relationship with head & peers and personal networks also shows a moderate positive correlation with 'r' values of 0.610, 0.462 and 0.548 respectively. The p value is statistically significant being the value is less than 0.05. Hence, it can be concluded that there exists a significant relationship between Social Factors and Research Engagement.

In order to find out the relationship between social factors and research engagement separately for different types of institutions, Karl Pearson's correlation coefficient is applied. Table 5.66 depicts the results of correlation coefficient.

Table 5.66

Relationship between Social Factors and Research Engagement – Institution-wise analysis

Sl. No.	Variables	r value	p-value	N	Type of Institution
a.	Leadership	0.587**	0.000	140	Government
b.	Relationship with head and peers	0.526**	0.000	140	
c.	Personal Networks	0.534**	0.000	140	
Social Factors		**0.558****	**0.000**	**140**	
a.	Leadership	0.641**	0.000	184	Aided
b.	Relationship with head and peers	0.544**	0.000	184	
c.	Personal Networks	0.564**	0.000	184	
Social Factors		**0.612****	**0.000**	**184**	
a.	Leadership	0.597**	0.000	66	Autonomous
b.	Relationship with head and peers	0.504**	0.000	66	
c.	Personal Networks	0.553**	0.000	66	
Social Factors		**0.562****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.66 shows the relationship between Social Factors and Research Engagement in Government, Aided and Autonomous colleges. Karl Pearson's correlation coefficient is used to measure the extent of relationship between two variables. Since, the p value is less than 0.05, it can be concluded that there exists a significant relationship between Social Factors and Research Engagement in all types of institutions.

The r value is 0.558 in Government colleges, which indicates a moderate correlation between two variables. The components Leadership, Relationship with head & peers and Personal Networks also shows a moderate relation with r values of 0.587, 0.526 and 0.534 respectively. In Aided colleges, the r value for Social Factors with Research Engagement is 0.612. The sub-variables are also moderately correlated with values of 0.641 for Leadership, 0.544 for Relationship with head &

peers and 0.564 for Personal Networks. In addition, Autonomous colleges are also having a moderate relation between Social Factors and Research Engagement with r values of 0.562. Leadership (0.597), Relationship with head & peers (0.504) and Personal networks (0.553) also signifies a moderate relation with Research Engagement.

5.3.5.3 Social Factors and Service Engagement

Service engagement, being the third dimension of faculty engagement is analysed with the social factors. The relationship between social factors and service engagement is established with the help of correlation coefficient. The results are depicted in Table 5.67.

Table 5.67

Relationship between Social Factors and Service Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Leadership	0.724**	0.000	390
b.	Relationship with head and peers	0.541**	0.000	390
c.	Personal Networks	0.651**	0.000	390
Social Factors		**0.693****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

The table 5.67 claims that the relationship between social factors and Service Engagement are moderately correlated (r = 0.693). Relationships with head & peers and Personal Networks also have a moderate positive correlation with Service Engagement with r values of 0.541 and 0.651 respectively. Whereas, Leadership is highly correlated with Service Engagement with an 'r' value of 0.724. As the p value is less than 0.05, the researcher can confirm that the relationship between Social Factors and Service Engagement are highly significant.

The researcher has performed an institution-wise analysis for measuring the relationship between social factors and service engagement. Table 5.68 depicts the results of correlation coefficient of Government, Aided and Autonomous arts and science colleges respectively.

Table 5.68

Relationship between Social Factors and Service Engagement- Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Leadership	0.732**	0.000	140	Government
b.	Relationship with head and peers	0.621**	0.000	140	
c.	Personal Networks	0.636**	0.000	140	
Social Factors		**0.675****	**0.000**	**140**	
a.	Leadership	0.747**	0.000	184	Aided
b.	Relationship with head and peers	0.659**	0.000	184	
c.	Personal Networks	0.674**	0.000	184	
Social Factors		**0.722****	**0.000**	**184**	
a.	Leadership	0.648**	0.000	66	Autonomous
b.	Relationship with head and peers	0.612**	0.000	66	
c.	Personal Networks	0.632**	0.000	66	
Social Factors		**0.641****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.68 shows the relationship between Social Factors and Service Engagement in Government, Aided and Autonomous colleges. Karl Pearson's correlation coefficient is used to measure the extent of relationship between two variables. Since, the p value is less than 0.05, it can be concluded that there exists a significant relationship between Social Factors and Service Engagement in all types of institutions.

The 'r' value of 0.675 in Government colleges, which indicates a moderate correlation between two variables. The components, Relationship with head & peers and Personal networks also shows a moderate correlation with r value of 0.621 and 0.636 respectively. Leadership (0.732) is the only component which is having a high relation with Service Engagement. In Aided colleges, the 'r' value for social factors with Service Engagement is 0.722. The sub variables are moderately correlated with values of 0.659 for Relationship with head and peers

and 0.674 for Personal Networks. While, Leadership is highly correlated with an 'r' value of 0.747 with Service Engagement. In case of Autonomous colleges, social factors are moderately correlated with Service Engagement with r value of 0.641. Leadership (0.648), Relationship with head & peers (0.612) and Personal Networks (0.632) also signifies a moderate relation with Service Engagement.

Table 5.62 to 5.68 analysed with the help of Karl Pearson's correlation coefficient at one percent level of significance to test the relationship between social factors and dimensions of faculty engagement, ***supported and proved the fifth hypothesis stated:***

H5: There exists a significant relationship between Social factors and the Dimensions of faculty engagement.

5.3.6 Management Factors and Dimensions of Faculty Engagement

Management factors have a large influence on the climate of a work place. Great management factors will turn employees to follow the words of authorities. Once, employees get more engaged, friction at work reduces and organisation effectiveness can be enhanced. Talent Management, Performance appraisal and Training & Development programmes are the three elements considered for assessing the contribution of management factors over engaging faculty members. Talent Management is the process of recruiting and developing a workforce that is as productive as possible and to stay with their institution in long run. Through this process it is possible to procure right talent and helping them grow to their optimal capabilities. Performance Appraisal is a method of evaluating the performance of faculty members in addition to that it also evaluates the other qualities such as talents, values, ethical standards, contribution to the growth of an institution, orientation towards research and allied aspects. Proper and scientific performance appraisal will inculcate engagement and boosts confidence among faculty members. The Training & Development Programmes aims at enhancing the academic and intellectual environment in the institutions by providing faculty members with enough opportunities to pursue research and to participate in seminars/ conferences/ workshops. It is reasonable for institutions to expect that these programmes will result in improved teaching performance and better outcomes.

The programmes are designed in such a way to improve instruction in higher education.

Eleven statements were developed which measures the management factors, were provided to faculty members of arts and science colleges of Kerala for finding out its role in inculcating teaching, research, and service engagement. Table 5.69 provides the mean and standard deviation values of management factors.

Table 5.69

Mean and Standard Deviation of Management Factors

Indicator Code	Indicators	Mean	Standard Deviation
TM1	There exists a proper alignment of talent and duties allotted.	4.3051	0.63870
TM2	Have to build a deep reservoir of successors at every level.	4.8436	0.57241
TM3	Need to assess the candidate's skill in the hiring process.	4.8692	0.50277
Talent Management		**14.0179**	**1.40590**
PA1	Existence of rational performance and appraisal system helps in development of skills and increases in reputation.	3.9897	1.08265
PA2	Quality of teaching and other allied activities could be enhanced through performance appraisal.	4.6103	0.85258
PA3	Continuous appraisal from the authorities enhances performance.	4.7692	0.74728
PA4	Monitoring performance with standards will help to assess the credibility of a faculty.	4.7795	0.72246
Performance Appraisal		**18.1487**	**2.87591**
TD1	It is possible to carefully monitor the faculty growth and development through T&D programmes.	4.2410	0.97704
TD2	Meaningful feedbacks on faculty accomplishments are provided through T&D programmes.	4.4308	0.84785
TD3	Training sessions and refreshment programmes induces the faculty members.	4.7026	0.79442
TD4	Authorities support to attend conferences and refresher programmes.	4.6308	0.97373
Training & Development Programmes		**18.0051**	**2.94770**

Primary Data

From Table 5.69, it can be found that the statement 'need to assess the candidate's skill in the hiring process' is having the highest mean score of 4.8692 with a standard deviation of 0.50277 followed by the statement, 'have to build a deep reservoir of successors at every level' with a mean value of 4.8436 (SD 0.57241). 'Existence of rational performance and appraisal system helps in development of skills and increases in reputation' has the lowest mean score of 3.9897 and a standard deviation of 1.08265.

In addition, the relationship between management factors and dimensions of faculty engagement is measured with the help of Karl Pearson's correlation coefficient. The following table provides us with these results.

5.3.6.1 Management Factors and Teaching Engagement

Teaching engagement, one of the major dimensions of faculty engagement is to be assessed with the help of correlation coefficient. Table 5.70 spells out the results of correlation coefficient with respect to arts and science colleges of Kerala.

Table 5.70

Relationship between Management Factors and Teaching Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Talent Management	0.784**	0.000	390
b.	Performance Appraisal	0.896**	0.000	390
c.	Training & Development Programmes	0.944**	0.000	390
Management Factors		**0.914****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

The table 5.70 clearly mentions the 'r' value of management factors in relation with teaching engagement of faculty members of arts and science colleges is 0.914 which indicates a high positive correlation between variables. The components of management factors such as Talent management, Training & Development programmes and Performance appraisal also shows a high positive relation with values of 0.784, 0.896 and 0.944 respectively. The p value shows a value of 0.000 which is less than the admissible value of 0.05. So, it can be

concluded that there exists a significant relationship between management factors and teaching engagement.

It is highly necessary to have a separate analysis which measures the relationship of management factors with teaching engagement in different types of arts and science colleges of the state. Table 5.71 depicts the institution-wise results of management factors and teaching engagement.

Table 5.71

Relationship between Management Factors and Teaching Engagement-Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Talent Management	0.730**	0.000	140	Government
b.	Performance Appraisal	0.884**	0.000	140	
c.	Training & Development Programmes	0.936**	0.000	140	
Management Factors		**0.896****	**0.000**	**140**	
a.	Talent Management	0.847**	0.000	184	Aided
b.	Performance Appraisal	0.922**	0.000	184	
c.	Training & Development Programmes	0.954**	0.000	184	
Management Factors		**0.938****	**0.000**	**184**	
a.	Talent Management	0.788**	0.000	66	Autonomous
b.	Performance Appraisal	0.862**	0.000	66	
c.	Training & Development Programmes	0.935**	0.000	66	
Management Factors		**0.895****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.71 depicts the correlation coefficient (r) value of management factors in relation with Teaching Engagement of faculty members belonging to Government, Aided and Autonomous colleges along with significant values and no of samples taken into consideration. It can be observed that the management factors are highly correlated with Teaching Engagement with an 'r' value of 0.896 in case of Government colleges, 0.938 for Aided and 0.895 for Autonomous

colleges. The components talent management (0.730), performance appraisal (0.884) and Training & Development programmes (0.936) shows a high relation with Teaching Engagement for Government colleges. Talent Management, Performance Appraisal and Training & Development programmes are highly correlated with Teaching Engagement with values of 0.847, 0.922 and 0.954 respectively in aided colleges. The components of management factors are also highly correlated with Teaching Engagement in case of autonomous colleges with r values of 0.788 for Talent Management, 0.862 for Performance Appraisal and 0.935 for Training and Development programmes.

Since, the p value is less than 0.05, it can be concluded that there exists a significant relationship between Management Factors and Teaching Engagement in all types of institutions.

5.3.6.2 Management Factors and Research Engagement

The research engagement is one of the important dimensions considered by the researcher in the study. The relationship between management factors and research engagement is established and the results are presented in Table 5.72.

Table 5.72

Relationship between Management Factors and Research Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Talent Management	0.589**	0.000	390
b.	Performance Appraisal	0.682**	0.000	390
c.	Training & Development Programmes	0.724**	0.000	390
Management Factors		**0.696****	**0.000**	**390**

Source: Primary Data, ** *statistically significant at 1% significant level.*

The table 5.72 depicts the relationship between Management factors and Research Engagement. The Pearson's Correlation Coefficient is 0.696 for Management Factors which shows a moderate positive correlation with Research Engagement. Talent Management and Performance Appraisal are also showing a moderate positive correlation with Research Engagement with r values of 0.589 and 0.682 respectively. Training & Development Programmes are also showing a

high relation with Research Engagement with an 'r' value of 0.724. Since, the p value is less than 0.05, it can be concluded that there exists a significant relationship between Management Factors and Research Engagement.

The researcher has also performed an institution-wise analysis for measuring the relationship between management factors and research engagement and the results are depicted in Table 5.73. The types of institution taken into consideration are Government, Aided and Autonomous.

Table 5.73

Relationship between Management Factors and Research Engagement- Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Talent Management	0.545**	0.000	140	Government
b.	Performance Appraisal	0.649**	0.000	140	
c.	Training & Development Programmes	0.695**	0.000	140	
Management Factors		**0.663****	**0.000**	**140**	
a.	Talent Management	0.652**	0.000	184	Aided
b.	Performance Appraisal	0.711**	0.000	184	
c.	Training & Development Programmes	0.737**	0.000	184	
Management Factors		**0.723****	**0.000**	**184**	
a.	Talent Management	0.597**	0.000	66	Autonomous
b.	Performance Appraisal	0.690**	0.000	66	
c.	Training & Development Programmes	0.761**	0.000	66	
Management Factors		**0.716****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.73 depicts the correlation coefficient (r) value of Management Factors in relation with Research Engagement of faculty members belonging to Government, Aided and Autonomous colleges along with significant values and

number of samples taken into consideration. It can be observed that the Management Factors are moderately correlated with Research Engagement with an 'r' value of 0.663 in case of Government colleges and highly correlated with an 'r' value of 0.723 and 0.716 in case of Aided and Autonomous colleges. The components Talent Management (0.545), Performance Appraisal (0.649) and Training & Development programmes (0.695) shows a moderate relation with Research Engagement for Government colleges. Talent Management is moderately correlated with an r value of 0.652, Performance appraisal and Training & Development programmes with an r value of 0.711 and 0.737 are highly correlated with Research Engagement in case of Aided colleges. Talent Management (0.597) and Performance Appraisal (0.690) are moderately correlated with Research Engagement and Training & Development programmes (0.761) is highly correlated with Research Engagement in Autonomous colleges.

Since, the p value is less than 0.05, it can be concluded that there exists a significant relationship between Management Factors and Research Engagement.

5.3.6.3 Management Factors and Service Engagement

The relationship between management factors and service engagement needs to be assessed, as service engagement meant to be one of the dimensions of faculty engagement. Table 5.74 depicts the relationship between management factors and service engagement in arts and science colleges of Kerala.

Table 5.74

Relationship between Management Factors and Service Engagement in Arts and Science colleges

Sl. No	Variables	r value	p-value	N
a.	Talent Management	0.698**	0.000	390
b.	Performance Appraisal	0.793**	0.000	390
c.	Training & Development Programmes	0.843**	0.000	390
Management Factors		**0.813****	**0.000**	**390**

*Source: Primary Data, ** statistically significant at 1% significant level.*

Table 5.74 clearly depicts the relationship between Management Factors and Service Engagement. The management factors and service engagement are having a high positive correlation with an 'r' value of 0.813. Performance appraisal and Training & Development programmes also have a high positive correlation with Service Engagement with r values of 0.793 and 0.843 respectively. Whereas, Talent Management is having a moderate positive correlation with an 'r' value of 0.698. Since, the p value is less than 0.05, it can be concluded that the relationship between Management Factors and Service Engagement is highly significant.

For gaining more clarity, the researcher also analyses the relationship between management factors and service engagement separately for different types of institutions, considered for the study. Table 5.75 depicts the relationship between management factors and service engagement on the basis of different types of institutions.

Table 5.75

Relationship between Management Factors and Service Engagement – Institution-wise analysis

Sl. No	Variables	r value	p-value	N	Type of Institution
a.	Talent Management	0.681**	0.000	140	Government
b.	Performance Appraisal	0.801**	0.000	140	
c.	Training & Development Programmes	0.860**	0.000	140	
Management Factors		**0.821****	**0.000**	**140**	
a.	Talent Management	0.749**	0.000	184	Aided
b.	Performance Appraisal	0.815**	0.000	184	
c.	Training & Development Programmes	0.846**	0.000	184	
Management Factors		**0.830****	**0.000**	**184**	
a.	Talent Management	0.648**	0.000	66	Autonomous
b.	Performance Appraisal	0.719**	0.000	66	
c.	Training & Development Programmes	0.795**	0.000	66	
Management Factors		**0.752****	**0.000**	**66**	

Source: Primary Data, ** *statistically significant at 1% significant level.*

Table 5.75 depicts the correlation coefficient (r) value of the Management Factors in relation with Service Engagement of faculty members belonging to Government, Aided and Autonomous colleges along with the significant values and number of samples taken into consideration. It can be observed that the Management factors are highly correlated with Service Engagement with an 'r' value of 0.821 in case of Government colleges, 0.830 in Aided and 0.752 in Autonomous colleges. The components Performance Appraisal (0.801) and Training & Development programmes (0.860) are highly correlated with Service Engagement, whereas, Talent Management (0.681) shows a moderate relation with Service Engagement in case of Government colleges. Talent Management (0.749), Performance Appraisal (0.815) and Training & Development programmes (0.846) are having a high relation with Service Engagement in Aided colleges. The components Performance Appraisal and Training & Development programmes are highly correlated with r values of 0.719 and 0.795 respectively. While, other component, Talent Management is moderately correlated with an 'r' value of 0.648. Since, the p value is less than 0.05, it can be concluded that the relationship between Management Factors and Service Engagement is highly significant.

Table 5.69 to 5.75 analysed with the help of Karl Pearson's correlation coefficient at one percent level of significance to test the relationship between management factors and dimensions of faculty engagement, ***supported and proved the sixth hypothesis stated:***

H6: There exists a significant relationship between Management factors and the Dimensions of faculty engagement.

5.4 Conclusion

The present chapter dealt with the objective of the research to evaluate the contributing factors in creating engagement among faculty members of arts and science colleges of Kerala. The contributing factors such as personal, organisational, psychological, economic, social, and management factors were measured and analysed. It was found that among personal factors, age and experience found to be significant with respect to Autonomous arts and science colleges and all the factors positively correlated with teaching, research, and

service engagement. Mean scores, standard deviation, independent sample t-test, one-way ANOVA, Tukey HSD, Tamhane's post hoc, Karl Pearson's correlation were used for analysing the data.

Chapter 6

COMPARISON OF FACULTY ENGAGEMENT IN DIFFERENT TYPES OF INSTITUTIONS

Contents

6.1 Introduction

The faculty member of an Arts and Science college is expected to perform duties in the areas of teaching, research, and service. The performance of a faculty member will be assessed by the authorities in these three aspects for promotion and entitlements. UGC has issued guidelines for the faculty members, keeping in mind these three aspects, and it takes effort to make them excel in these areas. When a faculty member is involved in teaching, research, or service, he or she is considered to be engaged. Earlier, teaching was the only activity that was demanded of from the faculty members of arts and science colleges. Later on, the scope was broadened by the inclusion of research and service-oriented activities. Effective classroom interaction, the development of techniques for delivering concepts, the development of pedagogy, and creating interest in subjects among students are the core activities to be performed in teaching by the faculty members. When it comes to research, research presentations, research publications with a high impact factor, attainment of a good score in the h-index, and research work that contributes to society, it must be prioritised. National Service Scheme (NSS), National Cadet Corps (NCC), Extension programs, and other services to be performed by a faculty member in the service-related activities. The state's arts and science colleges are broadly classified as Government, Aided, and Autonomous. The engagement in teaching, research, and service of the faculty members belonging to these types of institutions may vary, as the institutions differ in their

functioning. Even, the regulatory bodies differentiate these institutions while making assessments and issuing guidelines. Hence, it is imperative to make a comparison of the engagement level of faculty members belonging to different institutions on the aspects of teaching, research, and service. The research hypotheses set up by the researcher are:

H7: There exists a significant difference among the types of institutions and the dimensions of faculty engagement.

The researcher has made use of mean and standard deviation to assess the level of engagement in these activities and a one-way ANOVA to check whether there exists a significant difference among faculty members of Government, Aided and Autonomous institutions with respect to teaching, research, and service engagement.

6.2 Descriptives on Teaching, Research, and Service Engagement

In order to measure the level of engagement in teaching, research, and service, a five-point Likert scale has been developed by the researcher, and the respondents are asked to rate these statements on a scale that ranges from strongly agree (5) to strongly disagree (1). Statements TE1 to TE9 are used to examine the teaching engagement among faculty members, statements RE1 to RE8 are used to analyse the research engagement, and statements SE1 to SE7 are used to measure the service engagement of the faculty members belonging to Arts and Science colleges in Kerala. Table 6.1 gives the results of the mean and standard deviation.

Table 6.1

Mean and Standard Deviation on Teaching, Research and Service Engagement

Indicator Code	Statements	Mean	Standard Deviation
TE1	Successful teaching and learning strategies should be used to support everyone.	3.7744	1.19354
TE2	Able to develop and use e-contents and MOOC's.	3.8077	1.17008
TE3	A supportive environment is necessary in order to provide additional services to institutions and universities.	3.7436	1.20662
TE4	A faculty member have to be curious to find out students	3.9154	1.26064

Indicator Code	Statements	Mean	Standard Deviation
	preferences, interest, feelings and ideas.		
TE5	Active participation in orientation or refresher or methodology courses enhances the quality of research.	3.4026	1.10129
TE6	Being part of examination and evaluation activities seems to be worth.	3.5564	1.07347
TE7	Feedback from students arouses my confidence level to teach.	3.2872	1.10600
TE8	Faculty members need to be conscious to strengthen and update knowledge on a daily basis for effective mentoring.	2.9967	1.04963
TE9	A faculty member is responsible for using multiple diagnostic tools to determine student needs and identifies their areas of confusion.	3.5128	1.04578
RE1	Doing research presentations helps faculty members to get feedback on their work.	3.5385	1.1505
RE2	Publishing research work helps faculty members to communicate the research to a wide and interested audience.	3.5513	1.2088
RE3	Attainment of good scores in h-index can be used as a parameter to know the interest of a faculty member in research.	3.6385	1.2357
RE4	Research conducted must contribute something towards society.	3.6590	1.3218
RE5	Participation in research conferences helps to broaden the professional network.	3.5436	1.2260
RE6	Writing research papers engrosses me for hours on end.	3.4923	1.1644
RE7	Spending time for research enhances the overall quality as a faculty member.	2.4949	0.9903
RE8	Providing assistance to research scholars helps in building confidence in my skills as a researcher.	2.8436	0.9980
SE1	A faculty member must also provide administrative support to the college and University concerned.	3.4436	0.97825
SE2	A faculty member should be willing to be part of committees and perform the duties allotted.	3.6564	1.18902
SE3	Extension programmes and community engagement should be included in the curriculum.	3.0641	1.02588
SE4	I am energised by providing services.	3.5077	1.27208
SE5	My work as a service provider has an influence on society.	3.3462	0.94075
SE6	Faculty members should take initiative to identify the best practices and to implement it.	2.9590	1.02582
SE7	I feel immersed while providing services.	3.5821	0.91668

Source: Primary Data

Table 6.1 implies that 'A faculty member have to be curious to find out students preferences, interest, feelings and ideas.' has the highest mean score of 3.9154 (SD 1.26064) which indicates that faculty members are very much involved in teaching. Among the research engagement, it can be observed that, 'Research conducted must contribute something towards society.' obtains the highest mean score of 3.6590 (SD 1.3218), indicating the interest of faculty members to be part of research work which contributes to society. 'A faculty member should be willing to be part of committees and perform the duties allotted.' scores highest mean value of 3.6564 (SD 1.18902), which tells that faculty members are ready to perform their role in service-oriented activities.

From the mean values it can be inferred, faculty members must take more effort to upgrade themselves as a teacher, research, and service-provider.

Table 6.2

Descriptive Statistics of Dimensions of Faculty Engagement

Dimensions of Faculty Engagement	Mean	Standard Deviation
Teaching Engagement	31.9667	8.9633
Research Engagement	26.7615	6.9940
Service Engagement	23.5590	6.4982

Source: Primary Data

Table 6.2 depicts the mean score of dimensions of faculty engagement which assures that all the dimensions of faculty engagement is having an above average representation in engaging faculty members of arts and science colleges of Kerala. Teaching Engagement is the dimension which has the highest mean score of 31.9667 (SD 8.9633) against the maximum score of forty-five which indicates a 71.037% of influence in engaging faculty members of Arts and Science colleges of Kerala. Teaching Engagement is followed by Service Engagement with a mean score of 23.5590 (SD 6.4982) against the maximum score of thirty-five, indicating 67.311% in engaging faculty members. The lowest mean score is attained by Research Engagement with a mean score of 26.7615 (SD 6.9940) which is also having an average influence in inculcating engaging among faculty members.

6.3 Comparison of Teaching Engagement in Different Types of Institutions

Teaching engagement is a multi-dimensional construct that reflects the faculty member's decision to dedicate their energy, time, and resources into their work. Engagement in teaching covers the teaching and learning-related tasks of teachers and many aspects of a faculty member. To know the mean score of the teaching engagement of faculty members among different types of institutions, descriptive analysis has been performed. The researcher has employed Levene's statistic and one-way ANOVA to measure whether any significant difference exists among faculty members of different types of institutions with respect to teaching engagement.

Table 6.3 presents the institution-wise test of homogeneity of variances in teaching engagement among faculty members.

6.3.1 Institution-wise analysis of Teaching Engagement

Table 6.3

Institution-wise Test of Homogeneity of Variance of Teaching Engagement

Variable	Levene's Statistic	Sig. value
Teaching Engagement	2.008	0.136

Source: Primary Data

Since the p value of the test is greater than 0.05, the assumption of equal variance is accepted. Hence, the value of ANOVA is considered in the study. Table 6.4 presents the results of the ANOVA test.

Table 6.4

Institution-wise analysis of Teaching Engagement

Institution	N	Mean	SD	Max Score	F value/ Welch F	P Value	Remarks
Government	140	31.1714	9.409	45	2.433	0.089	ANOVA
Aided	184	33.0109	8.414				
Autonomous	66	30.7424	9.287				
Total	**390**	**31.9667**	**8.963**				

Source: Primary Data

From Table 6.4, it can be clearly observed that the p value is 0.089, which is greater than 0.05, which indicates that there is no significant difference among different types of educational institutions with respect to teaching engagement. While analysing the mean score, it is understood that faculty members belonging to aided institutions have the highest mean score of 33.0109 (SD 8.414), followed by the faculty members of Government colleges with a mean score of 31.1714 and SD of 9.409. Faculty members in Autonomous colleges have the lowest mean score of 30.7424 with a SD of 9.287. The mean value assures that there is no significant difference in teaching engagement among faculty members belonging to different types of institutions.

6.4 Comparison of Research Engagement in Different Types of Institutions

Research engagement can be defined as the positive feeling of faculty members towards research work achieved by investing resources, energy, and time in research-oriented activities. It is an emotional, psychological, and physical connectedness among the faculty members in the pursuit of research. Faculty members belonging to different types of institutions may possess different levels of research engagement. A descriptive analysis has been done to determine the mean score of different types of institutions with regard to research engagement. Further, one-way ANOVA is applied to test the significant difference among types of institutions. Levene's test has been used for testing the homogeneity of variances, which is illustrated in Table 6.5.

6.4.1 Institution-wise analysis of Research Engagement

Table 6.5

Institution-wise Test of Homogeneity of Variances of Research Engagement

Variable	Levene's Statistic	Sig. value
Research Engagement	1.667	0.188

Source: Primary Data

Table 6.5 reveals that the p-value of the test is greater than 0.05 for research engagement, and hence the assumption of equal variance is accepted. So, ANOVA's F value is considered in the study. The results are exhibited in Table 6.6.

Table 6.6

Institution-wise Analysis of Research Engagement

Institution	N	Mean	SD	Max Score	F value/ Welch F	P Value	Remarks
Government	140	25.5500	7.41506	40	3.394	0.035*	ANOVA
Aided	184	27.1515	7.07377				
Autonomous	66	27.5435	6.53099				
Total	**390**	**26.7615**	**6.99409**				

*Source: Primary Data, * statistically significance at 5% level.*

From table 6.6, it is clear that there exists a significant difference among faculty members regarding research engagement, belonging to different types of institutions, as the p value of the test is less than 0.05. The mean score is the maximum for faculty members belonging to Autonomous institutions, with a value of 27.5435 (6.53099), followed by Aided institutions with a mean score of 27.1515 (7.07377). Faculty members of Government institutions possess the lowest mean score of 25.5500 (SD 7.41506). This indicates that faculty members belonging to Autonomous institutions are more engaged in research. Multiple comparisons through post hoc analysis were performed to measure the significant difference among faculty members' attitudes towards research engagement. Since equal variances are assumed, the Tukey HSD test is used to examine the pairwise differences among faculty members belonging to different institutions with regard to research engagement. The results of Post Hoc are presented in Table 6.7.

Table 6.7

Post Hoc Test for significant difference among the type of institution with respect to Research Engagement

Institution (I)	Institution (J)	Mean Difference (I-J)	Standard Error	p value
Government	Aided	-1.60152	1.03794	0.272
	Autonomous	-1.99348*	0.77960	0.029
Aided	Government	1.60152	1.03794	0.272
	Autonomous	-0.39196	0.99739	0.918
Autonomous	Government	1.99348*	0.77960	0.029
	Aided	0.39196	0.99739	0.918

*Source: Primary Data, * statistically significant at 5% level.*

The results of a post-hoc analysis using Tukey HSD are shown in Table 6.7, and the p values are less than 0.05, indicating that there is a significant difference between the faculty members of Government colleges and Autonomous colleges. As a result, it can be deduced that research engagement differs between faculty members of Autonomous and Government institutions. The faculty members belonging to Autonomous institutions have the highest mean score, followed by Aided institutions. Hence, it can be concluded that faculty members belonging to Autonomous institutions are more engaged in research compared to faculty members belonging to other types of institutions.

6.5 Comparison of Service Engagement in Different Types of Institutions

Service engagement is considered to be a part of extension and outreach programmes conducted by the institution. It is critical that faculty members develop the necessary skills to serve society as their roles change. The level of service engagement among faculty members at different types of institutions may vary. In order to know the mean value of faculty members with respect to service engagement, a descriptive analysis was done. A one-way ANOVA is employed to test the significant difference among faculty members with respect to service engagement.

6.5.1 Institution-wise analysis of Service Engagement

Table 6.8

Institution-wise Test of Homogeneity of Variances of Service Engagement

Variable	Levene's Statistic	Sig. value
Service Engagement	1.979	0.140

Source: Primary Data

Table 6.8 reveals that the p value of the test is greater than 0.05 for service engagement, and hence, the assumption of equal variance is accepted. The value of ANOVA is considered in the study, and the results are exhibited in Table 6.9.

Table 6.9

Institution-wise analysis of Service Engagement

Institution	N	Mean	SD	Max Score	F value/ Welch F	P Value	Remarks
Government	140	22.9214	6.78240	35	1.605	0.202	ANOVA
Aided	184	24.1739	6.07712				
Autonomous	66	23.1970	6.94865				
Total	390	23.5590	6.49820				

Source: Primary Data

The results indicate that there is no significant difference among faculty members belonging to different types of institutions with regard to service engagement, as the p value is greater than 0.05. The faculty members of Aided colleges have the highest mean score of 24.1739 (SD 6.07712), and the faculty members of Government colleges have the lowest mean score of 22.9214 (SD 6.78240). It implies that Aided college faculty members are more engaged in service compared to faculty members at other types of institutions.

While testing seventh hypothesis, (Tables 6.3 to 6.9) with the help of One-way ANOVA to test the difference among type of institution and the dimensions of faculty engagement, ***the null hypothesis is accepted except for research engagement.***

The significant difference among faculty members belonging to different type of institution with respect to research engagement. While, in case of teaching and service engagement no significant difference among faculty members belonging to different types of institutions.

6.6 Conclusion

From the foregoing analysis performed with the help of a one-way ANOVA, it can be seen that there is no significant difference among faculty members of different types of institutions with respect to teaching and service engagement, as the p value is greater than 0.05. While, in the case of research engagement, the p value shows a value, less than 0.05, which indicates that there exists a significant

difference among types of institutions with regard to research engagement. The Tukey HSD post hoc analysis confirms the existence of a significant difference between faculty members of Aided and Autonomous institutions. The faculty members must keep in mind that their role as researchers will have an impact on society and that they should take part in research that is beneficial for society.

Chapter 7

STATISTICAL MODEL FOR FACULTY ENGAGEMENT AND ITS OUTCOMES

Contents

7.1 Introduction

Faculty engagement can be measured on the basis of various factors. Teaching, research and service engagement is considered here, as UGC, NAAC and other regulatory bodies measure the performance of faculty members on the basis of these aspects. In addition, NEP also divide the activities of a college faculty member into teaching, research and service. A detailed analysis of faculty engagement and a statistical model with dimensions that is, teaching, research, and service engagement as explanatory variables and faculty engagement as the dependent variable is discussed in this chapter. A discussion relating to outcomes of faculty engagement and a statistical model depicting the relationship between faculty engagement, being the independent variable and outcomes that is, Organisational Citizenship Behaviour (OCB), employee retention, innovative behaviour, and job satisfaction as dependent variable are also presented in this chapter.

7.2 Standard Model for Faculty Engagement

A faculty member who is engaged in teaching, research and service is considered to be engaged as a whole. Hence, these are considered as dimensions of faculty engagement. A faculty member who is engaged will reflect 'vigor', 'dedication', and 'absorption' in their behaviour. Following table depicts the descriptive statistics of faculty engagement.

Table 7.1

Mean and Standard Deviation of Faculty Engagement

Indicator Code	Indicators	Mean	Standard Deviation
FE1	Able to continue in work for long duration.	3.7333	1.11345
FE2	Willing to accept any type of job.	3.8128	1.20766
FE3	Element of challenge in the job induces performance level.	3.8872	1.17059
FE4	Willing to put a great deal of effort to make institution successful.	3.9667	1.05451
FE5	The performance relating to work are meaningful and purposeful.	4.0564	1.23442
FE6	My job inspires me.	3.8256	1.16961
FE7	Mental resilience is part of this profession.	3.8359	1.18636
FE8	Great deal of effort should be made in order to make the organisation successful.	3.8718	1.09402
Faculty Engagement		***30.9897***	***8.27235***

Source: Primary Data

Table 7.1 provides an insight that the aggregate score of faculty engagement is 30.9897 as against the maximum score of forty with a standard deviation of 8.27235. 'The performance relating to work are meaningful and purposeful' scores high with a mean value of 4.0564 and SD of 1.23442 and is followed by 'willingness to put a great deal of effort to make institution successful' with a mean score of 3.9667 and SD of 1.05451. The statements 'Willing to accept any type of job' and 'Able to continue in work for long duration' are having the lowest mean values of 3.8128 (SD 1.20766) and 3.7333 (SD 1.11345) respectively.

In order to establish the relationship between the dimensions of engagement with faculty engagement, correlation analysis was performed and the results are

exhibited under the categories of Government, Aided and Autonomous institutions. For measuring the contribution of teaching, research and service engagement in the overall engagement of faculty members, a statistical model using regression analysis was developed on the basis of different types of institutions. In addition, statistical model for faculty engagement for arts and science colleges in Kerala is also created by the researcher.

7.2.1 Statistical Model for Faculty Engagement in Arts and Science colleges of Kerala

7.2.1.1 Relationship between Dimensions of Faculty Engagement with Faculty Engagement in Arts and Science colleges

For identifying the most crucial dimension, the researcher has applied correlation coefficient and the results are presented under Table 7.2.

Table 7.2

Correlation of Dimensions of Faculty Engagement with Faculty Engagement in Arts and Science colleges

Sl. No	Dimensions of Faculty Engagement	r value	*p-value*	N
a.	Teaching Engagement	0.905**	0.000	390
b.	Research Engagement	0.774**	0.000	390
c.	Service Engagement	0.889**	0.000	390

*Source: Primary Data, ** statistically significant at 1% level.*

From the table 7.2, it can be inferred that all dimensions of faculty engagement are highly correlated with faculty engagement. It is clear that teaching engagement contributes the most in engaging faculty members with a correlation coefficient of 0.905 followed by service engagement with an r value of 0.889.

7.2.1.2 Regression analysis of dimensions of Faculty Engagement in Arts and Science colleges

To measure the relationship between dimensions of faculty engagement, total scores obtained from the responses from the faculty members towards the

statements are added and extracted for analysis purposes. Simple regression analysis was performed to find out the influence of dimensions of faculty engagement on faculty engagement. Table 7.3 exhibits the results of simple regression.

Table 7.3

Dimensions of Faculty Engagement and Faculty Engagement - Regression analysis of Arts and Science Colleges

Independent Variable	Unstandardised Coefficient		Standardised Coefficient	T	Sig.
	B	Std. Error			
Dimensions of Faculty Engagement	0.360	0.008	0.916	45.091**	0.000
Adjusted R^2 = 0.839					

*Source: Primary Data, ** statistically significant at 1% level*

From the table 7.3, which clearly depicts the regression analysis, it is very clear that faculty engagement is highly influenced by the dimensions of faculty engagement and the results shows its significance at 1% level. The standardised regression coefficient of dimensions of faculty engagement is 0.916 and adjusted R^2 is 0.839. Hence, it can be concluded that there exists a positive relation between dimensions of faculty engagement and faculty engagement in arts and science colleges of Kerala.

7.2.1.3 Statistical Model for Engaging faculty members of Arts and Science colleges

From the analysis performed, it can be inferred that the faculty engagement is related with teaching, research and service engagement. To measure the most contributing dimension of faculty engagement and its influence on faculty engagement, multiple regression was done by taking faculty engagement as dependent variable and teaching, research and service engagement as independent variables. Table 7.4 exhibits the results of multiple regression analysis.

Table 7.4

Relationship between Teaching Engagement, Research Engagement & Service Engagement in Arts and Science colleges- Results of Multiple Regression analysis

Independent Variable	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error			
Teaching Engagement	0.471	0.044	0.510	10.592**	0.000
Research Engagement	0.155	0.038	0.131	4.113**	0.000
Service Engagement	0.413	0.062	0.325	6.709**	0.000
Adjusted R^2 = 0.851					

*Source: Primary Data, ** statistically significant at 1% level.*

Hence, the final statistical model with standardised regression coefficient of the significant variables is given below:

fe= 0.510 te + 0.131 re + 0.325 se

Where, *fe* = Standardised value of Faculty Engagement,

te = Teaching Engagement,

re = Research Engagement,

se = Service Engagement.

The most influencing dimension of faculty engagement as per the equation, by virtue of the coefficient value and also the significance which is revealed from the analysis is the teaching engagement followed by service engagement.

It is clearly evident from the table 7.4, correlation coefficients corresponding to teaching, research and service engagement are highly significant at 1% level of significance. It can also be concluded that, engagement is driven through teaching, research and service engagement in Arts and Science colleges.

7.2.2 Model for Faculty Engagement in Government Arts and Science colleges

7.2.2.1 Relationship between Dimensions of Faculty Engagement with Faculty Engagement in Government Arts and Science colleges

In the first stage, to identify the most prominent among dimensions of faculty engagement, correlation was done separately. The results thus obtained is explained below.

Table 7.5

Correlation analysis of Dimensions of Faculty Engagement with Faculty Engagement in Government Arts and Science Colleges

Sl. No	Dimensions of Faculty Engagement	r value	p-value	N
a.	Teaching Engagement	0.930**	0.000	140
b.	Research Engagement	0.766**	0.000	140
c.	Service Engagement	0.917**	0.000	140

*Source: Primary Data, ** statistically significant at 1% level*

From the table 7.5, it can be clearly drawn that all dimensions of faculty engagement are highly correlated with faculty engagement. It is clear that teaching engagement contributes the most in engaging faculty members of Government college with correlation coefficient of 0.930, followed by service engagement (r = 0.917).

7.2.2.2 Regression analysis of dimensions of Faculty Engagement in Government Arts and Science colleges

To establish the relationship between dimensions of faculty engagement and faculty engagement, total scores were calculated by adding the scores that has been provided by the respondents towards corresponding statements under each dimension and extracted for analysis. In order to establish the influence of dimensions of faculty engagement on faculty engagement, simple regression analysis was performed. Table 7.6 exhibits the results of simple regression.

Table 7.6

Dimensions of Faculty Engagement and Faculty Engagement – Regression Analysis of Government Arts and Science Colleges

Independent Variable	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error			
Dimensions of Faculty Engagement	0.371	0.012	0.931	29.925**	0.000
Adjusted R^2 = 0.866					

*Source: Primary Data, ** statistically significant at 1% level.*

From the Table 7.6, which clearly depicts the regression analysis, it is very clear that the faculty engagement is highly influenced by the dimensions of faculty engagement and the results shows its significance at 1% level of significance. The standardised regression coefficient of dimension of faculty engagement is 0.931 and adjusted R^2 is 0.866. Hence, it can be concluded that there exists a positive relation between dimensions of faculty engagement and faculty engagement.

7.2.2.3 Statistical Model for Engaging faculty members of Government Arts and Science colleges

From the foregoing analysis, it can be inferred that the faculty engagement is related with teaching engagement, research engagement and service engagement. To know the most contributing dimension of faculty engagement and its influence on faculty engagement, multiple regression analysis was performed with faculty engagement as dependent variable and teaching, research and service engagement as independent variables. Table 7.7 presents the results of multiple regression analysis.

Table 7.7

Relationship between Teaching Engagement, Research Engagement & Service Engagement and Faculty Engagement in Government colleges- Results of Multiple Regression Analysis

Independent Variables	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
Teaching Engagement	0.525	0.075	0.559	6.989**	0.000
Research Engagement	0.115	0.055	0.096	2.067*	0.041
Service Engagement	0.418	0.111	0.321	3.767**	0.000
Adjusted R^2 = 0.884					

*Source: Primary Data, ** statistically significance at 1% level, *, statistically significance at 5% level.*

Hence, the final statistical model with standardised regression coefficient of the significant variables is given below.

fe* = 0.559 *te* + 0.096 *re* + 0.321 *se

where, *fe* = Standardised value of Faculty Engagement

te = Teaching Engagement,

re = Research Engagement,

se = Service Engagement.

The most influencing dimension of faculty engagement as per the equation, by virtue of the coefficient value, and also the significance which is revealed from the analysis is teaching engagement followed by service engagement.

It is clearly evident from the table 7.7, correlation coefficients corresponding to teaching and service engagement are highly significant at 1% level of significance and of research engagement are highly significant at 5% level of significance. It can be concluded that, engagement is driven through teaching, research and service engagement in Government colleges.

7.2.3 Model for Faculty Engagement in Aided Arts and Science colleges

7.2.3.1 Relationship between Dimensions of Faculty Engagement with Faculty Engagement in Aided Arts and Science colleges

First and foremost, the researcher intends to know the most prominent dimension of faculty engagement in Aided arts and science colleges. Hence, correlation coefficient has been utilised by the researcher. Table 7.8 depicts the results of correlation.

Table 7.8

Correlation of Dimensions of Faculty Engagement with Faculty Engagement in Aided Arts and Science colleges

Sl. No.	Dimensions of Faculty Engagement	r value	p-value	N
a.	Teaching Engagement	0.882**	0.000	184
b.	Research Engagement	0.763**	0.000	184
c.	Service Engagement	0.880**	0.000	184

*Source: Primary Data, ** statistically significant at 1% level.*

From the Table 7.8, it can be clearly drawn that all the dimensions of faculty engagement are highly correlated with faculty engagement. It is clear that teaching engagement contributes the most in engaging faculty members of Aided colleges with a correlation coefficient of 0.882 followed by service engagement which has an r value of 0.880.

7.2.3.2 Regression analysis of dimensions of Faculty Engagement in Aided Arts and Science colleges

To establish the relationship between dimensions of faculty engagement and faculty engagement, total scores were calculated by adding the scores that has been provided by the respondents towards corresponding statements under each dimension and extracted for analysis. In order to establish the influence of dimensions of faculty engagement on faculty engagement, simple regression analysis was performed. Table 7.9 exhibits the results of simple regression.

Table 7.9

Dimensions of Faculty Engagement and Faculty Engagement - Regression analysis of Aided Arts and Science Colleges

Independent Variable	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error			
Dimensions of Faculty Engagement	0.339	0.012	0.900	27.915**	0.000
Adjusted R^2 = 0.810					

*Source: Primary Data, ** statistically significant at 1% level.*

From the table 7.9, which clearly depicts the regression analysis, it is very clear that the faculty engagement is highly influenced by the dimensions of faculty engagement and the results shows its significance at 0.01 level. The standardised regression coefficient of dimension of faculty engagement is 0.900 and adjusted R^2 is 0.810. Hence, it can be concluded that there exists a positive relationship between dimensions of faculty engagement and faculty engagement.

7.2.3.3 Statistical Model for Engaging faculty members of Aided Arts and Science colleges

From the foregoing analysis, it can be inferred that the faculty engagement is related with teaching, research and service engagement. To identify the most contributing dimension of faculty engagement and its influence on faculty engagement, multiple regression analysis was done taking faculty engagement as dependent variable and teaching, research and service engagement as independent

variables. Table 7.10 depicts the results of multiple regression with reference to aided arts and science colleges of Kerala.

Table 7.10

Relationship between Teaching Engagement, Research Engagement & Service Engagement in Aided colleges- Results of Multiple Regression analysis

Independent Variables	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error			
Teaching Engagement	0.379	0.064	0.430	5.900**	0.000
Research Engagement	0.130	0.059	0.114	2.206*	0.029
Service Engagement	0.496	0.090	0.460	5.534**	0.000
Adjusted R^2 = 0.821					

*Source: Primary Data, ** statistically significant at 1% level, * significant at 5% level.*

Hence, the final statistical model with standardised regression coefficient of the significant variables is given below.

fe = 0.430 te + 0.114 re + 0.460 se

Where, *fe* = Standardised value of Faculty Engagement

te = Teaching Engagement,

re = Research Engagement,

se = Service Engagement.

The most influencing dimension of faculty engagement as per the equation, by virtue of the coefficient value, and also the significance which is revealed from the analysis is the service engagement followed by teaching engagement.

It is clearly evident from the table 7.10, correlation coefficients corresponding to teaching and service engagement are highly significant at 0.01 level and of research engagement are highly significant at 0.05 level. It can be concluded that, engagement is driven through teaching, research and service engagement in Aided colleges.

7.2.4. Model for Faculty Engagement in Autonomous Arts and Science colleges

7.2.4.1 Relationship between Dimensions of Faculty Engagement with Faculty Engagement in Autonomous Arts and Science colleges

A correlation analysis was performed by the researcher to analyse the relationship between dimensions of faculty engagement and faculty engagement. It also intends to identify the most important dimension which contributes to engagement of a faculty member in Autonomous arts and science colleges, which is depicted in Table 7.11.

Table 7.11

Correlation of Dimensions of Faculty Engagement with Faculty Engagement in Autonomous Arts and Science colleges

Sl. No	Dimensions of Faculty Engagement	r value	p-value	N
a.	Teaching Engagement	0.901**	0.000	66
b.	Research Engagement	0.820**	0.000	66
c.	Service Engagement	0.848**	0.000	66

*Source: Primary Data, ** statistically significant at 1% level*

From the table 7.11, it can be clearly drawn that all the dimensions of faculty engagement are highly correlated with faculty engagement. It is clear that teaching engagement contributes the most in engaging faculty members of Autonomous colleges with a correlation coefficient of 0.901 followed by service engagement with an r value of 0.848.

7.2.4.2 Regression analysis of dimensions of Faculty Engagement in Autonomous Arts and Science colleges

To establish the relationship between dimensions of faculty engagement and faculty engagement, total scores were calculated by adding the scores that has been provided by the respondents towards corresponding statements under each dimension and extracted for analysis. In order to establish the influence of

dimensions of faculty engagement on faculty engagement, simple regression analysis was performed. Table 7.12 presents the results of simple regression analysis.

Table 7.12

Dimensions of Faculty Engagement and Faculty Engagement - Regression analysis of Autonomous Arts and Science Colleges

Independent Variables	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std.Error			
Dimensions of Faculty Engagement	0.378	0.020	0.919	18.641**	0.000
Adjusted R^2 = 0.842					

*Source: Primary Data, ** statistically significant at 1% level*

Table 7.12 clearly depicts the regression analysis; it is very clear that faculty engagement is highly influenced by the dimensions of faculty engagement and the results show its significance at 1% level. The standardised regression coefficient of dimension of faculty engagement is 0.919 and adjusted R^2 is 0.842. Hence, it can be concluded that there exists a positive relation between dimensions of faculty engagement and faculty engagement.

7.2.4.3 Statistical Model for Engaging faculty members of Autonomous Arts and Science colleges

From the past analysis, it can be inferred that the faculty engagement is related with teaching, research and service engagement. To identify the most contributing dimension of faculty engagement and its influence on faculty engagement, multiple regression analysis was done by considering faculty engagement as the dependent variable and the dimensions of faculty engagement that is, teaching, research and service engagement are taken as independent variables. Table 7.13 presents the values of multiple regression analysis.

Table 7.13

Relationship between Teaching Engagement, Research Engagement & Service Engagement in Autonomous colleges- Results of Multiple Regression analysis

Independent Variables	Unstandardized Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error			
Teaching Engagement	0.481	0.119	0.497	4.054**	0.000
Research Engagement	0.321	0.108	0.253	2.973**	0.004
Service Engagement	0.291	0.136	0.225	2.141*	0.036
Adjusted R^2 = 0.839					

*Source: Primary Data, ** statistically significant at 1% level, *, Significant at 5% level*

Hence, the final statistical model with standardised regression coefficient of the significant variables is given below.

fe= 0.497 te + 0.253 re +0.225 se

Where, *fe* = standardised value of Faculty Engagement,

te = Teaching Engagement

re = Research Engagement

se = Service Engagement

The most influencing dimension of faculty engagement as per the equation, by virtue of the coefficient value, and also the significance which is revealed from the analysis is the teaching engagement followed by research engagement.

It is clearly evident from Table 7.13, correlation coefficients corresponding to teaching and research engagement are highly significant at 1% level of significance and of service engagement are highly significant at 5% level. It can be concluded that, engagement is driven through teaching, research and service in Autonomous arts and science colleges.

From the regression analysis (Table 7.3, Table 7.6, Table 7.9 and Table 7.12), it is clear that the faculty engagement is very much influenced by the

dimensions of faculty engagement as the result is significant at one percent level. Hence, ***the result supported and proved the eighth hypothesis formulated as:***

H8: There exists a significant relationship between Dimensions of Faculty Engagement and Faculty Engagement.

7.3 Outcomes of Faculty Engagement

The outcomes are the consequences that a faculty member and institution gains as a result of being engaged. The outcomes will be beneficial for both the faculty member and for the institutions. Organisational Citizenship Behaviour (OCB), Employee Retention, Job Satisfaction and Innovative Behaviour are the outcomes that has been proposed by the researcher. Organisational Citizenship Behaviour (OCB) is a set of discretionary work place behaviours that the faculty members exhibit which exceeds their job requirements which eventually contributes to the effectiveness and efficiency of an institution. Innovative Behaviour is the application of new ideas or behaviour. It is a set of process in engaging behaviour to create new ideas. It covers both the initiation and implementation of creative ideas. An employee who is engaged is likely to stay within the institution which reduces the cost and creates long term commitment towards institution. Job satisfaction involves personal happiness with one's job. It ensures performance and productivity of an institution. When a faculty member is found to be engaged, it leads them towards job satisfaction. Table 7.14 provides us with the results of mean and standard deviation.

Table 7.14

Mean and Standard Deviation of Outcomes of Faculty Engagement

Indicator Code	Indicators	Mean	Standard Deviation
OCB1	Always better to focus on positive side rather than negative side.	3.4436	0.97825
OCB2	Being part of new committees and extra-curricular activities considered as an opportunity.	3.6564	1.18902
OCB3	Defending should be done when others criticise our institution.	3.5821	0.91668

Indicator Code	Indicators	Mean	Standard Deviation
OCB4	Motivates others to express their opinion and ideas.	3.5077	1.27208
Organisational Citizenship Behaviour		***14.1897***	***3.91555***
IB1	Necessary to assure professional development of employees.	3.7744	1.19354
IB2	Rapid change in technology demands innovative behaviour in teaching.	3.8077	1.17008
IB3	Old school of thoughts should be replaced by new ones to achieve better results.	3.7436	1.20662
IB4	Educational sectors should be upgraded shortly.	3.9154	1.26064
Innovative Behaviour		***15.2410***	***4.47137***
ER1	Employee retention fosters bonding among the members.	3.4026	1.10129
ER2	Timely promotion plays a pivotal role.	3.5564	1.07347
ER3	Employees leave the institution out of frustration and constant friction with superiors.	3.3462	0.94075
ER4	Working environment of the institution creates confidence to work.	2.9590	1.02582
Employee Retention		***13.2641***	***3.67644***
JS1	Greater team spirit within the organisation.	3.2872	1.10600
JS2	Stability of job leads to higher job satisfaction.	2.9667	1.04963
JS3	Salary corresponds to the level of responsibility and demands of my job.	3.5128	1.04578
Job Satisfaction		***9.7667***	***2.93098***

Source: Primary Data

Table 7.14 provides the results of mean and standard deviation of outcomes of faculty engagement. 'Being part of new committees and extra-curricular activities considered as an opportunity' is the statement which has the highest mean score of 3.6564 (SD 1.18902) among the outcome organisational citizenship behaviour. 'Educational sectors should be upgraded shortly' is the statement which scores a high mean of 3.9154 (SD 1.26064) in case of innovative behaviour.

Faculty members also opine that 'Timely promotion plays a pivotal role' with a mean value of 3.5564 (SD 1.07347). It is also opined by the faculty members that 'salary corresponds to the level of responsibility and demands of my job' with highest mean score of 3.5128 (SD 1.04578) among job satisfaction.

7.3.1 Statistical Model for Faculty Engagement and its Outcomes

7.3.1.1 Relationship between Faculty Engagement and its Outcomes

Table 7.15

Correlation of Components of Faculty Engagement with its Outcomes

Sl. No	Components of Faculty Engagement	r value	p-value	N
a.	Vigor	0.897**	0.000	390
b.	Dedication	0.905**	0.000	390
c.	Absorption	0.886**	0.000	390
Faculty Engagement		**0.919****	**0.000**	**390**

*Source: Primary Data, ** statistically significant at 1% level*

Table 7.15 presents the correlation results of components of faculty engagement with its outcomes. It can be clearly inferred that Faculty Engagement is having a very high positive relation with its outcomes with an r value of 0.919 and the components vigor, dedication & absorption also shows high 'r' values of 0.897, 0.905 and 0.886 respectively. Since, the p-value is less than 0.05, it can be concluded that faculty engagement and its components are highly related with its outcomes.

7.3.1.2 Effect of Relationship between Faculty Engagement and its Outcomes

Simple regression analysis was used to measure the effect of relationship between Faculty Engagement and its outcomes. With the help of correlation, predictive power of a variable can be studied. Through regression analysis, we fit a predictive model, which can be used to predict the values of the outcomes from faculty engagement. It tries to explain how outcome is explained by faculty engagement. Table 7.16 exhibits the results of simple regression analysis.

Table 7.16

Components of Faculty Engagement and Outcomes of Faculty engagement – Regression analysis

Independent Variable	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std.Error			
Faculty Engagement	1.578	0.034	0.919	45.840**	0.000
Adjusted R^2 = 0.844					

*Source: Primary Data, ** statistically significant at 1% level*

In the analysis, outcomes of faculty engagement are taken as dependent variable and Faculty Engagement is taken as independent variable. From the table 7.16, it can be clearly inferred that the r value is 0.919 which shows a very high relation of faculty engagement with its outcomes. The value of adjusted R^2 being 0.844, it can be stated that 84% of the outcome is explained by components of Faculty Engagement and remaining by other factors.

7.3.1.3 Statistical Model of Faculty Engagement in generation of its Outcomes

From the analysis performed, it can be inferred that the outcomes are highly related with vigor, dedication and absorption. To measure the most contributing component and to know its influence on outcomes, multiple regression was performed. Outcomes are taken as dependent variable and the components vigor; dedication & absorption are considered as independent variables for the purpose of analysis. Table 7.17, shows the results of multiple regression analysis.

Table 7.17

Relationship between Vigor, Dedication & Absorption and its Outcomes – Results of Multiple Regression analysis

Independent Variables	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error			
Vigor	1.459	0.286	0.317	5.104**	0.000
Dedication	1.687	0.296	0.392	5.691**	0.000
Absorption	1.581	0.399	0.231	3.965**	0.000
Adjusted R^2 = 0.843					

*Source: Primary Data, ** statistically significant at 1% level, * statistically significant at 5% level*

The final statistical model with standard regression coefficients of the significant variables is given below:

out = 0.317vig + 0.392ded + 0.231abs

Where, *out* = Standardised value of Outcomes,

vig = Vigor,

ded = Dedication and

abs = Absorption.

The most influencing component of outcomes as per the equation, by virtue of the coefficient value and also the significance which is revealed from the analysis is the dedication followed by the vigor.

It is also clearly evident from the table 7.17, correlation coefficients corresponding to vigor, dedication and absorption are highly significant at 1% level. Hence, it can be concluded that outcomes are driven through vigor, dedication and absorption.

7.3.2 Model for Faculty Engagement and Organisational Citizenship Behaviour

7.3.2.1 Relationship between Faculty Engagement and Organisational Citizenship Behaviour

Table 7.18

Correlation of Components of Faculty Engagement with Organisational Citizenship Behaviour (OCB)

Sl. No	Components of Faculty Engagement	r value	p-value	N
a.	Vigor	0.848**	0.000	390
b.	Dedication	0.857**	0.000	390
c.	Absorption	0.842**	0.000	390
Faculty Engagement		***0.870****	***0.000***	***390***

*Source: Primary Data, ** statistically significant at 1% level*

From the table 7.18, it can be inferred that the components of faculty engagement are highly correlated with Organisational Citizenship Behaviour (OCB). It is clear that dedication contributes the most towards OCB with an r

value of 0.857 followed by vigor and absorption with r values of 0.848 and 0.842 respectively.

7.3.2.2 Effect of Relationship between Faculty Engagement and Organisational Citizenship Behaviour

The effect of relationship between Faculty Engagement and Organisational Citizenship Behaviour (OCB) can be studied using regression analysis. Correlation tells us something about the predictive power of a variable. But in regression analysis, we fit a predictive model to our data and use that model to predict values of dependent variable from one or more independent variable. It says how much one variable is explained by another variable. The following table shows the results of simple regression analysis.

Table 7.19

Components of Faculty Engagement and Organisational Citizenship Behaviour – Regression analysis

Independent Variable	Unstandardised Coefficients		Standardised Coefficients	t	Sig
	B	Std.Error			
Faculty Engagement	0.412	0.012	0.870	34.780**	0.000

Adjusted R^2 = 0.757

*Source: Primary Data, **, statistically significant at 1% level*

The Organisational Citizenship Behaviour (OCB) one of the outcomes of Faculty Engagement is taken as dependent variable and Faculty Engagement is taken as independent variable. From the table 7.19, it is clear that r value is 0.870 which shows a high correlation between Faculty Engagement and Organisational Citizenship Behaviour (OCB). Adjusted R^2 explains the proportion of variance, that is, 75.7% of the OCB is explained by Faculty Engagement and the remaining by other factors.

7.3.2.3 Statistical Model of Faculty Engagement in developing Organisational Citizenship Behaviour

From the analysis performed, it can be inferred that the OCB is related with vigor, dedication and absorption. To measure the most contributing component and its influence on Organisational Citizenship Behaviour (OCB), multiple regression

was performed by taking OCB as dependent variable and vigor, dedication & absorption as independent variables. Table 7.20 exhibits the results of multiple regression analysis.

Table 7.20

Relationship between Vigor, Dedication & Absorption and Organisational Citizenship Behaviour – Results of Multiple Regression analysis

Independent Variables	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error			
Vigor	0.363	0.098	0.286	3.690**	0.000
Dedication	0.425	0.102	0.359	4.169**	0.000
Absorption	0.465	0.137	0.246	3.389**	0.001
Adjusted R^2 = 0.755					

*Source: Primary Data, **, statistically significant at 1% level.*

Hence, the final statistical model with standard regression coefficient of the significant variables is given below:

ocb = 0.286 vig + 0.359 ded + 0.246 abs

Where, *ocb* = Standardised value of Organisational Citizenship Behaviour,

vig = Vigor,

ded = Dedication,

abs = Absorption.

The most influencing component on organisational citizenship behaviour as per the equation, by virtue of the coefficient value and also the significance which is revealed from the analysis is the dedication followed by vigor.

It is clearly evident from the table 7.20, correlation coefficients corresponding to vigor, dedication and absorption are highly significant at 1% level of significance. It can also be concluded that, Organisational Citizenship Behaviour (OCB) is driven through vigor, dedication and absorption.

7.3.3 Model for Faculty Engagement and Employee Retention

7.3.3.1 Relationship between Faculty Engagement and Employee Retention

Table 7.21

Correlation of Components of Faculty Engagement with Employee Retention

Sl. No	Components of Faculty Engagement	r value	p-value	N
a.	Vigor	0.862**	0.000	390
b.	Dedication	0.878**	0.000	390
c.	Absorption	0.862**	0.000	390
Faculty Engagement		***0.889****	***0.000***	***390***

*Source: Primary Data, **statistically significant at 1% level.*

The table 7.21 clearly spells that the faculty engagement is highly correlated with employee retention with an 'r' value of 0.889. The component of faculty engagement, dedication contributes the most towards employee retention with an 'r' value of 0.878 and the components vigor and absorption are having 'r' values of 0.862. As the p-value is less than 0.05, it can be concluded that there exists a significant relationship between faculty engagement and employee retention.

7.3.3.2 Effect of Relationship between Faculty Engagement and Employee Retention

The effect of relationship between components of faculty engagement and employee retention can be studied using regression analysis. Correlation states the predictive power of a variable. In regression analysis, we fit a predictive model to our data and use that model to predict values of employee engagement from faculty engagement. It says how much employee retention is explained by faculty engagement. The following table shows the results of regression analysis.

Table 7.22

Components of Faculty Engagement and Employee Retention – Regression analysis

Independent Variable	Unstandardised Coefficients		Standardised Coefficients	t	Sig
	B	Std. Error			
Faculty Engagement	0.395	0.010	0.889	38.185**	0.000
Adjusted R^2 = 0.789					

*Source: Primary Data, **, statistically significant at 1% level*

Here, the employee retention has been taken as dependent variable and Faculty engagement were taken as independent variable. From the table 7.22, the Pearson Correlation Coefficient (r) is 0.889, which shows a high correlation between faculty engagement and employee retention. The value of adjusted R^2 is 0.789, which states that 79% of the employee retention is explained by the faculty engagement and remaining by other factors.

7.3.3.3 Statistical Model of Faculty Engagement in Retaining Employees

From the analysis done, it can be inferred that the employee retention is related with vigor, dedication and absorption. To identify the most contributing component and its influence on employee engagement, multiple regression was performed by considering employee retention as dependent variable and the components of faculty engagement, vigor, dedication & absorption are taken as independent variables. Table 7.23, exhibits the multiple regression analysis.

Table 7.23

Relationship between Vigor, Dedication & Absorption and Employee Retention – Results of Multiple Regression analysis

Independent Variables	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error			
Vigor	0.268	0.086	0.225	3.129**	0.002
Dedication	0.461	0.089	0.415	5.193**	0.000
Absorption	0.479	0.119	0.270	4.009**	0.000
Adjusted R^2 =0.789					

*Source: Primary Data, ** statistically significant at 1% level.*

Hence, the final statistical model with standard regression coefficient of the significant variables is given below:

er = 0.225 vig + 0.415 ded + 0.270 abs

where, *er* = Standardised value of Employee Retention,

vig = Vigor,

ded = Dedication and

abs = Absorption.

The most influencing component on Employee Retention as per the equation, by virtue of the coefficient value and also the significance which is revealed from the analysis is the dedication followed by absorption.

It is clearly evident from the table 7.23, correlation coefficient corresponding to vigor, dedication and absorption are highly significant at 1% level. It can also be concluded that employee retention is driven through vigor, dedication and absorption.

7.3.4. Model for Faculty Engagement and Innovative Behaviour

7.3.4.1 Relationship between Faculty Engagement and Innovative Behaviour

Table 7.24

Correlation of Components of Faculty Engagement with Innovative Behaviour

Sl. No	Components of Faculty Engagement	r value	P Value	N
a.	Vigor	0.845**	0.000	390
b.	Dedication	0.851**	0.000	390
c.	Absorption	0.831**	0.000	390
Faculty Engagement		***0.864****	***0.000***	***390***

*Source: Primary Data, ** statistically significant at 1% level.*

The following table states that the faculty engagement is highly correlated with innovative behaviour with an 'r' value of 0.864. The components vigor,

dedication & absorption also shows a high positive relation between innovative behaviour with r values of 0.845, 0.851 and 0.831 respectively. As the p-value is less than 0.05, it can be concluded that there exists a significant relationship between Faculty Engagement and Innovative Behaviour.

7.3.4.2 Effect of Relationship between Faculty Engagement and Innovative Behaviour

The effect of relationship between Faculty Engagement and Innovative Behaviour can be studied using simple regression analysis. Correlation states that predictive power of a variable. In regression analysis, we fit a predictive model to our data and uses that model to predict values of innovative behaviour from the faculty engagement. It says how much innovative behaviour is explained by faculty engagement. The following table shows the results of regression analysis.

Table 7.25

Components of Faculty Engagement and Innovative Behaviour – Regression analysis

Independent Variable	Unstandardised Coefficient		Standardised Coefficient	t	Sig.
	B	Std. Error			
Faculty Engagement	0.467	0.014	0.864	33.771**	0.000
Adjusted R^2 = 0.746					

*Source: Primary Data, ** statistically significant at 1% level.*

Here, Innovative Behaviour has been taken as dependent variable and faculty engagement was taken as an independent variable. From the table 7.25, the Pearson Correlation Coefficient (r) is 0.864, which shows a high correlation between Faculty Engagement and Innovative Behaviour. The value of adjusted R^2 is 0.746, which states that 75% of the innovative behaviour is explained by faculty engagement and remaining by other factors.

7.3.4.3 Statistical Model of Faculty Engagement in developing Innovative Behaviour

From the foregoing analysis, it can be inferred that the innovative behaviour is related with vigor, dedication and absorption. To measure the most contributing and its influence on innovative behaviour, multiple regression was performed by considering Innovative Behaviour as dependent variable and the components of faculty engagement, vigor, dedication and absorption are taken as independent variables. Table 7.26 depicts the multiple regression analysis.

Table 7.26

Relationship between Vigor, Dedication & Absorption and Innovative Behaviour – Results of Multiple Regression analysis

Independent Variables	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std.Error			
Vigor	0.471	0.115	0.325	4.101**	0.000
Dedication	0.490	0.119	0.362	4.112**	0.000
Absorption	0.424	0.160	0.197	2.648**	0.008
Adjusted R^2 = 0.744					

*Source: Primary Data, ** statistically significant at 1% level.*

Here, the final statistical model with standard regression coefficient of the significant variables is given below:

ib = 0.325vig + 0.362ded + 0.197abs

Where, *ib* = Standardised value of Innovative Behaviour,
vig = Vigor,
ded = Dedication and
abs = Absorption.

The most influencing component on innovative behaviour as per the equation, by virtue of the coefficient value and also the significance which is revealed from the analysis is the dedication followed by vigor.

It is clearly evident from the table 7.26, correlation coefficients corresponding to vigor, dedication and absorption shows high significance at 1% level. Hence, it can be concluded that innovative behaviour is driven through vigor, dedication and absorption.

7.3.5 Statistical Model for Faculty Engagement and Job Satisfaction

7.3.5.1 Relationship between Faculty Engagement and Job Satisfaction

Table 7.27

Correlation of Components of Faculty Engagement with Job Satisfaction

Sl. No	Components of Faculty Engagement	r value	p-value	N
a.	Vigor	0.845**	0.000	390
b.	Dedication	0.846**	0.000	390
c.	Absorption	0.823**	0.000	390
Faculty Engagement		***0.860****	***0.000***	***390***

*Source: Primary Data, ** statistically significant at 1% level.*

The above table signifies that there exists a high positive relation between Faculty Engagement and Job Satisfaction with an r value of 0.860. The components vigor, dedication and absorption are also highly correlated with job satisfaction with r values of 0.845, 0.846 and 0.823 respectively. Since, p-value shows a value of 0.000 which is less than 0.05, it can be concluded that there exists a significant relationship between components of faculty engagement and job satisfaction.

7.3.5.2 Effect of Relationship between Faculty Engagement and Job Satisfaction

The effect of relationship between faculty engagement and job satisfaction can be analysed with the help of simple regression. Correlation states the predictive power of a variable. In regression analysis, we fit a predictive model to our data and use that model to predict values of job satisfaction from the faculty engagement. It says how much job satisfaction is explained by faculty engagement. The following table presents the results of simple regression analysis.

Table 7.28

Components of Faculty Engagement and Job Satisfaction – Regression analysis

Independent Variable	Unstandardised Coefficient		Standardised Coefficient	t	Sig.
	B	Std. Error			
Faculty Engagement	0.305	0.009	0.860	33.177**	0.000
Adjusted R^2 = 0.739					

*Source: Primary Data, ** statistically significant at 1% level.*

Here, Job satisfaction is taken as dependent variable and faculty engagement as independent variable. From the table 7.28, the Pearson Correlation Coefficient (r) is 0.860 which assures that the relationship between Faculty Engagement and Job Satisfaction is highly positive. The value of adjusted R^2 is 0.739, which states that 74% of the job satisfaction is explained by faculty engagement and remaining by other factors.

7.3.5.3 Statistical Model of Faculty Engagement in creating Job Satisfaction

From the analysis performed, it can be inferred that the job satisfaction is related with vigor, dedication and absorption. To identify the most contributing component and its influence on job satisfaction, multiple regression was performed by taking Job Satisfaction as dependent variable and the components of faculty

engagement that is, vigor, dedication and absorption as independent variables. Table 7.29, presents the results of multiple regression analysis.

Table 7.29

Relationship between Vigor, Dedication & Absorption and Job Satisfaction – Results of Multiple Regression analysis

Independent Variables	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error			
Vigor	0.358	0.076	0.377	4.696**	0.000
Dedication	0.311	0.079	0.351	3.943**	0.000
Absorption	0.214	0.106	0.151	2.011*	0.045
Adjusted R^2 = 0.738					

*Source: Primary Data, ** statistically significant at 1% level, * statistically significant at 5% level*

Hence, the final statistical model with standard regression coefficient of the significant variables is given below:

js = 0.377vig + 0.351ded + 0.151abs.

Where, *js* = Standardised value of job satisfaction,
vig = Vigor,
ded = Dedication and
abs = Absorption.

The most influencing component on job satisfaction as per the equation, by virtue of coefficient value and also the significance which is revealed from the analysis is that vigor is followed by dedication.

It is clearly evident form the table 7.29, the correlation coefficients corresponding to vigor, dedication and absorption are highly significant at 1% level. It can also be concluded that job satisfaction is driven through vigor, dedication and absorption.

From the regression analysis (Table 7.16,Table 7.19, Table 7.22, Table 7.25 and Table 7.28), it is clear that the Outcomes are very much influenced by the

faculty engagement as the result is significant at one percent level. Hence, ***the result supported and proved the ninth hypothesis formulated as:***

H9: There exists a significant relationship between Faculty Engagement and Outcomes of Faculty Engagement.

7.4 Conclusion

The present chapter deals with the fourth and fifth objective of the research to develop a standard model of faculty engagement and to analyse the outcomes of faculty engagement. With the help of Karl Pearson's correlation coefficient and multiple regression analysis, the relevant hypotheses have been tested. It has been found that the dimensions of faculty engagement that is, teaching, research, and service engagement are highly related to faculty engagement. That is, a faculty member who is highly engaged in teaching, research, and service seems to show a high level of vigor, dedication and absorption in their behaviour. It can also be observed that the relationship between faculty engagement and outcomes of faculty engagement are highly related and outcomes of faculty engagement is driven through vigor, dedication and absorption.

Chapter 8

SUMMARY, FINDINGS AND CONCLUSION

Contents

8.1 Introduction

The study is based on both secondary and primary data. Secondary data were collected from reports and websites of regulatory bodies to examine the steps taken by the regulatory bodies to enhance faculty engagement. The primary data were collected from 390 faculty members of Arts and Science colleges in Kerala. Inference of the study is grouped into contributing factors of faculty engagement, level of difference regarding engagement level among faculty members, outcomes of faculty engagement and creation of standard model for engaging faculty members. This chapter begins with a summary of the research, followed by the findings generated out of the study. The chapter concludes by providing further scope for research in faculty engagement.

8.2 Summary

The study entitled "A study on Faculty Engagement with special reference to Arts and Science colleges of Kerala" was undertaken to measure the level of engagement among faculty members in Arts and Science colleges of Kerala. This study identifies the factors that influence faculty engagement, compare the engagement level of faculty members of Government, Aided, and Autonomous colleges, and creates a standard model for faculty engagement. It also analyses the outcomes of Faculty Engagement. The research questions raised in the study include:

What are the steps taken by the regulatory bodies to enhance faculty engagement?
What are the factors that lead to engagement among faculty members of Arts and Science colleges?
Whether there exists any difference in engagement among faculty members of Government, Aided and Autonomous colleges?
What are the outcomes of faculty engagement?

The study is descriptive and analytical in nature. It is based on both secondary and primary data. It measures the level of engagement of faculty members of Arts and Science colleges of Kerala and develops a statistical model for engaging them. Research is done by adopting "research onion" framed by (Saunders, Lewis & Thornbill, 2009). For collecting the primary data, questionnaire was distributed among the selected faculty members of Arts and Science colleges of Kerala. Multi-stage probability sampling was adopted as the sampling technique for collecting the data.

The researcher has chosen University of Calicut, from the list of Universities in Kerala, as number of affiliated colleges are more compared to other Universities. Colleges for data collection belonging to the category of Aided, Autonomous and Government were selected through lottery method. After framing a list of faculty members working with each college, the researcher has made use of systematic probability sampling for the final selection of samples. The total sample size is 390 which is divided among types of institutions on the basis of total number of faculty members in each category. Mean, Standard deviation, percentage, independent sample t-test, one way ANOVA, Tamhane's post-hoc test, Tukey HSD post-hoc test, correlation and multiple regression are the tools used for analysing the data.

The study found that all the factors identified such as organisational, psychological, economic, social, and management factors are positively related to dimensions of faculty engagement. It is also found that there exists no significant difference among Government, aided, and autonomous institutions with respect to teaching and service engagement. But research engagement differs in Government and autonomous arts and science colleges. A strong relationship between faculty engagement and its outcomes are also established in the study.

It can be concluded that regulatory bodies should take immense consideration to build and maintain engagement among faculty members in the areas of teaching, research, and service. The statistical model developed by the researcher can be used as a base for this purpose. Faculty members should also understand that getting engaged will be beneficial to themselves in the long run.

8.3 Findings of the study

Important findings of the study are summarised in this section. After studying the policies and guidelines issued by the regulators of Indian higher education, it has been found that more focus has been given by the regulatory bodies in engaging faculty members in research-oriented activities and absence of policies which inculcate teaching and service engagement among faculty members. The regulatory bodies of higher education such as UGC and KSHEC has stressed more importance on research engagement. While analysing the guidelines proposed by UGC, it is found that grants and financial assistance being provided for major and minor research project, for organising conferences, seminars and workshops, faculty development programmes and others and the same is the case with KSHEC and other regulators. Barely minimum stress is given to develop teaching and service engagement among faculty members.

The findings after performing analysis of second, third, fourth, and objectives are pointed below.

8.3.1 Profile of Respondents

The study is conducted among faculty members of Arts and Science colleges of Kerala. The detailed findings from the profile of the respondents are:

a. There is a fair representation of both male and female faculty members in the study with 41.50% of male faculty members and 58.50% of female faculty members.

b. 80% (312) of the faculty members belong to 30-45 years of age. Thus, it is found that majority of the faculty members are in this age category compared to below 30 or above 45.

c. Among the sample faculty members, 45.90% have less than 10 years of experience, another 45.90% with an experience ranging from 10-20 years and 8.20% of the sample have more than 20 years of experience.

d. It is seen that 36% of the faculty members belong to Government colleges, 47.10% from Aided and 16.90% from Autonomous colleges. Thus, the proportion of Aided faculty members considered for the study is more compared to other two categories.

e. Among the sample faculty members, 90% (351) are Assistant professors and 10% (39) are Associate professors, which indicates that faculty members with the designation Assistant professor outnumbers the Associate professors in Arts and Science colleges of Kerala.

8.3.2. Contributing factors of faculty engagement

Contributing factors taken into consideration by the researcher are personal, organisational, psychological, economic, social, and management factors. Dimensions of faculty engagement can be classified into teaching, research, and service engagement.

8.3.2.1 Personal factors and Teaching Engagement

The personal factors considered for the analysis are gender, age, years of experience, and designation of faculty members. Independent sample t-test and One-way ANOVA are the statistical tools used.

- In Gender-wise analysis, the mean score of teaching engagement among female faculty members is 31.2675 (SD 9.5083), whereas, in the case of male faculty members, it is 32.9506 (SD 8.0624). The mean score indicates that the male faculty members are more engaged towards teaching. While, no significant difference exists between male and female faculty members with regard to teaching engagement.

  The analysis based on the different types of institutions also imply that no significant difference between male and female faculty members with respect to teaching engagement. Furthermore, male faculty members found to be more immersed in teaching when compared to their female counterparts.

- In age-wise analysis, faculty members belonging to age group below 30 years have the highest mean score of 36.1429 (SD 2.5548), whereas, the faculty members who are in age group of 30-45 have the lowest mean score of 31.8333 (SD 8.9993). This implies that young faculty members are more engaged in teaching. But the p-value makes it evident that significant difference does not exists among age category of faculty members with regard to teaching engagement.

  While analysing, on the basis of institutions, it is clear that significant difference exists among age category with regard to teaching engagement in case of Autonomous colleges. After performing post hoc analysis using Tamhane, it is found that significant difference exists between faculty members belonging to age category of below 30 with '30-45' age category. However, in the case of Government and Aided colleges, no significant difference exists among different age group of faculty members.

- In experience-wise analysis the faculty members with more than 20 years of experience possess the highest mean score of 32.4357 (SD 8.0520), whereas, faculty members with 10-20 years of experience have the lowest mean score of 31.6872 (SD 9.3971). This suggests that faculty members with more years of experience shows a high level of engagement in teaching. While, there exists no significant difference among experience with respect to teaching engagement.

  In case of different types of institutions, significant difference exists among faculty members' year of experience with respect to teaching engagement in autonomous colleges as the Welch's p-value is 0.049 which is less than 0.05. The post hoc results reveal that difference in teaching engagement exists between faculty members with less than 10 years of experience and 10-20 years of experience. In contrary, no significant difference among experience of the faculty members and teaching engagement in case of Government and Aided colleges.

- While analysing the designation, the mean score of assistant professors is 31.8746 (SD 9.0248), whereas the mean score of associate professors is 32.7949 (SD 8.4609), which implies that associate professor is more engaged towards teaching. Furthermore, no significant difference exists between assistant professor and associate professor with regard to teaching engagement.

  The analysis on the basis of different types of institutions indicate that no significant difference exists between assistant professor and associate professor. However, assistant professor seems to be more engaged in case of Aided with a mean score of 33.0617 and Autonomous institutions with a mean value of 30.7581. In Government colleges, Associate professors seems to be more engaged in teaching with a mean score of 33.7692.

8.3.2.2 Personal factors and Research Engagement

- Gender-wise analysis implies that, in arts and science colleges, no significant difference between female and male faculty members with regard to research engagement. While, analysing mean score among female and male faculty members, it is evident that male faculty members with a mean score of 27.3457 shows more engagement towards research.

  The analysis based on different types of institutions also imply that no significant difference between male and female faculty members with regard to research engagement. However, male faculty members are found to be more involved in research when compared to their female faculty members.

- Age-wise analysis exhibits that young faculty members in the age category of below 30 have the highest mean score of 31.2857 (SD 2.7516) and faculty members in the age group of 30-45 years have the lowest mean score of 26.5962 (SD 6.9613). The empirical evidence suggests that young faculty members are more engaged towards research. As the p-value is 0.200, which is greater than 0.05, no significant difference among age of faculty members with regard to research engagement.

Analysing the research engagement on the basis of institution makes it evident that, no significant difference exists among age category of faculty members with respect to research engagement in Government, Aided and Autonomous institutions.

- In experience-wise analysis, the faculty members having experience for 'more than 20 years' possess the highest mean score of 27.2813 (SD 7.1221), while, the faculty members having experience of 'less than 10 years' possess the lowest mean score of 26.5978 (SD 6.9650). Hence, it can be inferred that the faculty members having more years of experience are engaged towards research. Also, it is found that no significant difference exists among years of experience with regard to research engagement.

  In the case of different types of institutions, there exists significant difference among years of experience with regard to research engagement in case of Autonomous colleges. The post-hoc results reveal that difference in research engagement exists between faculty members with less than 10 years of experience and 10-20 years of experience. However, no significant difference among experience of the faculty members with respect to research engagement in case of both Government and Aided colleges.

- In designation-wise analysis, the mean score of research engagement among assistant professor is 26.6752 (SD 6.9957), whereas in case of associate professor, it is 27.5385 (SD 7.0219). The mean score indicates that associate professors are more engaged towards research. However, p-value indicates that no significant difference exists between assistant professor and associate professor with regard to research engagement.

  The analysis on the basis of different types of institutions, reveals that no significant difference exists between assistant and associate professors with regard to research engagement. However, associate professors are found to be more immersed in research when compared to assistant professor in case of Government colleges. In contrary, assistant professors are more engaged in research in case of Aided and Autonomous colleges.

8.3.2.3 Personal factors and Service Engagement

- In gender-wise analysis, the mean score of service engagement among female faculty member is 23.2500 (SD 6.8587), whereas, in the case of male faculty members, it is 23.9938 (SD 5.9474). The mean score indicate that male faculty members are more engaged towards service-oriented activities. However, no significant difference exists between female and male faculty members with regard to service engagement.

  The analysis on the basis of types of institution also imply that no significant difference between male and female faculty members with respect to service engagement. However, male faculty members are found to be more involved in service-oriented activities when compared to female faculty members in case of Government and Aided colleges. In Autonomous colleges, it has been found that female faculty members are more engaged compared to their male counterparts.

- In age-wise analysis, faculty members belonging to the age category below 30 have the highest mean score of 26.1429 (SD 3.1320), whereas, faculty members in the age category 30-45 have the lowest mean score of 23.3974 (SD 6.5165). This implies that young faculty members are more engaged in service-oriented activities. However, the p-value spells that the significant difference does not exist among age category of faculty members with regard to service engagement.

  While analysing, on the basis of institutions, it is clear that no significant difference exists among different age group of faculty members with regard to service engagement.

- Experience-wise analysis exhibits that faculty members with 'more than 20 years' of experience have the highest mean score of 24.1250 (SD 6.2874), and the faculty members with an experience ranging from '10-20 years' have the lowest mean score of 23.4134 (SD 6.9060). As the p-value is less than 0.05, there exists no significant difference among faculty members' years of experience with regard to service engagement.

Analysing the service engagement on the basis of types of institution, no significant difference exists among years of experience of faculty members with regard to service engagement. However, faculty members with experience of more than 20 years seems to be more engaged towards service with highest mean score of 24.5833 (SD 6.4449) in case of Government, 25.2000 (SD 4.5497) in case of Autonomous colleges. While, in Aided colleges, faculty members with 10-20 years of experience seems to be engaged in service-oriented activities with a mean score of 24.7674 (SD 5.9934).

- In designation-wise analysis, the faculty members' who holds the title 'associate professor' possess the highest mean score of 24.0513 (SD 6.5371) and 'assistant professor' possess the lowest mean score of 23.5043 (SD 6.5009). However, there exists no significant difference between assistant professor and associate professor with regard to service engagement.

The analysis based on the type of institution, also reveal that no significant difference exists between assistant professor and associate professor with regard to service engagement. However, associate professors are found to be more engaged towards service-oriented activities compared to assistant professor in case of Government and Autonomous colleges. While, assistant professors scores high with a mean value of 24.2840 (SD 5.9401) in case of Aided institutions.

The data (tables 5.2 to 5.40) analysed with the help of independent sample t-test, One-way ANOVA and relevant post-hoc to test the difference among selected personal factors of faculty engagement and the dimension of faculty engagement, ***the null hypothesis is accepted except for age and years of experience in arts and science colleges.***

Significant difference exists among faculty members belonging to age group below 30 and 30-45 in teaching engagement and among faculty members with less than 10 years of experience and 10-20 years of experience in teaching and research engagement with respect to Autonomous arts and science colleges. While, in remaining instances no

significant difference among personal factors and dimensions of faculty engagement.

8.3.2.4 Organisational factors and Teaching Engagement

- The mean score of organisation culture and policy tells that 88.74% of the respondents are satisfied and have a positive attitude towards the culture and policies the belonging institution has framed. But they still believe that an institutions' reputation cannot be measured through its culture and policies framed. Communication of policy is considered to be the key for effective functioning by the majority of the respondents.
- Department culture is considered as a crucial element by the faculty members at a rate of 92.28% in inculcating engagement. Respondents opined that quick resolution of problems are necessary for smooth conduct and ensure oneness in the institution with highest mean score. Respondents have low preference on the point openness can be promoted when employees are encouraged to voice their opinion.
- Autonomy is another element which is rated high among the organisational factors with 89.82%. Possibility for independent thoughts and critical resolutions creates more autonomy. While, more interference during the work erodes engagement should be considered as an element which has an impact on autonomy and leads to low engagement.
- Innovation is a highly influential element of organisational factor with 94.90%. Acceptance and implementation of ideas boosts engagement and respondents opines that development of creativity and problem-solving skills are not that much possible through innovation.
- Accountability scores 93% in creating engagement. Accountability assures high standards of teaching. Respondents doubt that an engaged faculty member will show a high sense of belongingness towards the profession.
- Recognition contributes 91.97% in inculcating engagement. Respondents believe that peer-to-peer recognition induces them more than monetary reward and opines that faculty members are not sufficiently recognised for the work they perform.

- The organisational factors to a great extent influence teaching engagement. The organisational factors such as organisational culture and policy, innovation, accountability, recognition, and autonomy are identified and statements were developed by the researcher. Faculty members were asked to rate these factors on a five-point Likert scale.

  From the analysis of the data presented in Table 5.42, it is understood that all the organisational factors are highly correlated with teaching engagement. The most contributing factor of teaching engagement is organisational culture and policy followed by departmental culture as the result is found to be significant at one percent level.

  Table 5.43 also implies that organisational factors are highly correlated with teaching engagement in all types of institutions. The factors that contribute the most is organisational culture and policy followed by departmental culture in case of Government colleges and Autonomous colleges. While, in case of Aided colleges, organisational culture and policy is followed by accountability and the results are found to be significant at 1% level.

8.3.2.5 Organisational factors and Research Engagement

- The most important factor used to assess the research engagement is organisational factor, components being organisational culture and policy, department culture, innovation, accountability, recognition, and autonomy. In order to know the relation between organisational factor and research engagement, total scores were calculated by adding the scores of the corresponding statements and used for analysis.

  From the Table 5.44, it is clear that organisational culture and policy (correlation coefficient 0.723) is the most contributing organisational factor of research engagement followed by department culture (correlation coefficient 0.704). So, if good organisational culture and policy is framed, it can enhance research engagement among faculty members.

  Table 5.45 explains the relationship of organisational factors with research engagement in case of different types of institutions.

Organisational culture and policy with 'r' value of 0.692 contributes the most followed by department culture with an 'r' value of 0.681 in case of Government colleges. The factors that contribute the most in Aided colleges are organisational culture and policy followed by department culture with 'r' values of 0.744 and 0.701 respectively. In Autonomous arts and science colleges, department culture is highly related to research engagement with an 'r' value of 0.770 followed by organisational culture and policy with an 'r' value of 0.748.

It can be inferred that by developing an ideal organisational culture and policy and creating a good department culture, authorities could develop a sense of commitment towards research in arts and science colleges.

8.3.2.6 Organisational factors and Service Engagement

- In order to know the relation between organisational factor and service engagement, total scores were calculated by adding the scores of the corresponding statements and used for further analysis.

From the correlation Table 5.46 the most contributing factors of service engagement is organisational culture and policy with an 'r' value of 0.845 followed by departmental culture with 'r' value of 0.805, the result is found to be significant at one percent level.

The table 5.47 clearly tells that service engagement is contributed more by the organisational factor, organisational culture and policy (r = 0.865), followed by department culture (r = 0.799) in Government institutions. Organisational culture and policy with 'r' value of 0.849 and department culture with 'r' value of 0.804 in case of Aided institutions. In Autonomous institutions, department culture acts as an important contributor towards service engagement, followed by recognition with 'r' values of 0.833 and 0.806 respectively.

The Table 5.41 to 5.47 analysed with the help of Karl Pearson's correlation coefficient at one percent level of significance to test the

relationship between organisational factors and dimensions of faculty engagement, ***supported and proved the second hypothesis stated:***

H2: There exists a significant relationship between Organisational factors and the Dimensions of faculty engagement.

8.3.2.7 Psychological factors and Teaching Engagement

- The mean score spells that 93.74% of the respondents have a positive attitude towards meaningfulness. Respondents opine that distinctiveness of institution is reflected in its performance and faculty members should be clear enough in what he or she intends to do.
- 92.28% of the respondents believe personal trust and value as a crucial determinant in creating engagement. Respondents believe that personal trust helps to reduce stress and burnout. But they also opine that they are not able to rely on each other's in decision making.
- Involvement, contributes in an average level towards creating engagement. Faculty members believe that sufficient authority must be given to participate in substantive decisions. They have a low feel of personal control over schedule.
- Work pressure, a highly contributing factor of engagement. Faculty members opine that it is possible to maintain a work-life balance and believe that they are not in a position to spent time on research and other activities.
- Another contributing psychological factor is challenging work. Respondents trust that they are able to infuse confidence level of students and they are of the opinion that no need to give equal priority for teaching, research and service.
- Psychological factors to a great extent is capable of creating engagement. The components of psychological factors being personal trust and value, meaningfulness, involvement, work pressure, and challenging work. Statements relating to these variables were developed and respondents were asked to rate these statements on a five-point Likert scale.

From the analysis of the data presented in Table 5.49, it is inferred that all the psychological factors are highly correlated with teaching engagement. The most contributing factor of teaching engagement among psychological factors are work pressure (r = 0.917) followed by involvement (r = 0.838) and the result is found to be significant at one percent level.

Table 5.50 analyses the relationship between psychological factors and teaching engagement and found that all factors are positively correlated with teaching engagement. The factors that contribute the most is work pressure with an 'r' value of 0.890 followed by personal trust and value with an 'r' value of 0.835 in case of Government colleges. While in case of Aided colleges, work pressure with an 'r' value of 0.944 contributes the most followed by involvement with an 'r' value of 0.913. Work pressure with an 'r' value of 0.920 and personal trust and value with correlation coefficient of 0.878 contributes the most in case of Autonomous colleges. Hence, it can be inferred that continuous monitoring by the superior is necessary for engaging the faculty members and they should be asked for timely completion of tasks.

8.3.2.8 Psychological factors and Research Engagement

- From the analysis (Table 5.51), it is understood that the personal trust and value is highly related to research engagement with an 'r' value of 0.704 followed by work pressure (r = 0.688) and involvement (r = 0.641). From this it can be concluded that, administrators should try to uphold the personal trust and value to create confidence among faculty members and indulging them in research-oriented activities.
- Table 5.52 depicts the relationship of psychological factors with research engagement in case of different types of institutions. All the psychological factors are moderately correlated with research engagement and personal trust and value contributes the most to research engagement followed by work pressure and challenging work in case of Government colleges. While it comes to Aided colleges, involvement contributes the most to research engagement (r = 0.716) followed by work pressure (r = 0.714) and personal

trust and value (r = 0.701). While analysing Autonomous institutions, personal trust and value is highly related with research engagement, r value being 0.770 followed by work pressure with an r value of 0.726 and involvement (r = 0.655). Hence, it can be concluded that work pressure leads to more involvement in research. Along with it, personal trust and value should also be promoted within the institution and among the faculty members.

8.3.2.9 Psychological factors and Service Engagement

- One of the most important factors used to assess the service engagement is psychological factor, components being meaningfulness, personal trust and value, involvement, work pressure, and challenging work. In order to know the relation between psychological factor and service engagement, total scores were calculated by adding the scores of the corresponding statements and used for further analysis.

  From the Table 5.53, it is clear that personal trust and value (r = 0.805) is the most contributing factor of service engagement followed by work pressure and involvement with an 'r' value of 0.814 and 0.749 respectively.

- Table 5.54 explains the relationship between psychological factors and service engagement in case of different types of institutions. Service engagement is very much contributed by the psychological factor, work pressure with an 'r' value of 0.811, followed by personal trust and value (r = 0.799) and challenging work (r = 0.718) in Government institutions. In Aided colleges, work pressure (r = 0.831) contributes most followed by involvement (r = 0.816). Personal trust and value (r = 0.833) is followed by work pressure (0.781) in case of Autonomous colleges. In order, to enhance the level of service engagement among faculty members, it would be better to include an element of challenge in their work and service groups or teams could be created in order to promote personal trust and value among the faculty members.

Table 5.48 to 5.54 analysed with the help of Karl Pearson's correlation coefficient at one percent level of significance to test the relationship between psychological factors and dimensions of faculty engagement, ***supported and proved the third hypothesis stated:***

H3: There exists a significant relationship between Psychological factors and the Dimensions of faculty engagement.

8.3.2.10 Economic factors and Teaching Engagement

- Rewards and benefits, a crucial component of economic factor in inculcating engagement at a rate of 85.82%. Respondents believe that reward act as a strong motivator for performance and opines that authorities lag in revising salaries and pay scales and in its implementation.
- External funding and funder's requirements have an above average influence in inculcating engagement among faculty members. Authorities must ensure that proper collaboration between industries and institutions to establish national level facilities. But they opine that all funding agencies are not easily accessible and assured to be used whenever needed.
- Economic factors play a pivotal role in creating engagement among faculty members. The components considered are rewards and benefits, and external funding and funders' requirements. The statements framed on five-point Likert scale rated by the respondents.

From the analysis of data presented in Table 5.56, it can be observed that all the economic factors are highly correlated with teaching engagement. The most contributing factor is rewards and benefits (r = 0.845) followed by external funding and funder's requirements (r = 0.798).

Table 5.57 also signifies that economic factors are highly correlated with teaching engagement in case of different types of institutions. Rewards and benefits contribute more in case of Government and Aided colleges with an 'r' value of 0.857 and 0.842 respectively. While, external funding and funders' requirements contributes most in case of Autonomous colleges with an 'r' value of 0.861 followed by rewards and benefits.

8.3.2.11 Economic factors and Research Engagement

- In order to know the relation between economic factor and research engagement, total scores of the corresponding statements rated by the faculty members are used for further analysis.

  The correlation Table 5.58, denotes that external funding and funders' requirements contributes the most with an 'r' value of 0.681 followed by 'rewards and benefits' with an 'r' value of 0.635, the results are found to be significant at one percent level.

- The table 5.59 clearly spells that research engagement is contributed more by the economic factor, external funding and funders' requirements (r = 0.643) followed by rewards and benefits (r = 0.625) in Government colleges. External funding and funders' requirements with an 'r' value of 0.685 and rewards and benefits with an 'r' value of 0.657 in case of Aided institutions. In Autonomous institutions also, external funding and funders' requirements (r = 0.806) contributes more compared to rewards and benefits (r = 0.618)

8.3.2.12 Economic factors and Service Engagement

- To measure the relation between economic factors and service engagement, Karl Pearson's correlation coefficient has been applied.

  From the analysis of the data presented in Table 5.60, it can be inferred that all the economic factors are highly correlated with service engagement. The most contributing factor of service engagement is external funding and funders' requirements with r value of 0.782 followed by rewards and benefits (r = 0.748).

- Table 5.61 analyses the relationship between economic factors and service engagement in different types of institutions and found that all economic factors are positively correlated with service engagement. Rewards and benefits contribute most in case of Government colleges. While, external funding and funders' requirements contributes most in Aided and Autonomous institutions.

- *Table 5.55 to 5.61 analysed with the help of Karl Pearson's correlation coefficient at one percent level of significance to test the relationship between economic factors and dimensions of faculty engagement,* ***supported and proved the fourth hypothesis stated:***

  H4: There exists a significant relationship between Economic factors and the Dimensions of faculty engagement.

8.3.2.13 Social factors and Teaching Engagement

- Leadership has an above average influence in inculcating engagement. Faculty members believe their leaders should act as a protective shield. They also opine that they are not much comfortable with constructive feedback from the leaders.
- Most critical element among social factor is relationship with head and peers in building commitment. It is opined that through healthy interactions, they will get more done and happier and greater productivity could be achieved.
- Personal networks should be given prominence among the social factor for enhancing engagement. Faculty members are of the opinion that it should be easy to communicate with members in various positions.
- Social factors to a greater extent is capable of building commitment among faculty members. The components taken into consideration are leadership, relationship with head and peers, and personal networks. Statements developed were rated by the faculty members and the total of the score is taken out for analysis.

  From Table 5.63, it is clear that all the elements of social factors are positively related to teaching engagement. The most contributing factor being leadership with an r value of 0.807 followed by personal networks with an r value of 0.714.

  Table 5.64 depicts the relationship of social factors with teaching engagement in different types of institutions. All the social factors are positively correlated with teaching engagement. Leadership contributes

the most followed by personal networks in case of Government, Aided and Autonomous institutions.

8.3.2.14 Social factors and Research Engagement

- From the analysis (Table 5.65), it is understood that all the elements of social factors that is, leadership, relationship with head and peers, and personal networks are moderately correlated with research engagement. Among these, leadership contributes the most with an 'r' value of 0.610, followed by personal networks with 0.548 as its 'r' value.
- Table 5.66 gives insights about the relationship of social factors and research engagement on the basis of types of institutions. In Government, Aided and Autonomous institutions, leadership act as a great contributor followed by personal networks. There exists only a moderate correlation between social factors and research engagement, and signifies the relationship at one percent level.

8.3.2.15 Social factors and Service Engagement

- In order to know the relation between social factor and service engagement, total scores were calculated by adding the scores of the corresponding statements rated by the respondents and used for analysis.

  The correlation Table 5.67, denotes that leadership is the most contributing element among social factors towards service engagement with an 'r' value of 0.724 and followed by personal networks with 0.651 as correlation coefficient.

- While analysing the relationship of social factor and service engagement institution wise, presented in Table 5.68, it can be claimed that leadership is the factor which contributes the most in case of Government, Aided and Autonomous institutions with an 'r' value of 0.732, 0.747, and 0.648 respectively. Relationship with head and peers is the least contributing factor in all types of institutions. Faculty members who possess the leadership skills need to be identified and to be allotted such roles.
- *Table 5.62 to 5.68 analysed with the help of Karl Pearson's correlation coefficient at one percent level of significance to test the relationship*

between social factors and dimensions of faculty engagement, ***supported and proved the fifth hypothesis stated:***

H5: There exists a significant relationship between Social factors and the Dimensions of faculty engagement.

8.3.2.16 Management factors and Teaching Engagement

- Talent management, an important element of management factor needs to be considered for enhancing engagement level. The respondents opine that it is necessary to assess the skill of the candidate in the hiring process and a proper alignment of talent and duties allotted is not being possible.
- Another influential element of management factor in inculcating engagement among faculty member is performance appraisal. Respondents opine that monitoring performance with standards will help to assess their credibility. They also believe that existence of rational performance appraisal system alone cannot helps in the development of skills.
- Training and development programmes do contribute in development of engagement level. Faculty members opine that training sessions and refreshment programmes induces them. They also believe, it is not possible to carefully monitor the growth and development of faculty members through training and development programmes alone.
- Management factor, an influential one in building engagement is measured using components talent management, performance appraisal, and training and development programmes. Statements relating to these variables were developed by the researcher and rated by the faculty members. From the analysis of the data presented in Table 5.70, it is inferred that all the factors are highly related to teaching engagement. The most contributing factor is training and development programmes with a correlation coefficient of 0.944, followed by performance appraisal with an 'r' value of 0.896 and the result is found to be significant at one percent level.

- Table 5.71 states that a high relationship between management factors and teaching engagement in all type of institutions. Training and development programme is the most contributing factor with an 'r' value of 0.936, which is followed by performance appraisal (r = 0.884) in Government colleges. In Aided and Autonomous institutions also, training and development programmes contributes the most with 'r' values of 0.954 and 0.935 respectively. Likewise, performance appraisal follows training and development in both type of institutions.

8.3.2.17 Management factors and Research Engagement

- The relationship between management factor and research engagement is assessed with the help of talent management, performance appraisal, and training and development programmes.

  From Table 5.72, it is clear that training and development programmes (r = 0.724) contributes most towards research engagement followed by performance appraisal (r = 0.682). It is necessary to conduct more training and development programmes to create confidence to conduct research.

- Table 5.73 explains the relation between management factors and research engagement in case of different types of institutions. Training and development programmes with 'r' value of 0.695 contributes the most followed by performance appraisal with an 'r' value of 0.649 in case of Government colleges. In Aided and Autonomous institutions, training and development contributes the most followed by performance appraisal.

8.3.2.18 Management factors and Service Engagement

- In order to know the relation between management factor and service engagement, total scores were calculated by adding the scores of the corresponding statements and were used for further analysis.

  From the correlation Table 5.74, the most contributing factor is training and development with a correlation coefficient of 0.843, followed by performance appraisal with an 'r' value of 0.793. Training programmes

should be conducted to indulge confidence among faculty members to take part in service-oriented activities.

- Table 5.75 clearly tells that service engagement is very much contributed by the management factor, training, and development programmes (r = 0.860), followed by performance appraisal (r = 0.801) in Government institutions. Likewise, training and development contributes the most followed by performance appraisal in case of Aided and Autonomous institutions.
- *Table 5.69 to 5.75 analysed with the help of Karl Pearson's correlation coefficient at one percent level of significance to test the relationship between management factors and dimensions of faculty engagement,* ***supported and proved the fifth hypothesis stated:***

  H6: There exists a significant relationship between Management factors and the Dimensions of faculty engagement.

8.3.3. Comparison of level of engagement among faculty members in different type of institutions

- In order to measure the significant difference among types of institutions with regard to faculty engagement, the researcher has considered the dimensions of faculty engagement, which are, teaching engagement, research engagement, and service engagement.

  The data analysis using one-way ANOVA revealed that, there exists no significant difference among faculty members in different types of institutions with regard to teaching engagement (Table 6.4), as the p-value is greater than 0.05. While analysing the mean score, it can be inferred that faculty members in Aided institutions seems to be more engaged towards teaching, followed by, Government and Autonomous institutions.

  Hence, it can be concluded that regulators could frame policies for enhancing teaching engagement as a whole. There is no need to issue separate guidelines to enhance teaching engagement among faculty members working under different types of institutions.

- With the help of One-way ANOVA, it has been found that there exists a significant difference among educational institutions with regard to research engagement as the p-value less than 0.05. (Table 6.6). Tukey HSD has been used to measure the pair wise difference among institutions and has been found out that engagement level in research is different for faculty members belonging to Government and Autonomous colleges.

  The weightage given to research and its allied activities is more in Autonomous colleges compared to Government colleges. Moreover, all the Autonomous colleges considered are research centres. Hence, faculty members belonging to Autonomous institutions seems to be more engaged compared to faculty members of Government and Aided institutions.

- Table 6.9 presents the results of One-way ANOVA relating to service engagement, it can be inferred that there is no significant difference among types of institutions, since, the p-value is 0.202 which is greater than 0.05. The mean score is high for Aided colleges (24.1739) which indicates that they are more engaged towards service, followed by autonomous colleges with a mean value of 23.1970. Government colleges score the lowest mean value of 22.9214. However, it has been observed that the differences are not significant with respect to service engagement.

  The data (Tables 6.3 to 6.9) analysed with the help of One-way ANOVA to test the difference among type of institution and the dimensions of faculty engagement, ***the null hypothesis is accepted except for research engagement in arts and science colleges.***

  The significant difference among faculty members belonging to different type of institution with respect to research engagement. While, in case of teaching and service engagement no significant difference among faculty members belonging to different types of institutions.

8.3.4 Standard Model for Faculty Engagement

- The analysis of data and findings thereof (Table 7.2) clearly indicates that faculty engagement is highly correlated with dimensions of faculty

engagement that is, teaching, research, and service. It also significantly influences the faculty engagement.

To know the most contributing dimension of faculty engagement and its influence on faculty engagement, multiple regression was performed by taking faculty engagement as dependent variable and teaching, research, and service engagement as independent variables. (Table 7.3).

The final model with standardised regression coefficient of the significant variable is:

fe = 0.510 te + 0.131 re + 0.325 se.

Where, *fe* = faculty engagement, *te* = teaching engagement, *re* = research engagement, and *se* = service engagement.

The most influencing dimension of faculty engagement as per the equation, by virtue of the coefficient value and the significance which is revealed from the analysis is the teaching engagement followed by service engagement. As evident from Table 7.4, coefficients corresponding to these dimensions are highly significant at 0.01 levels.

- The researcher also developed separate models for Government, Aided, and Autonomous institutions by taking faculty engagement as dependent and dimensions that is, teaching, research, and service engagement as independent variables.
- **The final model** with standardised regression coefficients of the significant variable in case of **Government college** is:

  fe = 0.559 te + 0.096 re + 0.321 se

  The most influencing dimension of faculty engagement as per the statistical model of Government College, by virtue of coefficient value reveals that it is, teaching engagement followed by service engagement and these two dimensions are highly significant at 1% level and research engagement at 5% level.
- **The final model** with standardised regression coefficients of the significant variable in an **Aided college** is:

fe = 0.430 te + 0.114 re + 0.460 se

The most influencing dimension of faculty engagement as per the statistical model of Aided college, by virtue of coefficient value reveals that it is service engagement followed by teaching engagement and these two are significant at 1% level and research engagement at 5% level.

- **The final model** with standardised regression coefficients of the significant variable in an **Autonomous college** is:

fe = 0.497 te + 0.253 re + 0.225 se

The most influencing dimension of faculty engagement as per the statistical model of Autonomous College, by virtue of coefficient value spells that it is the teaching engagement followed by research engagement and are significant at 1% level. While, service engagement is found to be significant at 5% level.

From the regression analysis (Table 7.3, Table 7.6, Table 7.9 and Table 7.12), it is clear that the faculty engagement is very much influenced by the dimensions of faculty engagement as the result is significant at one percent level. Hence, ***the result supported and proved the eighth hypothesis formulated as:***

H8: There exists a significant relationship between Dimensions of Faculty Engagement and Faculty Engagement.

8.3.5 Outcomes of Faculty Engagement

- A faculty member who is engaged will be reflecting vigor, dedication, and absorption in their behaviour. The outcomes considered are organisational citizenship behaviour, employee retention, job satisfaction, and innovative behaviour.
- From the correlation analysis (Table 7.15, Table 7.18, Table 7.21, Table 7.24, Table 7.27), it is clear that components of faculty engagement are highly correlated with the outcomes of faculty engagement.
- From simple regression analysis, it can be inferred that 84% of the outcome is explained by components of faculty engagement and remaining by other factors.

To measure the most contributing component and to know its influence on outcomes, multiple regression was performed. Outcomes are taken as dependent variable and the components vigor; dedication & absorption are considered as independent variables for the purpose of analysis.

The final model with standardised regression coefficient of the significant variable in case of **outcome** is:

out* = 0.317*vig* + 0.392*ded* + 0.231*abs

Where, *out* = Standardised value of Outcomes, *vig* = Vigor, *ded* = Dedication, and *abs* = Absorption.

The most contributing component of faculty engagement as per the equation, by virtue of the coefficient value is dedication followed by vigor, which are significant at 1 % level.

- **The final model** with standardised regression coefficient of the significant variable in case of **organisational citizenship behaviour** is:

ocb = 0.286 vig + 0.359 ded + 0.246 abs

Where, *ocb* = Standardised value of Organisational Citizenship Behaviour, *vig* = Vigor, *ded* = Dedication, and *abs* = Absorption.

The most contributing component on organisational citizenship behaviour as per the equation, by virtue of the coefficient value is dedication followed by vigor, which are significant at 1 % level.

- **The final model** with standardised regression coefficient of the significant variable in case of **employee retention** is:

er = 0.225 vig + 0.415 ded + 0.270 abs

where, *er* = Standardised value of Employee Retention, *vig* = Vigor, *ded* = Dedication, and *abs* = Absorption.

The most contributing component on employee retention as per the equation, by virtue of the coefficient value is dedication followed by absorption, which are significant at 1 % level.

- **The final model** with standardised regression coefficient of the significant variable in case of **innovative behaviour** is:

ib = 0.325vig + 0.362ded + 0.197abs

Where, *ib* = Standardised value of Innovative Behaviour, *vig* = Vigor, *ded* = Dedication and *abs* = Absorption.

The most influencing component of innovative behaviour as per the equation, by virtue of the coefficient value and the significance which is revealed from the analysis is the dedication followed by vigor.

- **The final model** with standardised regression coefficient of the significant variable in case of **job satisfaction** is:

js = 0.377vig + 0.351ded + 0.151abs.

Where, *js* = Standardised value of job satisfaction, *vig* = Vigor, *ded* = Dedication and *abs* = Absorption.

The most influencing component on job satisfaction as per the equation, by virtue of coefficient value and also the significance which is revealed from the analysis is that vigor is followed by dedication.

From the regression analysis (Table 7.16,Table 7.19, Table 7.22, Table 7.25 and Table 7.28), it is clear that the Outcomes are very much influenced by the faculty engagement as the result is significant at one percent level. Hence, ***the result supported and proved the ninth hypothesis formulated as:***

H9: There exists a significant relationship between Faculty Engagement and Outcomes of Faculty Engagement.

8.4 Conclusion of the study

The study attempted to measure the engagement level of faculty members in arts and science colleges of Kerala. This study proves that Organisational Citizenship Behaviour (OCB), retention of employees, job satisfaction and innovative behaviour will be reflected in the behaviour of an engaged faculty member of an arts and science college. Faculty engagement has a considerable impact on Indian education sector as faculty members' plays an inevitable role in the education system and their contribution seems to be higher. Faculty members

and regulatory bodies must be made aware of the factors and components for the growth of the industry which in turn leads to prosperity of the nation.

Research says that organisational, psychological, economic, social and management factors are related with teaching, research, and service engagement. It has been found that no significant difference among faculty members with respect to teaching and service engagement. While engagement level in research is different for faculty members belonging to Government and Autonomous colleges.

The current study endeavoured to bring out the factors that contributes to faculty engagement. A high necessity arises for the policy makers and regulatory bodies to come up with a range of policies and guidelines that cater the needs and requirements of faculty members in order to make them content. The statistical model proposed by the researcher may be taken as a base for this purpose as it has been framed by giving due consideration of the higher education set up of the state.

8.5 Scope for further research

There is a wide scope for further research in Faculty Engagement. The areas that can be researched in the future include:

- A study on Faculty Engagement by covering Self-financing or Private Arts and Science colleges.
- Studies on Faculty Engagement in Professional colleges in Kerala.
- Comparative studies with different Universities can be done.
- Studies can be done on the basis of consideration of other factors.
- Impact of Faculty Engagement on Student Engagement can be measured.

Chapter 9

RECOMMENDATIONS AND IMPLICATIONS

9.1 Recommendations of the Study

Based on the findings of the study, the following recommendations are made:

9.1.1 Recommendations related to Regulators/ Management/Superiors

1. The personal factors such as gender, age, years of experience, and designation of faculty members do not differ significantly in the case of Government and Aided colleges. Hence, it is advisable to frame common procedures and policies for the entire academic fraternity of Government and Aided colleges, rather than making separate policies for each category.
2. Organisational culture and policy, followed by department culture, are the organisational factors that contribute the most to engagement. Hence, the authorities or management should gear up to create and maintain a culture that boosts the commitment level of faculty members. Furthermore, to ensure better teaching experiences, HEIs must be equipped with basic infrastructure and cutting-edge technology.
3. Equip the faculty members with the mission, vision, and policies of the organisation.
4. Superiors/ Head of the departments should allocate the subjects according to the preference of faculty members which may contribute to high level of performance.
5. Leadership is a crucial factor that contributes to engagement. Excellent faculty members with high academic and service credentials could be identified, and with proper training, they could be posted in leadership positions at the college level.

6. It is critical to create platforms for networking opportunities in order to share faculty members' innovative skills, creative pedagogies, achievements in the field of research and their social commitments and with one another, as personal networks have been shown to contribute to faculty engagement.
7. It is advisable to replace the traditional means of education with alternative modes of quality education methods wherever found to be necessary. To meet current and future needs, digital platforms for teaching, research, and service-related activities must be optimised and expanded.
8. Continuous monitoring of the duties performed by the faculty members will yield greater results. Faculty members must be assigned tasks that must be completed within time constraints, which leads to greater commitment to their work.
9. Superiors/authorities must recognise the efforts and contribution of the faculty members. They should consider the good suggestions put forward by the faculty members and try to implement it and also give credit to that faculty who suggest it.
10. Superiors/ authorities must provide an environment for free communication and they must act as a mentor or counsellor or problem solver with subordinates.
11. The passion and dedication of faculty members should be recognised properly and encourage them to become more accountable.
12. Sufficient authority must be given to faculty members to participate in substantive decisions.
13. Regulators/ Universities/management must consider the morale of faculty members while dealing with the complaints raised by the students. Before making a final judgment, they must hear both the parties and make a quality judgment.
14. Regulatory bodies must also empower the faculty members to develop innovative teaching, research, and service practices within the approved framework.

15. It is highly recommended to fix the student-teacher ratio in a scientific manner for effective teaching and mentoring of students. It could also enable the faculty members to find more time for research and other academic activities.

16. Teaching is not merely dictating the syllabus to the students. In order to deliver a one hour class, the faculty members have to read a lot, prepare extra notes, etc. So, the Universities or regulators must design the curriculum of each programmes which can be completed with adequate teaching time in each semester.

17. The current higher educational set-up, the system which confers graduation with three or four years of continuous assessment has changed and replaced with the one with Multiple Entry and Exit System (MEES) where they are able to attain either a certificate or diploma or degree according to their preference. The faculty members must be adaptable and equip themselves with these growing demands and ensure active participation of students. For this purpose, it will be necessary to redesign the curriculum and promote the use of flipped classrooms for attracting the students.

18. Authorities should consider the basic requirements of the faculty members. They must promote the research and service culture of the faculty members and provide sufficient infrastructure and financial assistance for the same.

19. As one of the most important factors in increasing engagement, faculty members must be sufficiently incentivized through appropriate rewards, recognitions, and promotions, and faculty members who fail to perform their duties must be held accountable.

20. A fast-track promotion system with a merit-based structure must be developed, with greater weight given to high-impact research and other contributions. It may assure the engagement of faculty members.

21. Authorities must revise salaries and pay scales and implement it on time.

22. Administrators should develop and implement appropriate training and induction programmes to facilitate the transition of faculty members into effective educators in all aspects.

23. Regulators/management must organise various Faculty Development Programmes (FDPs) through which faculty members could be able to get new ideas and knowledge which build confidence in the work they perform, which in turn creates commitment among them towards oneself and towards the profession and institution at large.

24. Overlapping of even and odd semesters, university exams, centralised valuation camps etc. affect the quality of teaching-learning processes. So universities/ regulators must prepare an academic calendar in a scientific manner.

25. Regulators must develop a systematic and sustained multiple assessment strategy that includes measurable outcomes, the development of rubrics to evaluate student outcomes, research outputs, and the documentation of activities performed. A continuous performance appraisal system for faculty members is highly required, with several parameters including peer and student reviews, professional development activities, innovations in teaching, research, and other activities performed in the institution.

26. For faculty members, the list of clerical jobs seems to be endless and exhaustive. Minimise duplication of work and develop a systematic method to update the files, through which time saved could be used for meaningful research and other productive purposes.

27. As per the norms propounded by the authorities, 16 hours in a week has been allotted for a faculty member for teaching. Likewise, it is necessary to fix hours for faculty members to spend on research and other activities. That is, a complete bifurcation of working hours for teaching, research, and service-oriented activities should be made, which will help them to perform all the tasks that they are expected to perform, which in turn makes them more engaged.

28. Despite of the fact that many schemes and grants have been developed to instil a research culture, the statistical model indicates that faculty members are not heavily involved in research. In order to create a research culture among faculty members, regulators should review the existing schemes and policies.

29. The Regulators need to identify the faculty members who have a strong desire and interest to take part in research-oriented activities, for providing them with adequate facilities and environment to fulfil their research aspirations.

30. The management should also consider the interest of faculty members in their institution towards research and other activities and need to assure they are provided with facilities and environment to use their potential at the fullest. This will create loyalty and sense of belongingness among the faculty members.

31. In order to promote the research which seems to be beneficial to the society, it is advisable to build a tie-up with local bodies and NGOs through which the researcher could use their analytical skills and problem solving attitude for the good of the society. Moreover, research work which could be practically possible could be developed through the association of faculty members, NGO's, and local bodies.

32. It is highly recommendable to provide sufficient number of leaves to faculty members in order to participate in various kinds of seminars, workshops or conferences, both in national and international level, which improve the research aptitude of faculty members.

33. It is advisable to set up a service unit under each college by assigning responsibilities to a group of faculty members and a set of students, through which greater participation of faculty members in service areas can be assured.

34. It is advisable to include and prioritise community-based services in the curriculum and advise them to perform the services department-wise through which the faculty members could be more immersed in service-oriented activities.

35. The policy makers should take efforts to build policies and regulations to promote service-oriented activities. The regulations and policies in the area of service engagement and community engagement seems to be negligible.

The regulators could identify the best practices which contributes to the society like biodiversity and environmental engagements, women empowerment, participation of various strata of society to interact and share their grievances, extension and outreach, effective implementation of Government schemes and creating awareness about them among public, water and waste management, institutional social responsibility, development of social progress index among students.

36. Superiors should try to provide constructive feedback in order to arouse confidence level of faculty members.

37. Superiors must try to develop healthy interactions with faculty members to make them feel happy and committed.

38. Superiors must consider the talents and skills of faculty members while assigning duties to them.

39. Extension programs and community engagement should be promoted by superiors.

40. Proper encouragement must be given to faculty members in order to help them to become a full-fledged faculty member.

9.1.2. Recommendations related to Faculty Members

1. Faculty members must be well connected the organisational policies.
2. Faculty members must adapt with new teaching-learning methods, learning management systems like MOODLE, Google class room etc. Innovative teaching methods should be incorporated in their traditional teaching methods. They must to try to develop e-contents.
3. Higher education system is rapidly changing. Government, NAAC, UGC & higher education councils encourage blended learning, set various parameters to contribute quality education. In order to cope up with these changing demand, faculty members must be engaged more seriously in their job related activities.

4. The system demands more accountability from the faculty members. So, each of them should take more responsibilities in their institutions. It is recommended that they must avoid blaming others and giving excuses.
5. Try to develop creativity and problem-solving skills to resolve various issues.
6. Faculty members must try to recognise the achievements of their peers which induces more than monetary rewards.
7. Faculty members must take effort to assess their level of engagement and connect it with outcomes. They must be willing to participate in and enjoy all activities that contributes to the growth and development of themselves and the institution, thereby ensuring faculty well-being.
8. Faculty members must try to understand the problems of their students and be a real mentor and tutor for them which will help the active participation of the students' community which in turn boost the performance level of the faculty members.
9. Try to collect feedback from students about overall performance and should consider their valuable suggestions for further improvement.
10. Faculty members should try to strengthen and update knowledge on a daily basis for effective mentoring.
11. As the engagement level of faculty members in the area of research is found to be comparatively low, it is suggested that faculty members devote more time to research activities and understand the significance and role of research.
12. Faculty members should take initiative and interest to generate authentic research output besides participating in internships or workshops. They can also try to build collaborations with national and international Universities through which work culture can be improved.
13. Try to attain good scores in h-index through quality research papers.

14. Faculty members should try to collaborate with members in other educational institutions and industries in the field of research and others to exchange ideas and facilities.

15. Faculty members should understand the benefit of being engaged, as it lead them to experience an enhanced feeling of connection which builds confidence level to work in their roles. The faculty members would also be able to reduce their stress level when they take part in engagement enhancement programmes.

16. Faculty members should try to balance their work and life otherwise they may get exhausted.

17. In order to reduce stress and work-related pressure, faculty members can practice yoga and meditation. They can engage in their favourite extra-curricular activities to reduce strain. More interaction with family and friends helps to curtain their stress level.

18. Faculty members have to focus more on positive side rather than negative side in institutional matters.

19. Faculty should identify their key strengths and should make a clear distribution of their workload through TRCPIE (Teaching, Research, Consultancy, Projects, Innovation and Entrepreneurship). They must be able to pick the components of TRCPIE workload based on their area of interest, domain, expertise, choice, and past track records.

20. Faculty members must try to create a cordial atmosphere in their work place which will boost their confidence level and commitments.

21. Faculty members should take initiative to identify best practices and to implement it.

22. The apex bodies like NAAC, UGC, assess the higher educational institutions based on their overall output. So continuous team work of faculty members will help to acquire more grades in each cycle. Therefore, Faculty members must work together and engage more in the institutional activities.

9.2. Implications of the Study

The present study focuses on the faculty engagement in the arts and science colleges of Kerala. The researcher identifies the factors that contribute to faculty engagement by taking into account the structure of Kerala's arts and science colleges. A faculty member's teaching, research, and service dimensions have been considered, and a comparison of Government, Aided, and Autonomous institutions has been made.

Since, empirical evidence shows that all of the factors are positively correlated with the dimensions of faculty engagement, which are in turn positively related to faculty engagement and its outcomes. More effort should be made by the faculty members and authorities to develop the contribution of factors in creating engagement and improving engagement outcomes. The study comprehends the role of regulatory bodies in enhancing the engagement level of faculty members. By estimating the level of engagement, the study advocates to policymakers how they can stimulate faculty members and make the best use of their talents.

BIBLIOGRAPHY

Abdulla, M.H., & J.D. Shaw. (1999). Personal factors and organisational commitment: Main and interactive effects in the united arab emirates, *Journal of Managerial Issues, 11,* 77-93.

Abes, E. S., Jackson, G., & Jones, S. R. (2002). Factors that motivate and deter faculty use of service-learning. *Michigan Journal of Community Service Learning, 9*(1), 5–17.

Agarwal, P. (2006). *Higher education in India: The need for change* (Indian Council for Research on International Economic Relations Working Paper No. 180).

Agarwal, S. (2020, June). Virtual *teaching: A new norm*al. Counter Currents. Retrieved June 2022, from https://countercurrents.org/2020/06/virtualteaching-a-new-normal/

Agarwala, T. (2003). Innovative human resources practices and organisational commitment: An empirical investigation. *International Journal of Human Resource Management, 14*(2), 175-197.

AISHE. (2019-20). *All India survey on higher education* 2019-20. Ministry of Human Resource Development.

Ajgaonkar, M., Baul, U., & Phadke, S. M. (2012). Relationship between organizational citizenship behaviour and job characteristics model of motivation: An empirical study. *NMIMS Management Review*, *April-May,* 51-72.

Alderfer, C.P. (1972). *Human needs in organisational settings*. Free Press

Altbach, P. G. (2005, April 12). A world-class country without world-class higher education: India's 21st century dilemma. *International Higher Education, 40*(Summer), 18-20.

Altbach, P., & Jayaram, N. (2015). India's effort to join 21st-century higher education. *International Higher Education*, *54,* 17-19.

Ameen, N., & Babu, G. (2018). Parameters inducing faculty engagement in private education institutions: A conceptual study. *Journal of Management*, *5*(4) 343-348.

Andrew, O. C., & Sofian, S. (2012). Individual factors and work outcomes of employee engagement. *Procedia-Social and Behavioral Sciences, 40*(2012), 498-508.

Anitha, J. (2014). Determinants of employee engagement and their impact on employee performance. *International Journal of Productivity and Performance Management, 63*(3), 308-323.

Antonio, A. L., Astin, H. S., & Cress, C. M. (2000). Community service in higher education: A look at the nation's faculty. *Review of Higher Education, 23*(4), 373–398.

Arnold, E. (2005), Managing human resources to improve employee retention. *The Health Care Manager, 24*(2), 132-140.

Babbie, E. (Ed.). (2010). *The practice of social research*. (12th ed.). Wadsworth.

Bakker, A. B. (2005). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vocational Behavior, 66,* 26-44.

Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in Psychological Science, 20*(4), 265-269. https://journals.sagepub.com/doi/abs/10.1177/0963721411414534

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology, 22,* 309–328.

Bakker, A.B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, *13*, 209–223.

Baldoni, J. (2013). Employee engagement does more than boost productivity. *Harvard Business Review, July*, 2013, Retrieved June 15, 2015, from https://hbr.org/2013/07/employee-engagement-does-more/

Bandura, A. (1997). *Self-efficacy: The exercise of control.* Freeman.

Barman, A., & Saikat, R. (2011). Faculty engagement in higher educational institution: A proposed model. *Journal for Multidimensional Education*, 3(6), 7-17. http://ssm.com/abstract=1844432

Barman, L., Laksov, K. B., & Silén, C. (2014). Policy enacted teachers' approaches to an outcome-based framework for course design. *Teaching in Higher Education, 19*(7), 735-746. 10.1080/13562517.2014.934346

Baumgartner, H., & Homburg, C. (1996). Applications of structural equation modeling in marketing and consumer research: A review. *International journal of Research in Marketing, 13*(2), 139-161.

Bay, A. B., An, I. L., & Laguador, J. M. (2014). Organizational satisfaction and work engagement of filipino teachers in an asian university. *International Journal of Multidisciplinary Academic Research, 2*(4), 32- 41.

Beairsto, B. (2012, March). *Teacher engagement is the key to student engagement.* Retrieved July 2021, from https://www.edcan.ca/articles/teacher-engagement-is-the-key-to-student-engagement/

Bethencourt, A. L. (2012). *Employee engagement and self-determination theory* [Doctoral dissertation, Northern Illinois University].

Bhatnagar, J. (2008). Managing capabilities for talent engagement and pipeline development. *Industrial and Commercial Training, 40*(1), 19-28. 10.1108/0019785081084602

Birt, M., Wallis, T., & Winternitz, G. (2004). Talent retention in a changing workplace: An investigation of variables considered important to South Africa talent. *South Africa Journal of Business Management, 35*(2), 25-31.

Blackhurst, A. E., Brandt, J.E., & Kalinkowski, J. (1998). Effects of career development on the organisational commitment and life satisfaction of women students affairs administrators. *The NASPA Journal*, 36(1), 19-34.

Bohrnstedt, G. W., & Felson, R. B. (1983). Explaining the relations among children's actual and perceived performances and self-esteem: A comparison of several causal models. *Journal of Personality and Social Psychology*, *45*(1), 43.

Boyte, H. C. (2004). *Going public: Academics and public life.* Kettering Foundation.

British Council. (2014). *Understanding India: The future of higher education and opportunities for international cooperation.* British Council.

Brusoni, M., Damian, R., Sauri, J. G., Jackson, S., Kömürcügil, H., Malmedy, M., Matveeva, O., Motova, G., Pisarz, S., Pol, P., Rostlund, A., Soboleva, E., Tavares, O., & Zobel, L. (2014). *The concept of excellence in higher education* (ENQA Occasional Papers 20). European Association for Quality Assurance in Higher Education.

Bryman, A. (Ed.). (2012). *Social research methods* (5th ed.). Oxford University Press.

Bryman, A., & Bell E. (2015). *Business research methods*. Oxford University Press.

Bryman, A., & Bell, E. (Eds.). (2011). *Business research methods* (3rd ed.). Oxford University Press.

Candy, P. C. (2000). Reaffirming a proud tradition: Universities and lifelong learning. *Active Learning in Higher Education, 1*(2), 101-125.

Candy, P. C. (2000). Reaffirming a proud tradition: Universities and lifelong learning. *Active Learning in Higher Education, 1*(2), 101-125.

Carmines, E. G. (1990). Zeller. RA (1979) Reliability and validity assessment. JL Sullivan (ed.), *Quantitative Applications in the Social Sciences.* SAGE.

Cartwright, S., & Holmes, N. (2006). The meaning of work: The challenge of regaining employee engagement and reducing cynicism. *Human Resource*

Management Review, 16(2), 199-208. https://www.sciencedirect.com/science/article/abs/pii/S1053482206000246

Chambel, M. J., Castanheira, F., & Sobral, F. (2014). Temporary agency versus permanent worker: A multigroup analysis of human resource management, work engagement and organizational commitment. *Economic and Industrial Democracy, 37*(4), 1-25. https://journals.sagepub.com/doi/10.1177/0143831X14550695

Chew, J., & Chan, C.C.A. (2008). Human resource practices, organizational commitment and intention to stay. *International Journal of Manpower, 29*(6), 503-522.

Chou, C. P., & Bentler, P. M. (1995). Estimates and tests in structural equation modeling. In R.H. Hoyle (Ed.). *Structural equation modeling: Concepts, issues and applications* (pp. 37-55). Sage.

CoderZ. (2020). *Challenges teachers face when teaching online*. Retrieved October 2021, from CoderZ:gocoderz.com/blog/challenges-teachers face-when-teaching-online/

Cohen, A. and Hudecek, N. (1993). Organizational commitment-turnover relationship across occupational groups. *Group & Organization Management, 18*(2), 188-213.

Colbert, E. M. (2012). *The impact of leadership on employee engagement at a chemical manufacturing company in the United States* [Dissertation] ProQuest. AAI3537415. https://repository.upenn.edu/dissertations/AAI3537415

Cropanzano, R., & Mitchell, M.S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, *31*(6), 874-900.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process.* Sage.

Dall'Alba, G. (1993). The role of teaching in higher education: Enabling students to enter a field of study and practice. *Learning and Instruction, 3*(4), 299-313. https://doi.org/10.1016/0959-4752(93)90021-Q.

Department of Higher Education. (n.d.). https://www.education.gov.in/higher_education

Department of Higher Education. (n.d.). Initiatives of XI plan. Ministry of Education. https://www.education.gov.in/new-initiatives-xi-plan

Department of Higher Education. (n.d.). National research professorship. Ministry of Education. https://www.education.gov.in/national-research-professorship-nrp

Donahue, D. (2000). Charity basket or revolution: Beliefs, experiences and context in preservice teachers' service learning. *Curriculum Inquiry, 30*(4), 429-450.

Doyle, C., & Hind, P. (1998). Occupational stress, burnout and job status in female academics. *Gender, Work and Organisation, 5*, 67-82.

Dutta, A. (2004). Strategies for retaining employees. *Human Resource Management Review, August,* 31-35.

FICCI- E&Y (2012). Higher education in India: Vision 2047. file:///C:/Users/URMILA%20R%20MENON/Downloads/ey-higher-education-in-india-vision-2047.pdf

Flick, U. (2011). *Introducing research methodology: A beginner's guide to doing a research project.* Sage.

Fornes, S. L., Rocco, T. R., & Wollard, K. K. (2008). Workplace commitment: A conceptual model developed from integrative review of the research. *Human Resource Development Review, 7*, 339-357.

Fredrickson, B.L. (2001). The role of positive emotions in positive psychology: The broaden and build theory of positive emotions. *American Psychologist*, *56*, 218–226.

Gallup. (2017). Higher education employee engagement. The Engaged University.

Ghosh, P., Satyawadi, R., Joshi, J. P., & Shadman, M. (2013). Who stay with you? Factors predicting employees' intention to stay. *International Journal of Organizational Analysis, 21*(3), 288-312. https://www.emerald.com/insight/content/doi/10.1108/IJOA-Sep-2011-0511/full/html

Ghosh, S. (2001a). *The history of higher education in ancient India*. Munshiram Manoharlal.

Ghosh, S. (2001b). *The history of education in mediaeval India, 1192 A.D.-1757 A.D*. Originals.

Ghosh, S. C. (2000a). *The history of education in modern India*. Orient Longman.

Gitanjali, R., Sharma, Y., & Sharma, B. R. (2010). Search for the drivers of employee engagement among executives of a manufacturing organization. *Management and Labor Studies, 35*(2), 189-207.

Goddard, W. & Melville, S. (Eds.). (2004). *Research Methodology: An introduction* (2nd ed.). Blackwell Publishing.

Goldberg, W.A., Greenberger, E., Koch-Jones, J., O'Neil, R., & Hamill, S. (1989). Attractiveness of Child Care and Related Employer Supported Benefits and Policies to Married and Single Parents. *Child and Youth Care Quarterly, 18*, 23-37.

Gruman, J. A., & Saks, A. M. (2011). Performance management and employee engagement. *Human Resource Management Review, 21,* 123-136. 10.1016/j.hrmr.2010.09.004

Guthrie, J. (2000). Alternative pay practices and employee turnover. *Group & Organization Management, 25*(4), 419-439.

Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate data analysis with readings.* Prentice-Hall.

Hammond, C. (1994). Integrating service and academic study: Faculty motivation and satisfaction in michigan higher education. *Michigan Journal of Community Service Learning, 1*(1), 21–28.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*(2), 268-279.

Houston, D., Meyer, L. H., & Paweai, S. (2006). Academic staff workloads and job satisfaction: Expectations and values in academe. *Journal of Higher Education Policy and Management, 28*(1), 17-30.

Hughes, J. C. & Rog, E. (2008). Talent management: A strategy for improving employee recruitment, retention and engagement within hospitality organizations. *International Journal of Contemporary Hospitality Management, 20*(7), 743-757.

Hulland, J., Chow, Y. H., & Lam, S. (1996). Use of causal models in marketing research: A review. *International journal of research in marketing*, *13*(2), 181-197.

Humphreys, M. & Hoque, K. (2007). Have the lecturers lost their voice? Involvement and participation in the devolved further education sector. *International Journal of Human Resource Management, 18*(7), 1199-1213.

Idaszak, J.R., & Drasgow, F. (1987). A revision of the job diagnostic survey: Elimination of a measurement artefact. *Journal of Applied Psychology*, 72, 69-74.

Iverson, R. D., & Donna, M. (1999). Affective normative and continuance commitment: Can the right kind of commitment be managed. *Journal of Management Studies, 36*(3), 307-333.

Jayakumar, P. B. (2020, July 23). *Budget 2020: Education gets front seat in Sitharaman's aspiring India*. Business Today. Retrieved August, 2021, from https://www.businesstoday.in/union-budget-2020/decoding-thebudget/budget-2020-education-gets-front-seat-sitharaman-aspiringindia/story/395249.html

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, *33*(4), 692-724.

Kang, M., Shin, D. H., & Gong, T. (2016). The role of personalization, engagement, and trust in online communities. *Information Technology & People, 29*(3), 580-596.

Kapur, D., & Mehta, P. B. (2007*). Indian higher education reform: From half-baked socialism to half-baked capitalism.* Brookings NCAER India Policy Forum.

Kassahun, T. (2005). Level of organisational commitment: Its correlates and predictors. *Indian Journal of Industrial Relations, 41*(1), 29-63.

Kerala State Higher Education Council. (n.d.). https://www.kshec.kerala.gov.in/index.php/home/about-us2

Kerala State Higher Education Council. (n.d.). Ongoing programmes. https://www.kshec.kerala.gov.in/index.php/activities/ongoing

Kerala State Higher Education Council. (n.d.). State assessment and accreditation centre. https://kshec.org/saac.php

Kontoghiorghes, C., & Frangou, K. (2009). The association between talent retention, antecedent factors, and consequent organizational performance. *SAM Advanced Management Journal*, *74*(1), 29.

Kothari, C. R. (2004). *Research methodology: methods and techniques*. New Age International.

KPMG. (2019). *Enhancing quality of education in India by 2030: A F.I.T. approach to realising SDG 4*. KPMG.

Kumar, B., Pavan., & Giri, V. N. (2009). Effect of age and experience on job satisfaction and organisational commitment. *The ICFAI University Journal of Organisational Behaviour, 8*(1), 28-36.

Kumar, R., & Sia, S. K. (2012). Employee engagement: Explicating the contribution of work engagement. *Management and Labor Studies, 37*(1), 31-43. 10.1177/0258042X1103700104

Latino, J. (2020). *Student engagement: Strategies to help institutions retain students during the COVID-19 pandemic*. https://www.ellucian.com/insights/studentengagementstrategieshelpinstitutions-retain-students-during-covid-19-pandemic

Lew, T. Y. (2009). The relationships between perceived organizational support, felt obligation, affective organizational commitment and turnover intention of academics working with private higher educational institutions in Malaysia. *European Journal of Social Sciences, 9*(1), 72-87.

Livingston,J. (2011). Defining and measuring faculty engagement: Validation of the faculty engagement survey [Doctoral dissertation, Azusa Pacific University]. ProQuest Digital Dissertations. (3467979).

Locke, E.A. & Taylor, M.S. (1990). Stress, coping, and the meaning of work. In Brief, A., & Nord, W.R. (Eds), *Meanings of Occupational Work* (pp. 135-170). Lexington Books.

Luthans, F., Baack, D., & Taylor, L. (1987). Organisational commitment: Analysis of antecedents. *Human Relations, 40*(4), 219-236.

Luthans, K. W., Luthans, B. C., & Palmer, N. F. (2016). A positive approach to management education: The relationship between academic PsyCap and student engagement. *Journal of Management Development*, *35*(9), 1098-1118.

Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology, 1,* 3-30.

Macey, W. H., Schneider, B., Barbera, K. M., & Young, S. A. (2009). *Employee engagement: Tools for analysis, practice, and competitive advantage*. Wiley-Blackwell.

Maheshwari, R., & Mathur, M. (2020). Linking leader-member exchange and innovative work behaviour through faculty engagement: Rethinking management education in the era of VUCA world. *Our Heritage Journal, 68*(1), 3289-3306.

Maslach, C., & Leiter, M. P., (1997). *The truth about burnout: How organizations causes personal stress and what to do about it*. Jossey-Bass.

Mathieu, J.E., & Zajac, D. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organisational commitment. *Psychological Bulletin, 108*, 171-194.

May, D.R., Gilson, R.L., & Harter, L.M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organisational Psychology, 77*(1), 11-37.

May, T. (2011). *Social research: Issues, methods and research*. McGraw-Hill International.

Mayer, R.C., & Schoorman. F.D. (1998). Differentiating antecedents of organisational commitment: A test of march and simon's model. *Journal of Organisational Behaviour, 19*(1), 15-28.

Meyer, J. P & Allen, N. (1997). *Commitment in the workplace: Theory research and application.* Thousand Oaks, Sage.

Meyer, J.P., & Allen, N.J. (2004). TCM employee commitment survey academic users guide. Department of Psychology, The University of Western Ontario.

MHRD, GOI. (2020). *National education policy 2020*. Ministry of Human Resource Development. Government of India.

MHRD. (2012). *Annual report*. Department of School Education and Literacy.

Ministry of Education. (2022). *About MoE*. https://www.mhrd.gov.in/about-moe

Ministry of Education. (n.d.). https://www.education.gov.in/higher_educationcouncils

Ministry of Human Resource Development. (2017). *Rashtriya uchchtar shiksha abhiyan*. Department of Higher Education. Retrieved October 31, 2021, from http://rusa.nic.in/

Mishra, P.K. (1992). Does organisational climate help improving commitments? *Social Science International, 8*(1-2), 37-43.

Mohapatra, M., & Sharma, B. R. (2010). Study of employee engagement and its predictor in an Indian public sector undertaking. *Global Business Review, 11*(2), 281-301. 10.1177/097215091001100210

Monette, D.R., Sullivan, T.J., & DeJong, C. R. (Eds.). (2005). *Applied social research: A tool for the human services* (6th ed.). Brooks Publishing.

Mukhopadhyay, D. (2019, January). *Transformational need for higher education.* Daily Excelsior. https://www.dailyexcelsior.com/transformational-need-forhighereducation/

Nakamura, J., & Csikszentmihalyi, M. (2005). Engagement in a profession: The case of undergraduate teaching. *Daedalus, 134*(3), 60-67.

National Assessment and Accreditation Council. (n.d.). Assesment and accreditation. NAAC. http://naac.gov.in/index.php/en/assessment-accreditation#process

National Assessment and Accreditation Council. (n.d.). http://naac.gov.in/index.php/en/assessment-accreditation#eligibility

National Institutional Ranking Framework. (n.d.). Overview. Ministry of Education. https://www.nirfindia.org/About

National Institutional Ranking Framework. (n.d.). Parameters. Ministry of Education. https://www.nirfindia.org/Parameter

Newman, I. (1998). *Qualitative-quantitative research methodology: Exploring the interactive continuum.* Southern Illinois University Press.

Ngo, H., & Tsang, A., Ngar, W. (1998). Employment practices and organisational commitment: Differential aspects for men and women. *International Journal of Organisational Analysis, 6*(3), 251-266.

Niehoff, B.P., Enz. C.A., & Grover, R.A. (1990). The impact of top management actions on employee attitudes and perceptions. *Group and Organisational Studies, 15*(3), 337-352.

Nyangau, J. Z. (2014). Higher education as an instrument of economic growth in kenya. *FIRE: Forum for International Research in Education*, 1(1): 7-25.

O'Meara, K. A., Sandmann, L. R., Saltmarsh, J., & Giles, D. E. (2011). Studying the professional lives and work of faculty involved in community engagement. *Innovative Higher Education, 36,* 83-36. 10.1007/s10755-010-9159-3

Organ, D. W. (1994). Personality and organizational citizenship behavior. *Journal of management, 20*(2), 465-478.

Palich, L.E., Hom, P.W. & Griffeth, R.W. (1995). Managing in the international context: Testing cultural generality of sources of commitment to multinational enterprises, *Journal of Management, 21*(4), 671- 690.

Palmer, P. J. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life.* Jossey-Bass.

Paradise, A. (2008). Influences engagement ASTD. *Training and Development, 62*(1), 54-59.

Patel, J. V. (2018). Paradigm shift from pedagogy to andragogy to heutagogy in higher education. *University News, 56*(30), 22-26.

Patrick, B. C., Hisley, J., & Kempler, T. (2000). What's everybody so excited about? The effects of teacher enthusiasm on student intrinsic motivation and vitality. *Journal of Experimental Education, 68*, 217-236.

Perrin, T. (2003). *Working today: Understanding what drives employee engagement.* www.towersperrin.com/hrservices/webcache/towers/Unitedstaestes/Publications/Talent_Report_2003/Talent_2003.pdf.

Planning Commission (2013). *Twelfth Five Year Plan 2012- 17*. Government of India.

Raghavan, H. V. (2017). Good research promotes good teaching. *University News, 55*(33), 3-5.

Raina, K., & Khatri, P. (2015). Faculty engagement in higher education: Prospects and areas of research. *On the Horizon*, *23*(4), 285-308.

Raju, P. L. (2004). Talent magnet: How to attract and retain star employee. *Human Resource Management Review, August,* 11-13.

Ramlall, S. (2003). Managing employee retention as a strategy for increasing organizational competitiveness. *Applied HRM Research, 8*(2), 63-72.

Randal, D.M., & Cote, J. A. (1991). Interrelationships of work commitment constructs. *Working and Occupation. 18*, 194-211

Remo, N. (2012). *Comparing two models of employee engagement: An examination of antecedents and outcome variables* [Doctoral dissertation, University of Windsor].

Reoi, T. J., & Sanders-Rerio, J. (2011). Thinking about workplace engagement: Does supervisor and coworker incivility really matter? *Advances in Developing Human Resource, 13*(4), 462-478. 10.11771/1523422311430784

Rhoads, G. (2012). *Faculty engagement to enhance student attainment. National commission on higher education attainment*. University of Arizona. Retrieved from https://www.acenet.edu/news-room/Documents/Faculty-Engagement-to-Enhance-Student-Attainment--Rhoades.pdf

Rich, B.L., Lepine, J.A. & Crawford, E.R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal, 53*(3), 617-635.

Richman, A. (2006), Everyone wants an engaged workforce: How can you create it? *Workspan, 49*(1), 36-39.

Roberts, K. J. (2009). Capacity building for new model universities. *Excellence in higher education (4)*, 108-118.

Rochi, W.S., & S. Swardlow. (1999). Training and its impact on organisational commitment among lodging employees. *Journal of Hospitality and Tourism Research, 23*(2), 176-195.

Rooper, K. (2009). *The relationship between employees' perceptions of talent management practices and levels of engagement: A Botswana organisation case study*, (Master Thesis, 2009).

Rothausen, T.J., Gonzalez, J.A., Clarke, N. E., & O'Dell, L. L. (1998). Family-friendly backlash: Fact or fiction? The case of organisation's on-site child care centres. *Personnel Psychology, 51*(3), 687-697.

Rowley, G., & Purcell, K. (2001). As cooks go, she went: Is labour churn inevitable? *International Journal of Hospitality Management, 20*, 163-185.

Sak, A. M. & Gruman, J. A. (2014). What do we really know about employee engagement? *Human Resource Development Quarterly, 25*(2), 155-182. 10.1002/hrdq.21187

Sak, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology, 21*(7), 600-619.

Saks, A., & Rotman, J. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology, 21*(7), 600-619.

Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research methods for business students* (6th ed.). Pearson.

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.

Saunders, M.N.K., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (8th ed.). Pearson.

Schaufeli, W. B. (2003). Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology*, *29*(4), 1-15.

Schaufeli, W. B., & Bakker, A. B. (2003). *UWES – Utrecht work engagement scale: Test manual.* Department of Psychology, Utrecht University.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior, 25*, 293-315.

Schaufeli, W.B., Bakker, A.B., & Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *Journal of Organisational Behaviour, 30*(7), 893- 917.

Schneider, B., Macey, W.H. and Barbera, K.M. (2009), Driving customer satisfaction and financial success through employee engagement. *People and Strategy, 32*(2), 23-27.

Selmer, J., Jonasson , C., & Lauring, J. (2013). Group conflict and faculty engagement: Is there a moderating effect of group trust? *Journal of Higher Education Policy and Management, 35*(1), 95-109.

Setia, M., S. (2016). Methodology series module 3: Cross-sectional studies. *Indian Journal of Dermatology, 61,* 261-4.

Sharma, B. R. & Rama, J. J. (2001). Determinants of organisational commitment in a manufacturing organisation in the private sector. *Indian Journal of Industrial Relations,* 37(2), 199-216.

Sharma, Radha R. & Sharma, Baldev R. (2003). Organisational commitment and motivation among managerial staff. *Productivity, 44*(2), 251-257.

Sharma., &Singh. (1991). Determinants of organisational commitment. *Management and Labour Studies, 16*(2), 63-75.

Shaw, D.J., John, E.D., Jenkins, G.D. Jr and Nina, G. (1998). An organization level analysis of voluntary and involuntary turnover. *Academy of Management Journal, 41*(5), 511-525.

Shrivastava, P.K. & Dolke, A.M. (1978). *Personality and organisational correlates of work and organisational identification*. ATIRA.

Shuck, B., & Wollard, K. (2010). Employee engagement and HRD: A seminal review of the foundations. *Human Resource Development Review, 9*(1), 89-110.

Silverman, D. (2013). *Doing qualitative research: A practical handbook*. Sage.

Smeby, J. C. (2003). The impact of massification of university research. *Tertiary Education and Management, 9*(2), 131-144.

Snieder R. & Larner, K. (2009). The art of being a scientist: A guide for graduate students and their mentors. Cambridge University Press.

Stairs, M. (2008). Work happy: Developing employee engagement to deliver competitive advantage. *Selection and Development Review, 21*(5).

Sturges, J., Guest, D., Conway, N., & Keynes, M. (2002). A longitudinal study of the relationship between career management and organisational commitment among graduates in the first ten years at work. *Journal of Vocational Behaviour, 23*(6), 731-748.

Tao, M., Takagi, H., Masahiro, I., & Kei, M. (1998). A study of antecedents of organisational commitment. *Japanese Psychological Research, 40*(4), 198-205.

The Education Commission. (n.d.). *The learning generation.* https://report.educationcommission.org/report/

Tight, M. (2003). *Researching higher education (eds).* The society for research into Higher Education and Open University press.

Tilak, J.B.G. (2007) Post-elementary education, poverty and development in India. *International Journal of Educational Development, 27*, 435-445.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). University of Chicago Press.

Trowler, P., & Wareham, T. (2008). *Tribes, territories, research and teaching: Enhancing the teaching-research nexus*. The Higher Education Academy.

Truss, K., Soane, E., Edwards, C., Wisdom, K., Croll, A., & Burnett, J. (2006). *Working life: Employee attitudes and engagement.* Chartered Institute of Personal and Development.

Ugwu, F. O., Onyishi, I. E., & Rodríguez-Sánchez, A. M. (2013). Linking organizational trust with employee engagement: The role of psychological empowerment. *Personnel Review, 43*(3), 377-400. 10.1108/PR-11-2012-0198

UNESCO. (n.d.). *Global education monitoring report.* UNESCO. https://www.unesco.org/gem-report/en

University Grants Commission. (2012), Guidelines for the special scheme of faculty development programme for colleges for the twelfth plan (2012-2017). UGC. https://www.ugc.gov.in/pdfnews/7156840_Guideline__FDP.pdf

University Grants Commission. (2012). Minor research project for teachers: 12th plan guidelines. UGC. https://www.ugc.gov.in/pdfnews/6733319_12th-plan-Minor.pdf

University Grants Commission. (2012). Research project for teachers: 12th plan guidelines. UGC. https://www.ugc.gov.in/pdfnews/7716504_12th-plan-guidelines.pdf

University Grants Commission. (2018-19). *UGC annual report 2018-19*. University Grants Commission.

University Grants Commission. (2021). *About Us: UGC*. University Grants Commission: https://www.ugc.ac.in/ University Grants Commission.(2021).

University Grants Commission. (2022). Guidelines for dr. Kothari research grant for newly recruited faculty members (2022)https://frg.ugc.ac.in/download/Guidelines-Newly%20rectt%20faculty.pdf

University Grants Commission. (n.d.). Genesis. https://www.ugc.gov.in/page/Genesis.aspx

University Grants Commission. (n.d.). Guidelines for fellowship for superannuated faculty members (2022). UGC. https://frg.ugc.ac.in/download/Guidelines-Superannuated%20faculty.pdf

University Grants Commission. (n.d.). Guidelines for organising conferences workshops seminars in colleges during eleventh plan (2007-2012). UGC. https://www.ugc.gov.in/oldpdf/xiplanpdf/conferenceseminars08.pdf

University Grants Commission. (n.d.). Guidelines for research grant for in-service faculty members (2022). UGC. https://frg.ugc.ac.in/download/Guidelines-In%20service%20faculty.pdf

Vilkinas, T., & Ladyshewsky, R. K. (2011). Leadership behaviour and effectiveness of academic program directors in Australian Universities. *Educational Management Administration & Leadership*, *40*(1), 109-126.

Walker, J. W. (2001). Perspectives. *Human Resource Planning, 24*, 6-10.

Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of management*, *34*(1), 89-126.

Wang, P. and Walumbwa, F. (2007). Family-friendly programs, organizational commitment, and work withdrawal: The moderating role of transformational leadership. *Personnel Psychology, 60*, 397-427.

Weigl, M., Hornung, S., Parker, S., Petru, R., Glaser, J., & Angerer, P. (2010). Work engagement accumulation of task, social, personal resources: A three-wave structural equation model. *Journal of Vocational Behavior 77*(1), 140-153

Whitener, E. M. (2001). Do "high commitment" human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modeling. *Journal of Management, 27(50),* 515-535. https://journals.sagepub.com/doi/10.1177/014920630102700502

Whittington, J. L., & Galpin, T. J. (2010). The engagement factor: Building a high-commitment organization in a low-commitment world. *Journal of Business Strategy, 31*(5), 14-24. https://www.emerald.com/insight/content/doi/10.1108/02756661011076282/full/html

Wiles, R., Crow, G., & Pain, H. (2011). Innovation in qualitative research methods: A narrative review. *Qualitative Research, 11*(5), 587-604.

Willis, C. (2000). Go for your goals. *Working Woman, March*, 6-7.

World Bank (2010). *India Country Summary of Higher Education*. World Bank.

Wright, M. (2005). Always at odds? Congruence in faculty beliefs about teaching at a research university. *The Journal of Higher Education, 76,* 331-353.

Wright, P.L. (1990). Teller job satisfaction and organisational commitment as they relate to career orientations. *Human Relations, 43*(4), 369-381.

Wuttaphan, N. (2016). Factors affecting faculty engagement: A review literature. *HROD Journal, 8*(2), 92-118.

APPENDICES

APPENDIX- I

QUESTIONNAIRE

I am Urmila R Menon, Research Scholar pursuing Ph.D. from the Research Department of Commerce, St.Thomas' College (Autonomous), Thrissur. In connection to my study on 'A study on Faculty Engagement With Special Reference to Arts and Science Colleges of Kerala', I request you to read and answer my questions with utmost sincerity. I ensure that your response will be handled confidentially and will be used only for academic purpose.

Thanking You,
Urmila R Menon

I. Personal Factors

1. Gender: Male ☐ Female ☐

2. Age:
   - Below 30 ☐
   - 30-45 ☐
   - Above 45 ☐

3. Years of Experience:
   - Less than 10 years ☐
   - 10-20 years ☐
   - More than 20 years ☐

4. Type of Institution:
   - Government ☐
   - Aided ☐
   - Autonomous ☐

5. Title of Post:
   - Assistant Professor ☐
   - Associate Professor ☐

II. Contributing Factors of Faculty Engagement

Please respond to the following statements by ticking your preferred response from: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Agree (SA).

1.	Faculty members must be well connected with mission, vision and policies of an organisation.	SA	A	N	D	SD
2.	Clear communication of policy is necessary for effective functioning.	SA	A	N	D	SD
3.	Authorities must consider employees opinion while	SA	A	N	D	SD

	formulating policies.					
4.	Reputation of an institution is reflected through its organisation culture and policy.	SA	A	N	D	SD
5.	Adequate resources and support are available to perform duties.	SA	A	N	D	SD
6.	Encouraging employees to voice their opinions promotes openness.	SA	A	N	D	SD
7.	A good culture keeps faculty members more engaged.	SA	A	N	D	SD
8.	Quick resolution of problems is necessary in department.	SA	A	N	D	SD
9.	Independent thoughts and actions should be promoted in an institution.	SA	A	N	D	SD
10.	More interference during the work erodes engagement.	SA	A	N	D	SD
11.	Freedom to choose the subject contributes to higher level of performance.	SA	A	N	D	SD
12.	Possible to think independently and critically to resolve issues.	SA	A	N	D	SD
13.	Development of creativity and problem-solving skills are possible through innovation.	SA	A	N	D	SD
14.	Innovation is possible by handling problems in a different way.	SA	A	N	D	SD
15.	Authorities welcome and implement innovative ideas.	SA	A	N	D	SD
16.	Engaged faculty will show a high sense of belongingness towards the profession.	SA	A	N	D	SD
17.	High standards of teaching can be assured through accountability.	SA	A	N	D	SD
18.	Institutional social responsibility should be reflected in the activities performed.	SA	A	N	D	SD
19.	Peer-to-peer recognition induces more than monetary reward.	SA	A	N	D	SD
20.	Proper recognition increases productivity and reduces attrition rates.	SA	A	N	D	SD
21.	Passion and activities must be recognised properly.	SA	A	N	D	SD
22.	Faculty members are recognised sufficiently for the work they perform.	SA	A	N	D	SD
23.	Faculty members must be very clear in what he/she intends to do.	SA	A	N	D	SD
24.	Contributions from the faculty members have an influence on the outcome of an institution.	SA	A	N	D	SD
25.	Distinctiveness of institution is reflected in its performance.	SA	A	N	D	SD
26.	Co-workers must support each other.	SA	A	N	D	SD
27.	Able to rely on each other's in decision making.	SA	A	N	D	SD
28.	It is possible to express ourselves in the institution.	SA	A	N	D	SD

29.	Personal trust helps to reduce stress and burnout.	SA	A	N	D	SD
30.	Involvement in work always results in positive outcomes.	SA	A	N	D	SD
31.	Faculty members must be well connected with the interest of students.	SA	A	N	D	SD
32.	Sufficient authority must be given to participate in substantive decisions.	SA	A	N	D	SD
33.	Increased feeling of personal control over schedule.	SA	A	N	D	SD
34.	Able to participate directly to fulfil organisational mission.	SA	A	N	D	SD
35.	Able to spent time on research and other activities.	SA	A	N	D	SD
36.	Possible to maintain a fit between duties and passion.	SA	A	N	D	SD
37.	It is possible to maintain a work-life balance.	SA	A	N	D	SD
38.	No clear delineation between work and home.	SA	A	N	D	SD
39.	Repetitive actions create boredom.	SA	A	N	D	SD
40.	Able to identify the strength and weakness of students and act accordingly.	SA	A	N	D	SD
41.	Able to infuse confidence level of students.	SA	A	N	D	SD
42.	Should give equal priority for teaching, research and service.	SA	A	N	D	SD
43.	Performance related pay encourages an employee to perform better.	SA	A	N	D	SD
44.	Authorities revise salaries & pay scales and implement it on time.	SA	A	N	D	SD
45.	More initiative is taken when there are sufficient rewards.	SA	A	N	D	SD
46.	Reward act as a motivator.	SA	A	N	D	SD
47.	Improvement in infrastructure contributes to faculty development.	SA	A	N	D	SD
48.	All funding agencies are easily accessible and assured to be used whenever needed.	SA	A	N	D	SD
49.	Sufficient schemes to promote research exist and its accessible.	SA	A	N	D	SD
50.	Proper collaboration between industries and institution to establish national level facilities is ensured by authorities.	SA	A	N	D	SD
51.	Leaders should act as a protective shield for their followers.	SA	A	N	D	SD
52.	Proper training and mentoring programmes empower faculty members to develop their own leadership skill.	SA	A	N	D	SD
53.	Constructive feedback from the leaders arouse confidence in faculty members.	SA	A	N	D	SD
54.	Greater productivity could be achieved through healthy relations.	SA	A	N	D	SD
55.	Through healthy interaction employees will get more done and happier.	SA	A	N	D	SD

56.	Quality of interaction should be enhanced by involved ones.	SA	A	N	D	SD
57.	Networking with other members will lead to better engagement.	SA	A	N	D	SD
58.	It should be easy to communicate with members in various positions.	SA	A	N	D	SD
59.	There exists a proper alignment of talent and duties allotted.	SA	A	N	D	SD
60.	Have to build a deep reservoir of successors at every level.	SA	A	N	D	SD
61.	Need to assess the candidate's skill in the hiring process.	SA	A	N	D	SD
62.	Existence of rational performance and appraisal system helps in development of skills and increases in reputation.	SA	A	N	D	SD
63.	Quality of teaching and other allied activities could be enhanced through performance appraisal.	SA	A	N	D	SD
64.	Continuous appraisal from the authorities enhances performance.	SA	A	N	D	SD
65.	Monitoring performance with standards will help to assess the credibility of a faculty.	SA	A	N	D	SD
66.	It is possible to carefully monitor the faculty growth and development through T&D programmes.	SA	A	N	D	SD
67.	Meaningful feedbacks on faculty accomplishments are provided through T&D programmes.	SA	A	N	D	SD
68.	Training sessions and refreshment programmes induces the faculty members.	SA	A	N	D	SD
69.	Authorities support to attend conferences and refresher programmes.	SA	A	N	D	SD

III. Dimensions of Faculty Engagement

1.	Successful teaching and learning strategies should be used to support everyone.	SA	A	N	D	SD
2.	Able to develop and use e-contents and MOOC's.	SA	A	N	D	SD
3.	A supportive environment is necessary in order to provide additional services to institutions and universities.	SA	A	N	D	SD
4.	A faculty member have to be curious to find out students preferences, interest, feelings and ideas.	SA	A	N	D	SD
5.	Active participation in orientation or refresher or methodology courses enhances the quality of research.	SA	A	N	D	SD
6.	Being part of examination and evaluation activities seems to be worth.	SA	A	N	D	SD
7.	Feedback from students arouses my confidence level to teach.	SA	A	N	D	SD

8.	Faculty members need to be conscious to strengthen and update knowledge on a daily basis for effective mentoring.	SA	A	N	D	SD
9.	A faculty member is responsible for using multiple diagnostic tools to determine student needs and identifies their areas of confusion.	SA	A	N	D	SD
10.	Doing research presentations helps faculty members to get feedback on their work.	SA	A	N	D	SD
11.	Publishing research work helps faculty members to communicate the research to a wide and interested audience.	SA	A	N	D	SD
12.	Attainment of good scores in h-index can be used as a parameter to know the interest of a faculty member in research.	SA	A	N	D	SD
13.	Research conducted must contribute something towards society.	SA	A	N	D	SD
14.	Participation in research conferences helps to broaden the professional network.	SA	A	N	D	SD
15.	Writing research papers engrosses me for hours on end.	SA	A	N	D	SD
16.	Spending time for research enhances the overall quality as a faculty member.	SA	A	N	D	SD
17.	Providing assistance to research scholars helps in building confidence in my skills as a researcher.	SA	A	N	D	SD
18.	A faculty member must also provide administrative support to the college and University concerned.	SA	A	N	D	SD
19.	A faculty member should be willing to be part of committees and perform the duties allotted.	SA	A	N	D	SD
20.	Extension programmes and community engagement should be included in the curriculum.	SA	A	N	D	SD
21.	I am energised by providing services.	SA	A	N	D	SD
22.	My work as a service provider has an influence on society.	SA	A	N	D	SD
23.	Faculty members should take initiative to identify the best practices and to implement it.	SA	A	N	D	SD
24.	I feel immersed while providing services.	SA	A	N	D	SD

IV. Faculty Engagement

1.	Able to continue in work for long duration.	SA	A	N	D	SD
2.	Willing to accept any type of job.	SA	A	N	D	SD
3.	Element of challenge in the job induces performance level.	SA	A	N	D	SD
4.	Willing to put a great deal of effort to make institution successful.	SA	A	N	D	SD
5.	The performance relating to work are meaningful and purposeful.	SA	A	N	D	SD

6.	My job inspires me.	SA	A	N	D	SD
7.	Mental resilience is part of this profession.	SA	A	N	D	SD
8.	Great deal of effort should be made in order to make the organisation successful.	SA	A	N	D	SD

V. Outcomes of Faculty Engagement

1.	Always better to focus on positive side rather than negative side.	SA	A	N	D	SD
2.	Being part of new committees and extra-curricular activities considered as an opportunity.	SA	A	N	D	SD
3.	Defending should be done when others criticise our institution.	SA	A	N	D	SD
4.	Motivates others to express their opinion and ideas.	SA	A	N	D	SD
5.	Necessary to assure professional development of employees.	SA	A	N	D	SD
6.	Rapid change in technology demands innovative behaviour in teaching.	SA	A	N	D	SD
7.	Old school of thoughts should be replaced by new ones to achieve better results.	SA	A	N	D	SD
8.	Educational sectors should be upgraded shortly.	SA	A	N	D	SD
9.	Employee retention fosters bonding among the members.	SA	A	N	D	SD
10.	Timely promotion plays a pivotal role.	SA	A	N	D	SD
11.	Employees leave the institution out of frustration and constant friction with superiors.	SA	A	N	D	SD
12.	Working environment of the institution creates confidence to work.	SA	A	N	D	SD
13.	Greater team spirit within the organisation.	SA	A	N	D	SD
14.	Stability of job leads to higher job satisfaction.	SA	A	N	D	SD
15.	Salary corresponds to the level of responsibility and demands of my job.	SA	A	N	D	SD

APPENDIX II- List of Government, Aided and Autonomous Arts and Science Colleges under University of Calicut

A. GOVERNMENT ARTS AND SCIENCE COLLEGES

Sl. No	Name of the College	Year of Establishment	Website
1.	N.M.S.M Government College, Kalpetta	1981	https://nmsmcollege.ac.in/
2.	C.H.M.K.M Government Arts and science college, Koduvally	2013	https://gasckoduvally.ac.in/
3.	Dr. B.R Ambedkar Memorial Government Arts and Science College, Balussery	2013	http://gcbalussery.ac.in/
4.	Government Arts and Science college, Kozhikode	1964	https://www.gasckkd.ac.in/
5.	Government Arts and Science College, Nadapuram	2014	NA
6.	Government College, Madapally	1958	http://madappallycollege.ac.in/
7.	S.A.R.B.T.M Government College, Koyilandy	1975	https://www.gckoyilandy.ac.in/
8.	Government College, Mokeri	1981	http://govtcollegemokeri.ac.in/
9.	Kunnamangalam Government Arts and Science college.	2014	http://gasckunnamangalam.ac.in/
10.	Government college, Kodencherry	1980	https://kodencherycollege.ac.in/
11.	C.K.G Government College	1975	http://ckgmgovcollege.ac.in/
12.	C.H.M.K.M Government Arts and Science College, Tanur	2013	http://gctanur.ac.in/
13.	Government Arts and Science college for Women, Malappuram	2015	http://gwcmalappuram.ac.in/
14.	Government Arts and Science College, Tavanur	2013	http://gascthavanur.ac.in/
15.	Government Arts and Science College, Nilambur	2017	NA
16.	Government Arts and Science college, Kondotty	2013	https://www.gasckondotty.ac.in/
17.	Government Arts and Science college, Mankada	2013	NA
18.	Government college,	1972	https://gcmalappuram.ac.in/

Sl. No	Name of the College	Year of Establishment	Website
	Malappuram		
19.	P.T.M Government college	1975	http://ptmgc.ac.in/
20.	T.M Government college, Tirur	1980	http://tmgctirur.org/
21.	Government Arts and Science college, Tholanur	2019	NA
22.	Government Arts and Science college, Thrithala	2013	http://thrithalagovtcollege.ac.in/
23.	Rajiv Gandhi Memorial Government Arts and Science college, Attappady	2013	NA
24.	Government Victoria College, Palakkad	1866	http://www.gvc.ac.in/
25.	Government Arts and Science college, Kozhinjampara	2005	http://gasck.ac.in/
26.	Government College, Chittur	1947	https://chitturcollege.ac.in/
27.	Government Arts and Science College, Pathiripala	2014	NA
28.	S.N.G.S College, Pattambi	1889	https://sngscollege.org/
29.	Government Arts and Science college, Chelakkara	2013	NA
30.	Government Arts and Science college, Ollur	2014	http://gascollur.ac.in/
31.	KKTM Government College, Pullut	1972	http://govtkktmcollege.ac.in/
32.	P.M. Government College, Chalakudy	1975	https://pmgc.ac.in/
33.	Sri C. Achuthamenon Government College, Kutanellur	1972	http://govtcollegethrissur.ac.in/

B. AIDED ARTS AND SCIECNE COLLEGES

Sl. No	Name of the College	Year of Establishment	Website
1.	Pazhassi Raja College, Pulpally	1982	https://pazhassirajacollege.ac.in/
2.	St. Mary's College, SulthanBathery	1965	https://stmarysbathery.ac.in/
3.	WMO Arts and Science College,	1995	https://www.wmocollege.ac.in/

Sl. No	Name of the College	Year of Establishment	Website
	Muttil		
4.	Malabar Christian College, Kozhikode	1909	https://mccclt.ac.in/
5.	MAMO College, Mukkom	1982	https://www.mamocollege.org/
6.	Providence Women's college, Kozhikode	1952	https://www.providencecollegecalicut.ac.in/
7.	R. Sankar Memorial SNDP Yogam Arts and Science college, Koyilandy	1995	NA
8.	S.N. College, Chelannur	1968	https://sngcollegechelannur.edu.in/
9.	Zamorin's Guruvayurappan College, Kozhikode	1877	https://zgcollege.org/
10.	Amal College of Advanced Studies, Santhigramam, Myladi, Nilambur, Malappuram	2005	https://amalcollege.ac.in/
11.	Ambedkar College of Arts and Science, Aided, Wandoor, Malappuram	2014	https://www.ambedkarcollegewdr.in/
12.	EMEA College of Arts & Science, Kondotty, Kumminiparamba	1983	https://www.emeacollege.ac.in/
13.	K.A.H.M. Unity Women's College Manjeri	1991	https://unitywomenscollege.ac.in/
14.	KTM College of Advanced Studies, Karuvarakkundu	1995	https://www.ktmcollege.org/
15.	Malabar College of Advanced Studies, (Aided), Vengara	2013	https://www.malabarcollegevengara.org/
16.	Mar Thoma College, Chungathara, Malappuram	1981	https://mtcc.ac.in/
17.	MES Keveeyam College, Valanchery, Malappuram	1981	https://www.meskeveeyamcollege.ac.in/

Sl. No	Name of the College	Year of Establishment	Website
18.	MES Ponnani College, PO Ponnani South, Malappuram	1967	https://www.mesponnanicollege.ac.in/
19.	NSS College, Manjeri, Manjeri College, P.O, Malappuram	1965	http://nsscollegemanjeri.ac.in/
20.	PSMO College, P.B.No.2, Thirurangadi, Malappuram	1968	https://psmocollege.ac.in/
21.	Sayyid Muhammed Ali Shihab Thangal Memorial Arts and Science Women's college, Kattilangadi,	2016	https://smstmwomenscollege.com/
22.	Sullamussalam Science College, Areacode	1995	https://sscollege.ac.in/
23.	Mercy College, Palakkad	1965	https://www.mercycollege.edu.in/
24.	MES Kalladi College, Mannarkkad College	1967	https://meskc.ac.in/
25.	MPMMSN Trust College, Shoranur	1981	http://sncshoranur.edu.in/
26.	N.S.S Arts and Science College, Kappur, Parakulam	2016	http://nssparakkulam.ac.in
27.	NSS College, Nemmara	1966	http://nssnemmara.ac.in/
28.	NSS College, Ottapalam, Palappuram	1961	http://nsscollegeottapalam.org/
29.	Sree Narayana College, Anjumoorthy (Via), Erattakulam	1977	https://www.sncollegealathur.com/
30.	Sreekrishnapuram VT Bhattathiripad College, PO Mannampatta	1982	http://vtb.ac.in/
31.	Carmel College, Mala, Trichur	1981	https://www.carmelcollegemala.a

Sl. No	Name of the College	Year of Establishment	Website
			c.in/
32.	Little Flower College, Guruvayur	1955	https://littleflowercollege.edu.in/
33.	Mar Dionysius College, Pazhanji, Trichur	1982	https://mdcollege.edu.in/
34.	MES Asmabi College, Vemballur, PO Kodungalloor,	1981	http://mesasmabicollege.org/
35.	Prajyoti Niketan College, Puthukad	1995	https://prajyotiniketan.edu.in/
36.	Sacred Heart College for Women, Chalakkudy	1980	https://sacredheartcollege.ac.in/
37.	Sree Kerala Varma College, Trichur	1947	https://keralavarma.ac.in/
38.	Sree Krishna College, Guruvayoor PO, Ariyannur	1964	http://sreekrishnacollege.in/
39.	Sree Narayana College, Nattika	1967	https://www.sncollegenattika.ac.in/
40.	Sree Vivekananda College, Kunnamkulam	1981	https://svcollege.ac.in/
41.	Sri Vyasa NSS College, PO Vyasagiri, Wadakkanchery	1967	https://www.srivyasanss.ac.in/
42.	St. Aloysius College, Elthuruth PO, Trichur	1968	https://www.staloysiuselt.edu.in/
43.	St Mary's College, Trichur	1946	https://www.stmaryscollegethrissur.edu.in/

C. AUTONOMOUS ARTS AND SCIENCE COLLEGES

Sl. No	Name of the College	Year of Establishment	Website
1.	Farook College, Kozhikode	1948	https://www.farookcollege.ac.in/
2.	St. Joseph's College, Devagiri, Kozhikode	1956	https://www.devagiricollege.org/
3.	MES Mampad College, PO Mampad College	1965	https://mesmampadcollege.edu.in/

Sl. No	Name of the College	Year of Establishment	Website
4.	Christ College, Irinjalakuda	1956	https://christcollegeijk.edu.in/
5.	St. Joseph College, Irinjalakuda	1964	https://www.stjosephs.edu.in/
6.	St. Thomas College, Trichur	1889	https://stthomas.ac.in/
7.	Vimala College, Trichur	1967	https://www.vimalacollege.edu.in/