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.

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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.