

Positive Organisational Practices in Indian Engineering and Technology Institutes: A Model Building Approach

THESIS

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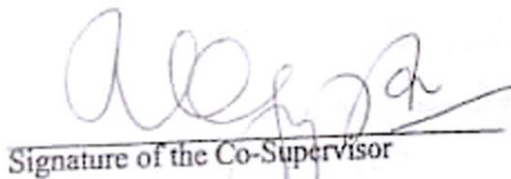
CERTIFICATE

This is to certify that the thesis entitled "Positive Organisational Practices in Indian Engineering and Technology Institutes: A Model Building Approach" and submitted by Ms. Priyanka Bhattacharya, ID No. 2012PHXF0012P for award of Ph.D. of the Institute embodies original work done by her under our supervision.


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Dedicated
To my beloved Parents

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Abstract

Background:

The conspicuous growth of the world economy in the 21st century is leading to severe competition within and across national borders. The progressive environment indicates there would be enormous changes in all the economic sectors in the coming decade. It is evident that such developments hamper the physical and psychological well-being of stakeholders involved. The higher education institutions are also facing a similar challenge and are under intense pressure to perform well in this fast-changing and dynamic environment. Not only the students but also the faculty members experience a high level of job pressure and stress making their roles more challenging than before. With the emergence of the Positive Psychology movement, the issue relating to the well-being of students in an educational institution has recently gained the attention of academicians and researchers in western countries. But there is a paucity of literature on faculty well-being, especially in the Indian context. Thus, educational institutions need to adopt proactive steps to maintain and enhance the well-being of faculty members. This research accentuates on the need to incorporate positive organisational practices in the Indian higher education sector, especially engineering and technology institutes, and proposes a conceptual framework for the identification and development of such practices.

Aim of the study:

The study aimed to identify the positive practices in Indian Engineering and Technology Institutes that lead to the well-being of faculty members. To facilitate the understanding of the inter-related practices the aim was further extended to propose a conceptual theory depicting the relationship and interdependence of these practices in an institutional setting.

Methodology:

The review of literature pointed towards the paucity of research on the well-being of faculty members in the higher education sector, more specifically in Indian Engineering and Technology Institutes. This prompted us to adopt a qualitative (exploratory) study to achieve the predetermined objectives. Grounded theory methodology is one of the most suited techniques for addressing the research questions that lack theoretical underpinnings. Grounded theory methodology adopts an inductive approach, which is also called the 'reverse-engineered process'. Unlike the deductive methods, this methodology aims at starting from data and believes that the theory is hidden in data. There are several approaches to Grounded theory methodology. For this study, we adopted a combined approach of Glaserian and Straussian school of thought. Using theoretical, purposive and snowball sampling the premier engineering and technology institutes of India were selected for this study. Faculty members from these institutes were selected, and an in-depth interview was conducted. Theoretical saturation was achieved after interviewing 41 participants from these institutes.

Findings:

The study explores the positive practices in five engineering and technology institutes of India. The study also reveals the several macro and micro environmental factors that influence the practices in the institutes. There are four macro contextual factors namely, cultural aspect, government, competition and location. There are five micro environments namely, teaching or formal learning environment, research environment, administrative environment, residential environment, social environment, family environment and local community environment.

Along with the practices the study unearths the outcomes of these practices, termed as well-being (outcomes from positive practices) or ill-being (outcomes of negative practices). These well-being outcomes are then related to the PERMA model proposed by Seligman to demonstrate the presence of well-being in the faculty members through the incorporation of these practices. The study also gives a list of suggestions that the faculty members have proposed that might enhance their experience in the institute which might lead to well-being. The theory generated using the grounded theory method establishes a relationship between these facets and demonstrates the interdependence of each facet with the other.

Conclusions

Findings suggest that the premier engineering and technology institutes of India have practices that lead to the well-being of faculty members. The exhaustive list of practices and their categorisation can be used as a benchmark for other institutions for enhancing the well-being of the faculty members. The study also discovers the practices that need to be changed and the suggestions to make the best institute in the country even better. The findings of this study can also be extended to explore the well-being practices for the students and staffs and thus provide a holistic view of the well-being of the educational institution.

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Chapter 1. Introduction

1.1 Background

The demand for intellectual capital – the world’s best talents and greatest ideas, is on the rise in this new era of globalisation and liberalisation. Several countries have experienced faster economic development because of this phenomenon. The emerging economies accentuate on monetary success and promote increasing faith in the competitive markets. Though the globalisation and technological advancement have provided abundant opportunities for the improvement of physical well-being, but the mental well-being facet has not received adequate attention. The competition and fast-paced economic development have inexorably paved the way for a rise in depression, attrition, mental illness, and distress across all sectors of an economy (Walker, 2007). As per a report by the World Health Organisation (WHO), all over the world anxiety and depressive disorders take the top position amongst the list mental illness, and approximately 25% of all visits to the health care centres can be attributed to them (Lambert, 2006). The WHO also claims that the rate of depression has increased by 18% between 2005 and 2015, and more than 300 million people are now suffering from it¹. The research trend exhibits that depression and anxiety have grown manifold accounting to ten times more than what it used to be fifty years ago (Geryk, 2011; Martin E P Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). Hence, one can easily spot the irony. Today, the world is witnessing advancements across all the fields but countries are performing low on indicators of well-being (Chandra, 2017)

¹ Source: http://www.who.int/mental_health/management/depression/en/

Like any other sector, the higher education institutions are internationalising and expanding leading to complexities and increased pressure to instil competitiveness for fostering growth and prosperity of all its stakeholders. In the last two decades, the demand for higher education has constantly elevated. UNESCO (2017) reported that between 2000 and 2014 the gross enrolment ratio in the global higher education has increased from 19% to 34% and the number of students have more than doubled, rising from 100 million to 207 million. The higher education sector is now viewed as a complex combination of free flow of ideas, knowledge, finance and inter-institution dealings operating simultaneously at the local, national and global level (Marginson, 2006).

It is observed that the complicated and highly competitive education scenario has led to an increase in the level of psychological distress, mental illness and student dropout from the system. But, not only the students the faculty members are also under immense pressure to give their best performance under this competitive scenario. For example, a study found that 85.5% of faculty exit from the institution because of excess stress at work and work-life imbalance (Butali, Wesang'ula, & Mamuli, 2013). Thus, it becomes a necessity for the institutions to pinpoint the factors that lead to the flourishing and development of the strength and capabilities of all the stakeholders involved. This calls for the education system to shift its sole focus from academic excellence towards the enhancement of strengths, talents, virtues, well-being, etc. i.e., the aspects of 'positive organisational scholarship.'

1.2 Positive Organisational Scholarship

Positive organisational scholarship (POS) has originated from the field of positive psychology with its formal introduction in the year 2003. With the onset of the

positive psychology movement, many scholars had explored the conditions under which the positive emotions, positive relationships, strengths, engagement and meaning flourish (Cameron, Dutton, & Quinn, 2003a; Gardner, Csikszentmihalyi, & Damon, 2001). However, studies exploring positive aspects of human flourishing were scant in organisational and institutional settings. This gave birth to a relatively new area of research namely, Positive Organizational Scholarship (POS) (Cameron, Dutton, & Quinn, 2003b). As per Cameron, Dutton, & Quinn, (2003b) “POS is concerned with the study of especially positive outcomes, processes and attributes of organisations and their members.” Since its conception, it has attracted substantial attention of the researchers and academicians (Caza & Cameron, 2008; Fineman, 2006; George, 2004; Roberts, 2006).

However, the credibility and importance of this field are partly dependent on the relationship between positive practices and organisational effectiveness. The researchers advocate that the study of such practices in an organisational setting is crucial as it accounts for variance in performance, which might otherwise remain unnoticed (Carlson & Barling, 2008; Roberts, 2006). The study of the positive phenomenon in an organisational science has not received much focus and thus needs special attention. Especially in the higher education sector, the focus of positivity has mostly remained on the students. For example, positive education practices bring attention to skill and knowledge development along with emphasising on enhancing happiness in students (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). However, the stakeholders of an educational institution are inter-dependent, and thus it is imperative to constitute such positive practices that permeate across all the layers of an institution and impact not only the students but also the faculty members and staffs. For this research, we focus on identifying such positive organisational practices

that lead to the well-being of faculty members along with increasing effectiveness in the institution.

1.3 Positive Organisational Practices

The stress and burden of managing a system that is complex and exists in an ever-changing and challenging business situation devoid the management practices from the positive aspects. Such positive practices can create a positive environment and lead to less turnover, less training cost, fewer periods of inefficiency in new employees and lower down stress levels (Levin, 2016; Twigg & McCullough, 2014). POS is extensively studied in the past, but the literature available on positive organisational practices is insufficient. Few studies have incorporated positive practices in the research; however, have failed to provide an extensive definition of the same (Lee, 2011; Twigg & McCullough, 2014).

In one of the studies Cameron, Mora, Leutscher, & Calarco, (2011) defined “practices as collective behaviours or activities sponsored by and characteristic of an organisation.” For defining positive organisational practices, Cameron et al. (2011) evolved a list of positive practices from the prior literature. Though the list was not exhaustive, it provided a comprehensive inventory of behaviours that characterise positivity in organisations. The authors did not use an additional or new theory for defining positive practices rather attempted to integrate all three connotative meanings of positive in the organisational practices. Thus, defined positive organisational practices as “behaviours, techniques and routines - that represent positively deviant (i.e., unusual) practices, practices with an affirmative bias, and practices that connote virtuousness and eudemonism in organisations.”

During the past five years, research has accelerated in the field of POS wherein impact of positivity, positive work environment, positive approaches and positive practices on various job attitudes of the employees and overall organisational effectiveness have been the focal point of attention. Oldham (2012) outlined the possible effects of the design of jobs on several positive employee outcomes (e.g. new learning and resilience) that have received little research attention till now.

This research is an attempt to study such positive practices in the Indian Higher education system that impacts the well-being of faculty members. The faculty members are the elementary unit of an educational institution. Thus it is the responsibility of an institution to induce positive organisational practices in the system. Introducing positive organisational practices in the Indian higher education institutions will play a dual role in this context — one, by holistic development of students and preparing them for 21st-century challenges. Second, by building a vibrant and virtuous workplace culture leading to the well-being of faculty members and staff, and thus, fostering institutional well-being as a whole.

1.4 Scope of the Study

Since independence, the Indian education system has received a prime position in framing the policies and norms of Indian development. The issues faced by education sector and the problems of education reconstruction were reviewed by various commissions like the Gandhi's scheme of Basic Education, 1937 (Shrimali, 1960), University Education Commission, 1948-49 (*The Report of the University Education Commission*, 1949), the Secondary Education Commission, 1952-53 (*The Report of Mudaliar Commission of Secondary Education*, 1953), and the Education Commission, 1964-66 (*The Report of Education Commission*, 1966). The higher

education sector in India has made considerable progress since independence, and the GER is expected to rise to 32% by 2021-22 followed by a manifold increase in the number of colleges and universities to cater the growing demand of higher education (*Rashtriya Uchchatar Shiksha Abhiyan, National Higher Education Mission, 2013*).

Indian higher education is the third largest higher education system in the world surpassed by China and the US². Under the main governing body of University Grants Commission, it offers a large variety of courses ranging from arts, humanities, social sciences, engineering, medicine, agriculture, law, commerce, etc. As per the report of '*All India Survey on Higher Education (2015-2016)*' India has 799 universities that can be categorised into central universities (44), state universities (540), private universities (90) deemed universities (122), and universities that fall under the act of Institutes of National Importance (75) including AIIMS, IITs, NITs, etc³.

With science and technological advancement all over the world, the emphasis on science and technology education has increased manifold. The government has announced to double the investment in the science and technology area to place greater emphasis on research, education and innovation by 2020⁴. The Union Minister of Department of Science and Technology, Dr Harsh Vardhan has reiterated that the government aims to make people science-centric and for development technology is considered a strong priority area.

Modern India has a stronger focus on science and technology, as it is believed to be the key element in economic growth. In this respect, the IITs have a great role to

² Source: http://siteresources.worldbank.org/EDUCATION/Resources/278200-1121703274255/1439264-1193249163062/India_CountrySummary.pdf

³ Source: AISHE Report: http://mhrd.gov.in/sites/upload_files/mhrd/files/statistics/AISHE2015-16.pdf

⁴ Source: <http://www.sciencemag.org/features/2013/02/advancing-science-india>

play. The IITs not only focus on imparting high-quality technical education but also focus on producing high-quality research. This has brought the IITs in several reputed international ranking lists making them one of the top institutions not only in India but also in the world.

The IITs in India are declared as the institutes of national importance and were formally introduced in the early 1960s. Since then the government has expanded the number of IITs from five to twenty-three indicating the higher focus of the system to emphasise and promote technical education and research.

Indian Engineering and Technology Institutes

In India, a "university" is an educational institute established or incorporated by or under a Central Act, a Provincial Act or a State Act and includes any such institution as may be recognised by the University Grants Commission (UGC) in accordance with the regulations made in this regard under the UGC Act, 1956. In 2014 alone, there were 34 times as many universities in India as there were in 1950. The total number of colleges has also seen a similar meteoric rise as there were 74 times more registered colleges in 2013 as compared to 1950. Several disciplines are being covered under these institutions, but engineering and management have come in vogue in the last decade due to glamorised status and high demand in the industry and therefore witnessed an increase in the enrolment of the students. This could be one reason for the increasing number of engineering colleges being set up in India.

Among these engineering colleges, the IITs have a national foothold. These institutions have been declared as 'Institution of National Importance' and are governed by the Act of Parliament. The mission of these institutions is to impart world class education in engineering and technology, to conduct research in the relevant fields, and to further advancement of learning and dissemination of

knowledge. These Institutes are also contributing significantly to education and research in basic sciences and humanities. In recent years, MHRD has increased the intake of students in these institutions. This poses a challenge to the faculty members as the student to faculty ratio has increased. Moreover, the increased focus on research and competing for international ranking has surged up the performance pressure on the faculty members. To overcome the performance pressure, there is an emerging need to incorporate the positive organisational practices in the Indian higher education system.

In the education sector, the concepts of positive organisational scholarship and positive psychology are continuously gaining importance and have begun to have a significant impact on schools and classroom interventions (Ling, 2012; Roth, Suldo, & Ferron, 2017; Shoshani & Steinmetz, 2014). In India, few constructs of positivity have been implemented in school by the educational policy-making bodies like NCERT and MHRD and educational boards like CBSE, in the form of life skills education. Also, the integral education philosophies and practices as propounded by Shri Aurobindo and J. Krishnamurthy have accentuated on “value-based holistic education,” i.e. development of mental health as well as physical health of students (Esbjörn-Hargens, Reams, & Gunnlaugson, 2010; Rudge, 2008). A plethora of research has been carried out in western countries concerning school education. However, the effect of positivity in higher education has largely been ignored.

The report by the “Committee to Advise on Renovation and Rejuvenation of Higher Education” known as the Yashpal Committee Report (*Report of The Committee to Advice on Renovation and Rejuvenation of Higher Education*, 2009) points out that the higher education system is suffering from the disconnect between the theoretical knowledge and its practical exposure. The committee further suggests

that to overcome this problem knowledge should be treated in a "holistic way". This also points towards the need to address issues towards the well-being of the people associated with the university as a system rather than only creating a culture of excellence and peak performance. Thus, the universities have to offer an enthralling proposition to attract and retain not only the best of the students but also faculty and staff.

Thus, it can be concluded that the engineering and technology institutes of India hold an important place and the government lays special emphasis on its development. Faculty members are considered the backbone of an educational institution. The satisfaction of the faculty is important as it directly impacts the experience of students in a class. Thus, to incorporate the positive aspects in an educational institution, it is imperative to focus on the well-being of faculty members along with the students.

The present study is an attempt to identify such positive organisational practices in the IITs that lead to the well-being of faculty members. The next section describes the stress and pressure aspects of faculty members and its effect on well-being.

1.5 Well-being of Faculty members

“Teacher stress is a major problem. It damages lives, ends careers and affects teaching standards.” (Holmes, 2005)

Historically, the role of any teacher, be it at primary, middle or higher levels, has been to provide nurturing care to students for them to develop and hone skills that they need to wield for survival in the professional world. In the recent decades, teachers/ faculty have been put under immense pressure for widening their work domain to include learning and disseminating new information and skills, keeping

themselves and their students updated towards technological inventions, and deal with pressure from parents/ community. These increased expectations have birthed a growing concern about teacher/ faculty well-being and its effect on teaching prowess because of which attrition rate, burnout due to stress have seen a spike around the globe. Therefore, it has become imperative that faculty well-being is discussed at length by the researchers working in the field of academics.

Faculty attrition is primarily triggered by job stress. One noted cause of job stress which features prominently in attrition studies was frustration due to excessive time demands (Clark, 1987; Gmelch, Lovrich, & Wilke, 1983; Moracco, D'ariento, & Danford, 1983). The other most prevalent reason for attrition was found to be a general lack of a community sense at the institution under study. A study by Johnson et al. (2005) compared occupational stress across 26 different vocations relating to health, job satisfaction and well-being. It concluded that stress experienced by teachers was worse than average on all the studied factors. Another study (Simbula, 2010) showed that day level work mediated the impact of co-worker support, job satisfaction and mental health. Also, the study found that work exhaustion affected family-work conflict daily. A review of studies conducted over a decade concluded that studying stress and burnout in teachers could foster the reduction of stress levels in schools (Kyriacou, 1987).

While many studies can be found in literature contemplating school teacher well-being, mental health and job satisfaction very few such endeavours have been undertaken to study the stresses experienced by the faculty at higher education institutes (Hubbard & Atkins, 1995). This is a gross oversight in scholarly literature, which has only recently begun to find the attention of the researchers.

1.6 Aim of Research

From the above discussion, it can be concluded that the job pressure of faculty members in Indian Engineering and Technology institutes is on the rise. Due to which the well-being of faculty members in these institutes is at stake. Thus, there is a need to take proactive steps to address this issue. The Indian Engineering and Technology Institutes, being the best in the country is supposed to follow such practices that enhance the well-being of the faculty members along with the attainment of the institutional goal. Thus, this study aims to identify those positive organisational practices that enhance the well-being of faculty members in these institutions and propose a model to depict the relationship between these practices and the outcomes. The structure of the thesis to achieve this aim is stated below.

1.7 Organisation of the Thesis

The thesis begins with the review of the literature. The topics like positive psychology, positive organisational scholarship, positive practices, well-being and the status of the Indian education system are described in detail grounding upon the available literature. For review, papers were collected from a diverse online database and was analysed using summative content analysis. The enable meaningful interpretation of the review frequencies were calculated and depicted in graphs. Also, the study of positivity in different work contexts like healthcare, education, corporates, etc. is highlighted. The literature review is concluded by identifying gaps, stating the research question and research objectives. This paves the way for deciding the methodology to be adopted to achieve the research objectives.

Subsequently, chapter 3 introduces the methodology adopted in this study. The review of the literature suggested that the undertaken area of investigation has

received scant scholarly attention and the study has to be started right from scratch. Moreover, the research aimed to build a theory depicting a clear relationship between all the factors impacting the positive practices in an educational institution. Therefore, the grounded theory methodology (GTM) was adopted that could best serve the purpose. Grounded theory methodology is a qualitative technique for the construction of a theory that is grounded in the data. The chapter accentuates on the theoretical underpinnings of the GTM, the elements of GTM, its process and the justification of its suitability for achieving the research objective. This chapter provides further understanding of how the critical research aspects such as the process of coding, data sampling, and data collection techniques are practically employed in this thesis. The chapter concludes by briefly introducing the NVivo software that was used to store, analysing and interpreting data.

In the next chapter, (Chapter 4), analysis and interpretation procedure of the data is described in detail. This chapter extends the understanding of the approach of grounded theory used in this thesis and the steps undertaken to analyse the data. The first step taken for data analysis was the open coding also called as naming or labelling the data. The next step was axial coding that includes establishing a relationship between the codes follows the open codes, and finally culminates with selective coding which leads to the generation of theory from the data. The constant comparison principle guided all the three steps of coding until theoretical saturation was achieved. The chapter also illustrates several examples from the interview transcript to provide transparency of the procedure and a better understanding of the analysis conducted. Further, figures and tables have been used to represent the interpretation process. The chapter concludes by proposing an empirical model as a result of this research endeavour.

Chapter 5 assesses the quality of the study. It highlights the use of research rigour in performing data collection and analysis. The trustworthiness of qualitative research is often difficult to establish. The analysis process and the findings of this study are evaluated on several parameters like credibility, conformability, transferability, and dependability. The chapter gives a brief of such parameters through which the quality of a qualitative study can be tested. It also highlights in detail how these parameters are applied throughout the research study making the results reliable and trustworthy.

Chapter 6 emphasises on discussing the major findings of this research. The theory that emerged from the data collected is discussed in detail. The chapter also emphasises on weighing the positive practices concerning the PERMA model describing the elements of well-being. The chapter further illustrates suggestions on making the best institutes of the country even better. The existing scholarly literature was also used to compare the findings of the study and provide thoughtful insights.

Finally, chapter 7 concludes this research endeavour by highlighting key findings of the research. The chapter illuminates the theoretical contribution of the results of the study. Along with it, the practical implications of the results are discussed in detail. It further enhances understanding about the limitations of the study, which paves the way for identifying the future scope of this top and carrying out further research in those areas.

Chapter 2. Literature Review

2.1 Introduction

The present chapter is an attempt to review and summarise the literature available in the areas of positive psychology, positive organisational scholarship, positive organisational practices, well-being and the scenario of Indian higher education. Based on the review of the literature the research gaps are identified. The chapter also proposes the research question and research objectives based on the identified gaps.

2.2 Background

The new era powered by globalisation and liberalisation has elevated the demand for intellectual capital. People with the greatest ideas and best talents stand at the core of every institution. The focus has now shifted from ‘what to think’ to ‘how to think’. Where, indeed, can one learn how to think and perceive differently? Certainly, the conventional education system is the answer to the above question. The contemporary education system needs to impart students, not only theoretical knowledge but also equip them with 21st-century competencies (21CC) (Cairns & Malloch, 2017). To enhance such competencies (21CC), holistic approach to education should be incorporated with a conventional approach. In an aggressively changing world, students and faculty members need to acquire life-ready competencies like resilience, creativity, cross-cultural understanding and innovation. Simultaneously, there is intense pressure on the organisations for a firmer commitment to social development. In this respect, higher education institutions have a special role to play (Geryk, 2011). In the last 20 years, the higher education system has witnessed a dramatic change in the roles, responsibilities and the organisation of the system. The highly volatile

environment calls for the education system to emphasize 'skill and knowledge development' along with accentuating on strengths, talents, virtues, well-being, etc., which are the aspects of 'positive organisational scholarship'. Positive Organisational Scholarship (POS) studies the positive outcomes, processes and attributes of an organisation as well as its members (Cameron, Dutton, & Quinn, 2003b). POS advocates the idea that laying focus on the drivers of positive behaviour in the workplace will allow the organisation and all its stakeholders to achieve even higher levels of performance (Roberts et al., 2005). POS is concerned with the positive states and processes that lead to the development of strengths and capabilities of every individual and organisation.

According to Dutton and Glynn (2007), multiple factors were responsible for the advancement of POS as a field in the early 2000s. For example, there was a visible shift in applied social sciences towards a strength-based approach besides the deficit-based approach. Also, a significant increase in the organisational scandals and tragic events necessitated diverting the focus more on optimism, hope, resilience, compassion, healing and re-engagement. Geryk (2011) stated that people are the chief support system of every institution and organisation and its accomplishment can be accounted to human endeavour. Thus, it becomes a necessity for the institutions to identify the factors that lead to the flourishing of stakeholders and the development of strength and capabilities of the institution. Therefore, the vital issue here appears to be the question of efficient application of the concepts of POS as a modern tool, which will eventually lead to efficient use of the opportunities and the resources available, and cultivate extraordinary individual and organisational performance (Geryk, 2011).

This widening domain of research has also inspired universities across the globe, and their growing fascination towards the science of well-being could be noticed well.

For example, “The Well-being Institute,” (Cambridge University’s Institute of Well-Being) is an interdisciplinary Institute dedicated to advancing the scientific understanding of well-being and applying this new knowledge to help people and institutions develop their full potential. The institute defines well-being as 'positive' and 'sustainable characteristics' which enable individuals and organisations to thrive and flourish (The Well Being Institute). On a similar pattern, “The University of Leeds,” (2013), “Student Wellbeing,” (2013) Newcastle University, and “Centre for Health and Well-being,” (2013) Indiana University of Pennsylvania provide programs and services that promote individual, physical, emotional and psychological well-being.

2.3 Review of Literature

Human sustainability essentially means maintaining human capital and improving the overall quality of life. Investment in education, physical and mental health is one of the areas that should be focused on to elevate the human capital scenario in developing economies like India. Historically, higher education institutions have considered academic excellence as the sole parameter to measure success. Like any other sector, the higher education institutes are under increasing pressure to instil competitiveness for fostering growth and prosperity in all its stakeholders. As per Bui and Baruch (2010), the competition is getting severe within and across national borders. It has been noted that there is an increase in the level of psychological distress, mental illness and student dropout due to increase in competition level in the education scenario. In the United States, instances of major depression have increased markedly among adults from 3.33% in 1991-92 to 7.06% in 2001-02 (Compton, Conway, Stinson, & Grant, 2006). Research elucidate that depression is ten times

more common in this era than it was 50 years ago. Ullas (2011) published an article in 'Times of India' (Bangalore edition), which revealed that 7% of students drop out from higher education because they are disinterested and de-motivated to study. Student dropout remains one of the most extensively researched area both in higher education and at secondary education level. In a study, Tinto (1975) considers academic and social mal-integration responsible behind dropout behaviour at higher education level and suggests that it is essential to study dropout patterns in the light of whether it is a voluntary withdrawal or academic dismissal.

Latest figures from the Higher Education Statistics Agency (HESA) show that the dropout rate of students has increased significantly in UK universities (BBC News Wales, 2012). Attwood (2009) reported that according to Times Higher Education the "quality of teaching and the student experience" is the reason for the low participation rates of students at some universities. On the other hand, the experience of the faculty in the institution and their state of mental well-being impacts the classroom climate and the student-teacher relationship, which are considered as core resources for quality of teaching and student learning (Shernoff, Mehta, Atkins, Torf, & Spencer, 2011). Studies have shown that an individual's sense of well-being is majorly affected by emotional deprivation (75%), followed by social and material deprivation (15%) (Huppert, 2007). For example, a study found that 85.5% of faculty leave the institution because of excess stress at work and work-life imbalance (Butali et al., 2013). Jain (2013) argued that academicians are facing an issue of high work stress and associated it to higher job dissatisfaction and lower emotional and physical health. Jain also stated that the high level of stress diminishes the teaching quality that impacts student achievement eventually hampering the institute's overall performance and growth.

Thus, there is a paradox in this context. Almost, everything is better now than it was 50 years ago, but the human morale. As the statistics suggest, depression and anxiety are growing sumptuously as weeds (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009b). Nowadays instead of aiming for academic excellence only, growing number of schools and educational institutions are adopting a more proactive approach and focusing on well-being by developing institutions in a holistic manner (Oades, Robinson, Green, & Spence, 2011). There is an urgency to acknowledge the need to foster and maintain the conditions for optimal functioning of students, faculty and staff. So, there seems to be an opportunity as well as a challenge for the universities to create a culture that values and cultivates the psychosocial determinants of well-being, and enhances the experience of students, faculty members and staffs on campus. This research proposes that positive organisational scholarship is extremely relevant for the institutions, like university settings, to assist in the understanding and development of positive qualities, strengths, and high levels of psychological wellbeing in students, staff and institution as a whole. In this context, the positive organisational practices that fall under the area of Positive Organisational Scholarship can serve as an important tool for the institutions to design proactive steps that cultivates well-being across all the levels of an institution and leads to holistic development.

2.3.1 Positive Psychology

Positive psychology was formally introduced in the American Psychological Association convention in 1998. The positive psychology movement immediately attracted the attention of researchers and practitioners from various fields (Donaldson, Csikszentmihalyi, & Nakamura, 2011). Positive psychology challenged the traditional research paradigms and transferred the orientation of researchers and practitioners on

strengths, virtues, flourishing, excellence, thriving, resilience, flow and optimal functioning. To understand the human experiences holistically, this positive orientation towards life and work complements the traditional view of diagnosing, problem-solving or a deficit-focused approach instead of substituting it (Rudge, 2008). The concept of positive psychology deals with three central concerns also known as the three pillars of positive psychology: positive subjective experience, positive individual traits and positive institutions (Seligman, 2002). The locus of first two pillars lies in the individual behaviour, each of which endows to the development of strengths, self-efficacy and personal effectiveness, whereas the third pillar is considered to be beyond the scope of psychology and is linked to organisational psychology leading to the effective functioning of organisations and fostering better communities.

In this fast-paced world, everyone is in pursuit of happiness and satisfaction. There are numerous ways to attain the state of happiness, and one such theoretical model was proposed by Seligman (2011) which described the elements that bolster well-being and happiness amongst individuals known as the PERMA model. The acronym PERMA stands for five core components: positive emotions, engagement, relationships, meaning and accomplishments. Seligman affirmed that the strength of the PERMA model can benefit individuals in achieving a life of fulfilment, happiness and meaning, and can also be extended to institutions and communities. Another novel theory was proposed by Fredrickson (2004) which advocated that positive emotions like happiness, joy, interest, contentment and love, broaden an individual's momentary thought-action repertoire and increase their resources. This contrasts with negative emotions which prompt narrow and specific action tendencies needed for immediate survival like attack or flee. The theory accentuates on the importance of

positive emotions in optimal functioning and well-being as it broadens peoples' attention and thinking, incites resilience, builds personal resources and upward spiral for greater well-being and seeds human flourishing.

Since its introduction, the field of positive psychology prospered and quickly proliferated across all disciplines and sectors. It was soon applied to organisational science, and three sub-areas were derived, viz., positive organisational scholarship, positive organisational psychology and positive organisation behaviour (Donaldson & Ko, 2010). These sub-areas are inter-linked and specifically deal with creating and maintain positive organisations. However, for the present study, we have only focused on the aspects of positive organisational scholarship and its application in the Indian Engineering and Technology institutes of India.

2.3.2 Positive Organizational Scholarship

Positive organisational scholarship has its roots lying in the domain of positive psychology. Positive psychology movement has directed scholars to explore the how, why, and the circumstances under which positive emotions, positive relationships, strengths, engagement and meaning flourish (Cameron, Dutton, & Quinn, 2003a; Gardner et al., 2001). However, there was a need to explore and understand the positive aspects of human flourishing, especially in an organisational setting. This gave birth to a relatively new area of research namely, Positive Organizational Scholarship (POS), which was formally introduced in the year 2003 (Cameron, Dutton, & Quinn, 2003b; Cameron, Dutton, Quinn, et al., 2003). Since then, it has attracted substantial attention from the researchers and academicians (Caza & Cameron, 2008; Fineman, 2006; George, 2004; Roberts, 2006).

This new movement asserts positively deviating from the expected patterns. These 'positive deviance' approaches promote a better understanding of organisational life

and augment effectiveness and flourishing in individuals and their organisations. ‘Positive organisational scholarship’ (POS) is the umbrella that covers such approaches in the organisational domain (Cameron, Dutton, & Quinn, 2003b; Cameron & Spreitzer, 2011). POS unearths attributes and processes that identify individual and collective strengths and discovers how such strengths can facilitate human flourishing (Roberts, 2006).

Scholarly articles on POS also accentuate on virtue and advocate its role in understanding exceptional human functioning in organisations (Cameron, 2003; Park & Peterson, 2003). For instance, Bright, Cameron, & Caza (2006), argued that virtue in an organisation represents something that is good and contributes to social betterment. The intention behind the study of POS is to gain knowledge about positive deviance and flourishing in individual behaviour and performance in the organisation (Spreitzer & Sonenshein, 2004; Spreitzer et al., 2005). It is defined as “the study of that which is positive, flourishing, and life-giving in organisations” (Cameron & Caza, 2004).

The three terms in POS (positive, organisational, scholarship) have different connotative meanings. The intended meaning of the terms organisational and scholarship are unequivocal. Wherein, “organisational” stresses on collective and organisational phenomena as opposed to individual phenomena (Dutton, & Glynn, 2007), and scholarship emphasises on developing the premises on the basis rigorous, systematic, empirical and theoretical explanations (Cameron et al., 2011). Examples of research subjects within the POS include strength, resilience, vitality, trust, organisational virtuousness, positive deviance, extraordinariness, and meaning (Cameron, 2003; Spreitzer & Sonenshein, 2004; Sutcliffe & Vogus, 2003).

However, the meaning of the term “positive” has remained controversial. As per

Cameron et al. (2011) “positive” has three connotative meanings. One being an affirmative bias and shifting orientation towards a phenomenon that is based on strengths and is exceptional, life-giving, and flourishing. The second meaning refers to the outcomes that are extraordinary and positively deviate from the expected performance. In other words, it refers to positive deviance that exceeds the anticipated achievements and ordinary success. The third meaning signifies the aspects of virtuousness and eudemonism. It emphasises on Aristotle’s philosophy that in all human beings there exists an inherent inclination towards goodness. Researchers have used the three meanings of positive and have investigated them in different work contexts (Cameron, 2008; Cameron, Bright, & Caza, 2004; Dutton & Sonenshein, 2007; Spreitzer & Sonenshein, 2004). These investigations in different work contexts are reported in the coming sections.

The field of POS encompasses the study of positive outcomes, practices and attributes of organisation and its members. Cameron et al. (2011) claim that the relationship between positive practice and organisational change is the basis of credibility of this field. The author also advocates that only a few studies have systematically examined this phenomenon. Thus the area positive organizational practices need more attention of the researchers so that its effect on the individual well-being, organisational effectiveness and organisational change is further explored.

2.3.3 Organisational Practices

The term ‘organisational practice’ is widely researched and studied in different contexts. Kostova (1999) defines organisational practice as “particular ways of conducting organisational functions that have evolved under the influence of an organisation's history, people, interests, and actions and that have become

institutionalised in the organisation.” As per Cameron *et al.* (2011), practices were defined as collective behaviours or activities sponsored by and characteristic of an organisation. They refer to the behavioural orientation instead of being indicative of emotions or climate. Thus, it’s a set of work that is carried out habitually or repeatedly to conduct an organisational function. It is an outcome of prolonged behaviour or action in an organisation that gets institutionalised over time.

2.3.4 Positive Organisational Practices

Impact of positivity on individual behaviour has been the subject matter of contemporary researchers. Positive factors such as positive affect, positive emotions, positive leadership, positive identity engagement, satisfaction, psycho-social well-being, etc., had captured the interest of the researchers for decades. However, the focus has mostly concentrated on the individual level analysis, and there is a dearth of research when it comes to organisational science. In an organisation positive phenomenon is known to produce a variance in performance, which might otherwise remain unnoticed (Carlson & Barling, 2008; Dutton & Sonenshein, 2007; Roberts, 2006). Caza & Cameron (2008) advocated that this aspect of positive organisational scholarship has been ignored and not much has been done to support the effects of positive practices in organizational science, especially it lacks empirical support. As per Lyubomirsky, King, & Diener (2005) relationships between positivity and individual outcomes are still verified, but its relationship with organisational outcome remains largely overlooked. A study by Steele (2010) discussed a few positive practices that can potentially save cost to the company due to lost productivity. Simple everyday practices like remembering to say good morning with a smile or discussing achievements in formal meetings can create a positive atmosphere and boost up the morale of the employees. Also, Geue (2018) finds out

that positive employee behavior such as mutual trust, respect, confidence in each other, tolerating mistakes etc. help the team members to discover meaning in their work and enhance performance.

Similarly, Twigg & McCullough (2014) studied the strategies that help in retention of nurses by creating a positive practice environment. The study concluded that participation of nurse in hospital affairs, leadership and support of nurses, nurse manager ability, staffing and resource adequacy, and collegial nurse-physician relationship are key elements of a positive practice environment.

However, the term 'positive organisational practice' or 'positive practice' is not clearly defined in the literature. Except, in a study, Cameron, Mora, Leutscher, & Calarco (2011) evolved a list of positive practices, though not exhaustive, but which represented a comprehensive inventory of behaviours characterising positivity in organisations. To define the positive practices, no augmentative theory was used. They were determined using the prior literature. Positive organisational practices were thus defined as "the practices that are, behaviours, techniques, routines—that represent positively deviant (i.e., unusual) practices, practices with an affirmative bias, and practices that connote virtuousness and eudemonism in organisations." They represent the behavioural practices or activities that possess at least one of the three connotations of positive as discussed above (Cameron et al., 2011). Using the same definition of positive practices Redelinghuys, Rothmann, & Botha (2018) conducted a study on school educators and argued that positive organisational practices were linked with flourishing at workplace and it positively predicts organisational citizenship behaviour and in-role performance, whereas, negatively predicted the intentions to leave the organisation.

During the past five years, research has accelerated in the field of POS wherein impact of positivity, positive work environment, positive approaches and positive practices on various job attitudes of the employees and overall organisational effectiveness have been the focal point of attention. However, the application of such concepts in higher education institutions has not received much consideration.

2.3.5 Well-being

The term “well-being” was commonly linked to general health. But in a deeper level, it is seen as what makes life ‘good’ for an individual. Well-being is an intangible and a broad term; because of lack of theory-based formulations, it is challenging to define and even harder to measure (Ryff & Keyes, 1995; Thomas, 2009). One of the oldest definitions of well-being was given by Shin and Johnson (1978), who described it as , “a global assessment of a person’s quality of life according to his own chosen criteria.” Later, Ryff and Singer (1998) described the key factors of psychological well-being that includes self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. There is no consensus found in the definition of well-being, but all the definitions unify on common grounds like the existence of positive emotions and moods, life satisfaction, the absence of negative emotions and positive functioning.

Well-being is considered to be a core concept in positive psychology as there is ample evidence that suggests that it increases life satisfaction, optimism, happiness and has other positive effects on different aspects of an individual’s life (Diener & Chan, 2011; Diener & Tay, 2014; Khaw & Kern, 2015; Lyubomirsky et al., 2005; Pressman & Cohen, 2005). Seligman (2011), he asserted that well-being is important for human flourishing.

In this fast-paced world, everyone is in pursuit of happiness and satisfaction. There are numerous ways to attain the state of happiness, and one such theoretical model was proposed by Seligman (2011) which described the elements that bolster well-being and happiness amongst individuals known as the PERMA model. The model has five core components: positive emotions, engagement, relationships, meaning and accomplishments. Out of the five constructs, positive emotion was widely studied, and its effects were applied and tested on different areas. Positive emotions are considered as an essential ingredient to well-being. Seligman affirmed that the strength of the PERMA model can benefit individuals to achieve a life of fulfilment, happiness and meaning and can also be extended to institutions and communities.

Another novel theory was proposed by Fredrickson (2004) which advocated that positive emotions like happiness, joy, interest, contentment and love, broaden individual's momentary thought-action repertoire and increase their personal resources. This is in contrast to negative emotions which prompt narrow and specific action tendencies needed for immediate survival like attack or flee. The theory accentuates on the importance of positive emotions in optimal functioning and well-being as it broadens attention and thinking of people, incites resilience, builds personal resources and upward spiral for greater well-being and seeds human flourishing.

The concepts of positive psychology, positive organisational scholarship, and positive practices were applied in different spheres of individual life and organisations to enhance focus on strength, hope, optimism, resilience and well-being. Scholarly articles that emphasised on the application of these concepts were selected to present a glimpse of research carried out in this area and its impact in different work contexts.

The enormous literature published before and after the onset of positive psychology movement was rigorously scanned using the keyword search technique including a controlled vocabulary wherein keywords like positive psychology, positivity, positive organisation, positive behaviour, positive emotions, positive scholarship, positive education and positive affect were used. These keywords were identified by a review of primitive scholarly articles published in the area of positive psychology. The analysis of these articles and their implication is highlighted in the next section.

2.4 Observations from Literature

The keyword search on the online databases provided an extensive list of papers, which were later sorted by relevance. The analysis of the data was performed using summative content analysis technique that is further bifurcated into the manifest content analysis (Potter & Levine-Donnerstein, 1999) and latent content analysis (Holsti, 1969). A manifest content analysis targets on counting and calculating the frequency of specific words or content and is more quantitative, whereas, the latent content analysis goes beyond mere counting to the interpretation of the content. The papers selected for review of literature about the field of positivity is tabulated and categorised for better understanding. Frequency was calculated, and the result was represented in the form of graphs and pictures. The results are described in the below section.

2.4.1 Methodological Approach Utilized

One of the challenging parts of any research undertaking is the analysis of the collected data. The techniques used to draw conclusions or to interpret the data to play a significant role in determining the authenticity of the results and the overall effectiveness of the work itself. Therefore, it is paramount for this study to take into

consideration the analytical tools utilised in past studies in the domain of positive psychology and the various constructs that emerged consequently. The following figure (Fig. 2-1) represents the methodologies applied in the researches carried out in selected papers. It is evident that the majority of the papers (55%) that were considered in this study were theoretical and conceptual. The next methodological approach significantly used is quantitative analysis, wherein; correlation and hierarchical regression were most frequently used. In the qualitative approach, mostly case study, content analysis, grounded theory and appreciative inquiry techniques have been applied. Experimental and longitudinal approaches were also used in a few of the papers.

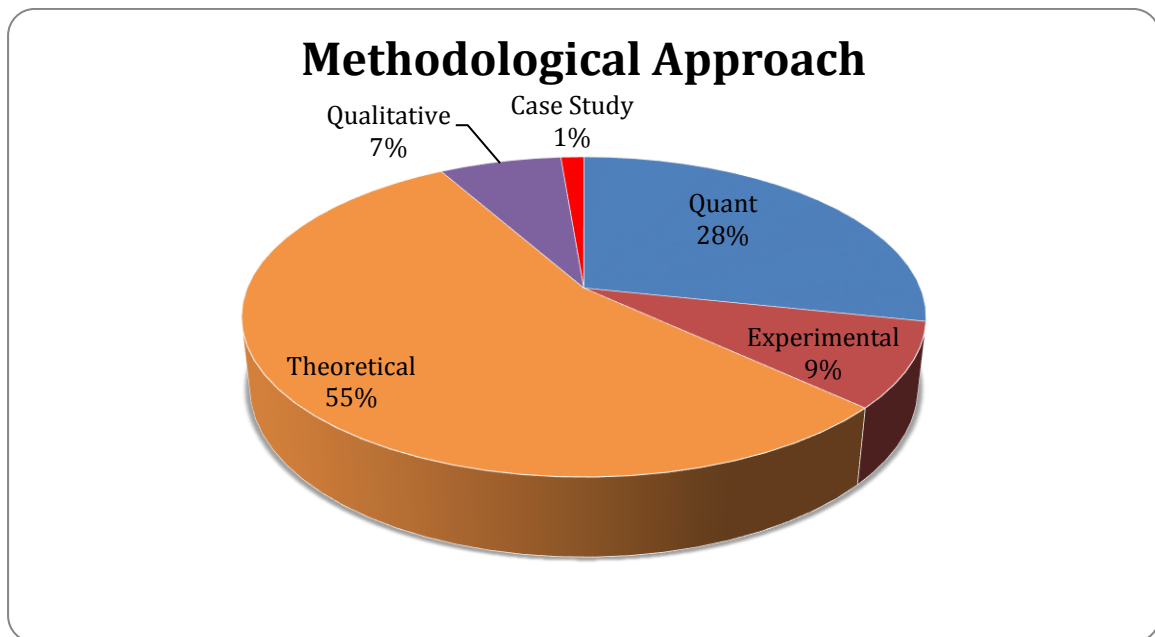


Fig. 2-1 Methodological approach for the study

Fig. 2-2 presents a glimpse of the commonly employed quantitative techniques as observed in the literature. Hierarchal regression, correlation, structural equation modelling (SEM) were the techniques that had the most instances of use in multiple

studies closely followed by mean, standard deviation, confirmatory factor analysis and ANOVA.

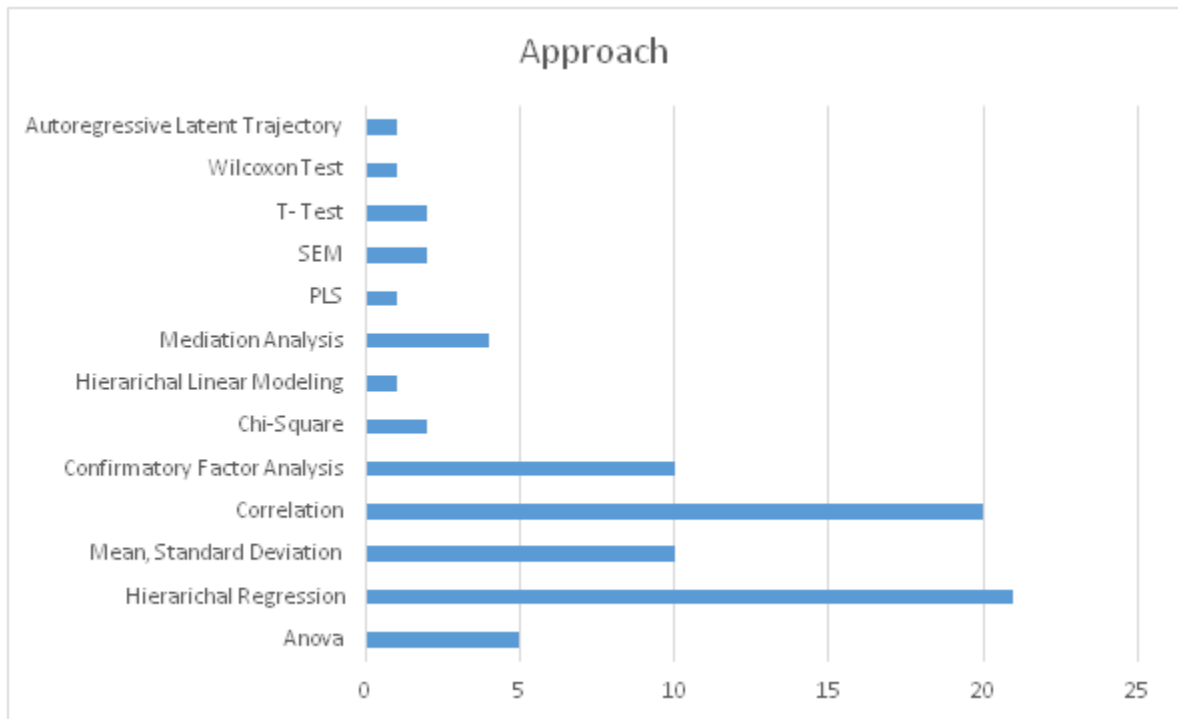


Fig. 2-2 Common quantitative techniques

2.4.2 Source of Data

Every field of scientific inclination be it physical, social sciences or humanities, depends upon data to provide the researchers with relevant, accurate and understandable information that can generate fruitful results in tandem with the research objectives. The techniques of data collection may vary from discipline to discipline, but their objective of capturing quality evidence leading to credible analysis outcomes remains constant. Research papers considered in the study are scanned in terms of the sources from which data had been taken into account. Data collected through the researcher's' first-hand experience in the form of surveys, questionnaires, interviews, experiments, observations, focus group and case studies were considered under the primary source of data. On the other hand, the data acquired from credible sources such as censuses, peer-reviewed literature, information

from government agencies etc. were considered under secondary sources of data. The findings of the present study indicate that 60% of the reviewed literature used data from secondary sources (as represented in Fig. 2-3).

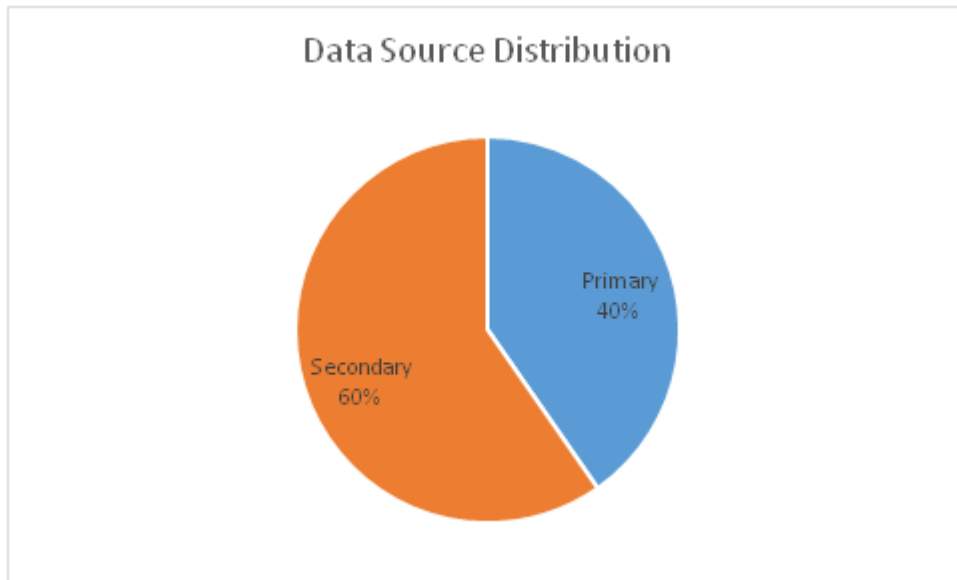


Fig. 2-3 Distribution of data source (in %)

2.4.3 Journals

With the constraint of access, the researcher attempted to count the frequency of the research articles published across different journals wherein positivity has been studied about organisational behaviour, leadership, happiness, management, political science, business ethics, and many more. Fig. 2-4 depicts the list of journals that have published 3 or more studies about positivity in different domains. Considering the origin and places of publication of the journals depicted in the figure, it further indicates that a large quantum of work in positive psychology has so far been conducted in the developed countries.



Fig. 2-4 List of Journals

2.4.4 Year-wise Publications

The birth of positive psychology movement can be traced back to the late 1990s. Along with rapid globalisation, sensitisation of cross-cultural views, the turn of the 21st century also witnessed positive psychology movement. Before this, academicians and practitioners working in the field of psychology lay more focus on addressing mental health or followed a disease-based approach. In 1998, the then President of the American Psychological Association urged the scientific community to follow a strength-based approach while maintaining their research towards mental health issues. This is evident from the year wise publications graph in Fig. 2-5. Till the year 2000, few studies were conducted that can be defined as exploring ‘positive psychology’ and its impacts. Since then, literature concerning positive psychology has witnessed a steady growth in its theoretical base and recently empirical too.

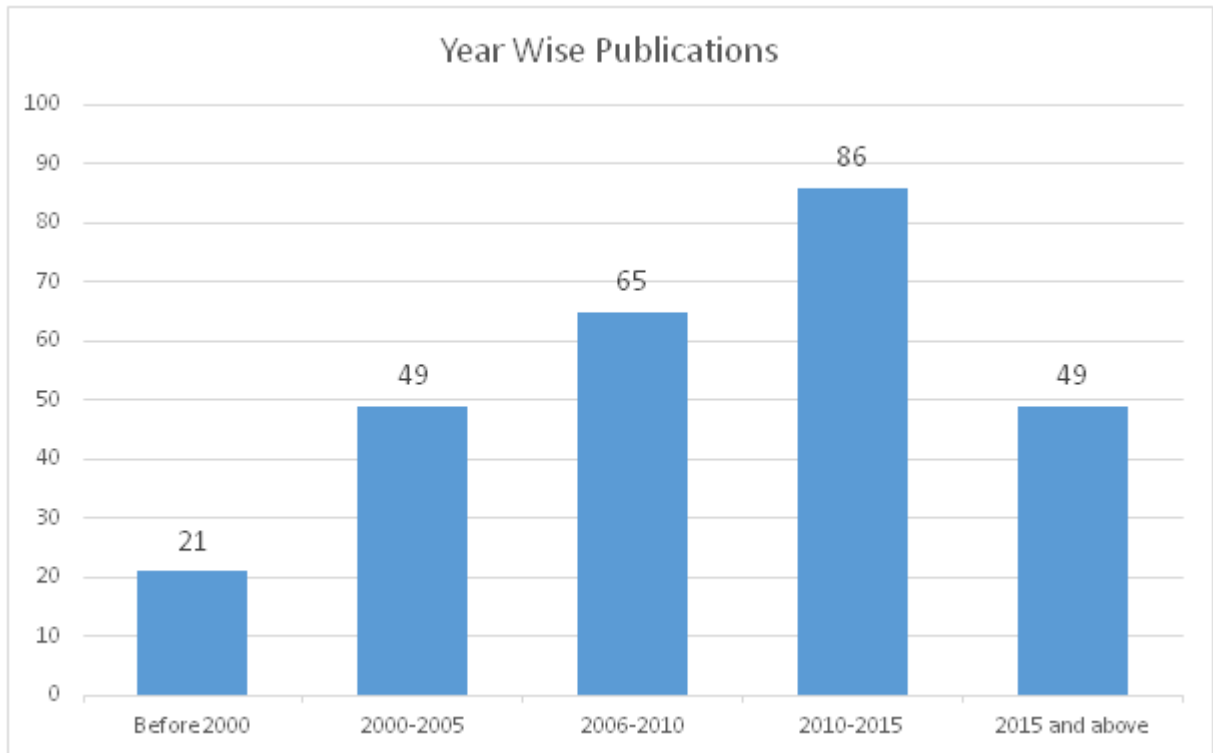


Fig. 2-5 Year-wise publications

2.4.5 Work Areas

One point that the pioneers of positive psychology movement were emphatic about was its applicability in a professional environment and relationship with work-related outcomes. What makes positive psychology an even more appealing subject to researchers is its utility in the corporate world, healthcare, schools, higher education and many more. Fig. 2-6 presents a distribution of areas that the reviewed studies examine concerning positive psychology.

The “General” portion in the chart consolidates the literature built up of the field, conceptual propositions, etc. The “Miscellaneous” portion covers a wide range of aspects like military, library, social workers, religion, vocational education, nuns, law and order, veterans, retired adults etc.

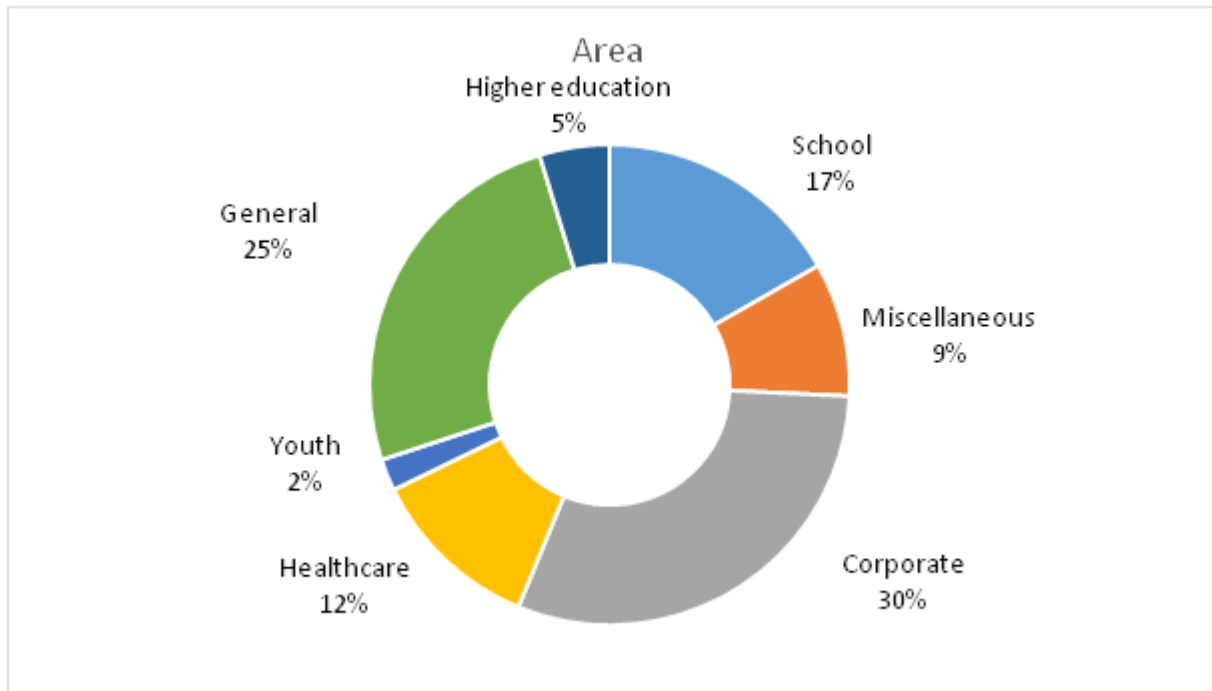


Fig. 2-6 Work areas in positive psychology

2.5 Positivity in Different Work Areas

An extensive review of the studies carried out in five broad areas namely general, healthcare, educations, corporate and miscellaneous are discussed below.

2.5.1 General

The evolution and emergence of the fields like positive psychology, positive organisational scholarship, positive organizational behaviour etc. and their criticism has been a subject matter in a wide range of papers. Even though they are theoretical, they provide a sound basis for understanding and conceptualising the various constructs covered in this field (Linley, Joseph, Harrington, & Wood, 2006; Gable, & Haidt, 2005). Various constructs of positivity like hope, optimism, resilience, happiness, flow etc. (Boniwell, 2005) are defined in many papers. For instance, Gewirth (2001) discussed meaning, essence and criticism of positivism and positive thinking.

The credit behind the wide work of positive psychology goes to Seligman who propounded and popularised this field (Seligman & Csikszentmihalyi, 2000). In one of the studies Seligman, Steen, Park, & Peterson (2005) found that positive interventions help in increasing happiness and decreasing depressive symptoms. Fredrickson (2004) also contributed to the field of positive emotions and positivity by developing the *Broaden and Build Model* (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). Herein, Fredrickson, (2001) advocated that the positive emotions can help in preventing and treating problems rooted in the negative emotion and concluded that the positive emotions not only counter negative emotions but also help in building personal resources for coping and promoting the ancestral function of individual's survival.

These positive emotions can be developed by loving-kindness meditation practice (Fredrickson et al., 2008). In another study, Fredrickson (2013) found that higher positivity ratios forecast flourishing mental health and other beneficial outcomes. In a study conducted on college students, Fredrickson & Branigan (2005) witnessed how the positive emotions broaden the thought-action repertoires unlike the negative emotions (Barbara L Fredrickson et al., 2008). Cameron & Caza (2004), another major contributor to this field, have explained how the application of positive concepts affected the life of individuals universally and advocated that it is the inherent nature of individual or organisation to attract to that which is inspiring, uplifting, positive and good. Cameron (2003) argued that in a constantly changing environment of the 21st century it is very important to have ethics, values and principles, which serve as the fixed points in determining what is right and wrong on a universal basis. The author also reiterated that positive deviant state characterised by

wellness, flow honour and virtues is usually ignored as most of the physician's time is spent on studying and getting people to a normal state from a negative deviant state.

2.5.2 Healthcare

Although positive psychology movement started in 2000, positivity and its effect had been witnessed in the healthcare sector since the 1980's. Thus, this context also formed a basis on which the positive psychology movement evolved. Before this movement, the main focus of the research studies in healthcare had been on the negative affect, and the positive effect had been largely ignored (Cohen & Pressman, 2006).

A large proportion of such studies in this area was experimental. Most of the studies in this area dwelled into exploring the effect of positive practices on the mentally and physically disabled children or children with some form of disability (Bradley, 2001; Luiselli & Rice, 1983). Such studies pointed out that positive practices could effectively decrease the frequency of inappropriate behaviour in such children and increase the frequency of appropriate behaviour. Positive behaviour support interventions were used to change problem behaviour into long term meaningful outcomes (Fox & Dunlap, 2002). In another study, Bradley (2001) describes how a proactive approach and supportive educational environment can improve behaviour and performance of students with learning difficulties. Luthans, Lebsack, & Lebsack, (2008) explored the level of optimism in the nurses and their relation with performance outcome and found that optimism leads to increased supervisor's rating of the nurses towards their commitment to the mission of the hospital and thus increased customer satisfaction.

Cohen & Pressman (2006) proved that positive affect and positive emotions like happiness, joy, excitement, enthusiasm, and contentment increase longevity in elderly

people. In Britain, positive deviance strategies, which is vast and untapped, were used to improve child health and help communities to gain better and other social benefits (Ahrari et al., 2006; Marsh, Schroeder, Dearden, Sternin, & Sternin, 2004). Greetis (2000) argued the importance of positively spoken truth to a terminally ill person and found that bluntly spoken truth will take away all the optimism and let the person suffering from the disease fall even more ill. A fact sheet issued by WHPA (2008) points out that the positive changes in the work environment help in better patient care and improvement in their health as these strategies help in retention of old employees leading to overall job satisfaction. In an additional study by Fredrickson et al. (2013), it was accentuated that the psychological (hedonic and eudemonic) well-being not only has a positive effect on current physical health and reduced stress, depression and other negative affective states but can also forecast future physical health.

2.5.3 Education

In the education sector, the concepts of positive organisational scholarship and positive psychology are continuously gaining importance and have begun to have a significant impact on schools and classroom interventions (Ling, 2012; Roth et al., 2017; Shoshani & Steinmetz, 2014). A plethora of research has been carried out in western countries concerning school education. However, the effect of positivity in higher education has largely been ignored. In India, few constructs of positivity have been implemented in school by the educational policy-making bodies like NCERT and MHRD and educational boards like CBSE, in the form of life skills education. World Health Organisation (2003) defined life skills as “abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life”. In this direction, the integral education philosophies and

practices as propounded by Shri Aurobindo and J. Krishnamurthy have been very popular which accentuate on “value-based holistic education,” i.e. development of mental health as well as physical health of students (Esbjörn-Hargens et al., 2010; Rudge, 2008).

Several studies have shown a positive correlation between the positive concepts and academic motivation, academic progress of the learner, psychological well-being and societal well-being (Gomez & Ang, 2007; Mabee, 1988; McDaniel, 1987; Quick, 1973; Schwartz, 2009). It has been proven that a positive classroom environment and a positive classroom atmosphere reinforce social and behaviour competence in students and decrease the problem behaviour (Gomez & Ang, 2007; MacSuga-Gage, Simonsen, & Briere, 2012; Regan & Michaud, 2011). This results in higher classroom attendance (Curtis, Van Horne, Robertson, & Karvonen, 2010). One of the key ingredients in creating a positive classroom climate is positive teacher-student interaction and a positive verbal environment that includes praise, cohesion, leadership, values etc. Use of such practices leads to increased student participation, increased learning and enhanced self-esteem (Conroy & Sutherland, 2012; L. L. Feuerborn, Wallace, & Tyre, 2013; Meece & Soderman, 2010; Regan & Michaud, 2011; Shapiro, 1993). *School-wide positive behaviour interventions (SWPBI)*, *positive peer culture* (Donlevy & Weissman, 1992) and *positive behaviour support (PBS)* (Dishion et al., 2008) are also being used to create a positive, safer and learning school environments to shift from reactive punishing practices to more proactive and positive practices (Curtis et al., 2010; Farrell, Collier-Meeek, & Pons, 2013; Feuerborn et al., 2013; Houchins, Jolivette, Wessendorf, McGlynn, & Nelson, 2005; Leedy, Bates, & Safran, 2004; McDaniel, 1987; Muscott et al., 2004; Regan & Michaud, 2011).

In the American context, it was found that high stress disrupts the learning environment of the school and use of PBS and SWPBI help in building positive and caring school communities to cope up with whatever challenges life brings. Nixon (1997) also suggested that an extended focus on deficits rather than the potentials of youth underestimate their true capacities. Herein, the concept of *positive education practices* also supports the prior research for shifting the primary focus of psychologists from deficits, problems and treatment to a preventative focus on positive experiences, strengths and the intentional promotion of wellbeing and resilience (Bowers, McGinnis, Ervin, & Friman, 1999; Noble & McGrath, 2008; Terjesen, Jacofsky, Froh, & DiGiuseppe, 2004). In a similar context, Palmer (1979) argued that accentuating on the positive can motivate teaching in the inner cities like Ghetto that generally consists of the black students who have been usurped, exploited and perorated over the years.

In comparison to the quantum of studies on positivity in school education scenario, insignificant work has been done in the higher education sector. Studies pointed out those opportunities for reflection, active learning, perspective taking and positive peer interaction help in the development of life-long learning orientations and concluded that negative experience and negative diverse peer interaction strangle the students' development (Mayhew, Wolniak, & Pascarella, 2008). Study conducted by Catalano, Berglund, Ryan, Lonczak, & Hawkins (2004) and O'Keeffe (2012) showed positive changes in youth behaviour, including significant improvements in interpersonal skills, quality of peer and adult relationships, self-control, problem solving, cognitive competencies, self- efficacy, commitment to schooling, and academic achievement. The similar study proved that effective programs show significant improvements in problem behaviours, including drug and alcohol use,

school misbehaviour, aggressive behaviour, violence, truancy, high-risk sexual behaviour, and smoking. Thus incorporating positivity promotes human conditions and strengths that help people to function optimally (S. J. Lopez, 2006). In a study by Oades, Robinson, Green, & Spence (2011) the PERMA model developed by Seligman has been applied in the six environments of a university to accentuate the need of well-being in an education setting.

Few studies have also criticised the emphasis of education policy on well-being. One such study done in the UK states that the political agenda in the UK and the politicians have spurred the well-being movement (Coleman, 2009). Another criticism brings forward the point that to implement the concepts of PBS and positive interventions the teachers need to feel prepared to address the needs and also need training. However, a study on these elements are scant (Feuerborn & Chinn, 2012).

2.5.4 Corporate

This section includes the papers that have studied the effect of positivity in the corporate culture and organisational settings. The researches in this area started even before the positive psychology movement. Few studies proved that positive practices construct like positive emotions, positive culture, positive feedback for contribution, personal support from supervisor etc. help in creating engaged workforce, characterised by vigour, dedication and absorption, improves employee retention in an organization and thus, improves the atmosphere in the workplace from negative to positive or vice versa (Briscoe & Kellogg, 2011; Escobar, 2008; Ouweneel, Le Blanc, Schaufeli, & van Wijhe, 2012; Steele, 2010; Wefald & Downey, 2009). It was found that *positive psychological capital* (which includes hope, efficacy, optimism and resilience) was significantly related to the feeling of empowerment and influenced the negative emotions like cynicism and intentions to quit (Avey, Hughes, Norman, &

Luthans, 2008). Several authors also stated that positive interaction with employees and a positive work context comprising ethical values and creative synergies result in increased job satisfaction, favourable outcomes, increased work performance and decreased turnover intentions (Escobar, 2008; Heaphy & Dutton, 2008; Valentine, Varca, Godkin, & Barnett, 2010).

Valentine, Varca, Godkin, & Barnett (2010) pointed out that the positive work contexts are linked to a higher level of ethical behaviour. In a similar context, Schweingruber (2006) found that *positive mental attitude* assists in coping with the negative working conditions and achieving success in the job, and thus, acts as a motivational tool in organisations. Research also suggests that leadership can facilitate a positive emotional climate can lead to better company performance, revenue growth and strategic growth (Ozcelik, Langton, & Aldrich, 2008). Fredrickson's Broaden and Build theory has also contributed to establishing significant relation between positive emotion and upward spirals towards emotional well-being (Barbara L Fredrickson & Joiner, 2002). Glynn & Watkins (2012) explored the affinities between cultural symbols and POS at the collective level of analysis under the domain of Positive Organizational Practices and they proposed a conceptual framework that clearly outlined three mechanisms- cognitive (meaning making), affective (experienced emotions) and relational (collective connectedness) by which symbols can have generative potency (i.e. the capability to enrich collective strengths, virtues and capabilities in organizations).

Though the effect of POS in enhancing the quality of life in individuals is indisputable, still few studies have raised concerns regarding the application of this concept in an organizational setting. As per Roberts (2006) POS may emphasise on ignoring problems, inequities or deficits and thus can create misperceptions and

argued that POS may create an impractical expectation for excellence and perfectionism and can hamper the actual performance and well-being of employees. Thus, the author goes in favour to value the positive and negative equally. Fineman, (2006) also raised some concerns about the application of positive perspective in organisations and advocated that positive and negative states depend on a person's judgment and perception. So, the constructs of positivity like joy, flourishing, compassion and the like are constitutive of both positive and negative. Thus, positivity can produce one-sidedness, normativeness, difficulties, exclusiveness that it attributes to deficit studies. However, a report by Harvard Medical School Special Health (Siegel, 2011) stated that knowing your strengths may lead to set realistic goals and prepares you for ups and downs of life.

The credibility of a positive approach to change has always remained controversial and needs more empirical evidence. Cameron, Mora, Leutscher, & Calarco (2011) carried out studies in two areas, financial services and health care industry, investigated the link positive practice and organisational effectiveness and concluded that positive practices do predict organisational performance.

2.5.5 Other Work Contexts

Positive practices have also been studied in some other context that may not fall under any category mentioned above. Such papers have been reviewed under this category. In one of the studies, Watson (2014) showed how positive psychology could be applied in a library setting and increases the productivity of librarians and keep them motivated. Berg & Karlsen (2014) carried out a study in the temporary industrial projects and inferred that positive emotions in such kind of projects could create good team member relations, reduce stress, and develop clearer roles, creativity and joy at the workplace. Pawelski (2003) displayed the focus of all the religions as morbid-

minded and advocated that the religions like Christianity, Buddhism, Hinduism and Islam preach to lead a joyful and meaningful life that can't be lived with the awareness of evil.

Positive psychology concepts were also applied to vocational education and training (VET) in one of the related studies. In VET positive education can be seen as education for well-being in addition to vocational education that would potentially enable students and their communities to flourish (McGrath, 2011). Research carried out in the area of knowledge management by Pinho, Rego, & Cunha (2012) showed that KM thrives in the positive organisational context and fails when the positive context is missing. The authors argued that only KM could only flourish by advancing positivity and removing negativity in the organizational climate. Fredrickson (2003) carried out a study on the Catholic nuns and found that those nuns who expressed in their writings the positive emotions like happiness, interest, love, hope etc. lived up to 10 years longer than the others. The same research finally stated that positive emotions could diminish the psychological damage on the cardiovascular system endorsed by the feeling of negative emotions. In the field of criminology (prevention), Meissner, Hartwig, & Russano (2010) Meissner, Hartwig, & Russano (2010) linked the positive psychological approach for improving practice in interrogation room and showed that adopting a positive collaborative approach in the interrogation room will prove to be more diagnostic and will help the criminal justice system to reform the interrogative practices.

Thus, from the above bifurcation we can conclude that since the emergence of the positive psychology movement several studies were conducted in different sectors like corporate, education, healthcare etc. But, most of them were in the western countries. In the education sector, these studies were further limited to the school

students. Thus, in the Indian education system countable efforts were made to enhance positivity. In the coming section, we further highlight the history and structure of the Indian higher education system.

2.6 Indian Status of Higher Education

Since independence, education has been given prime place in framing the policies and norms of Indian development. The issues faced by education sector and the problems of education reconstruction were reviewed by various commissions like the Gandhi's scheme of Basic Education, 1937 (Shrimali, 1960), University Education Commission, 1948-49 (*The Report of the University Education Commission, 1949*), the Secondary Education Commission, 1952-53 (*The Report of Mudaliar Commission of Secondary Education, 1953*), and the Education Commission, 1964-66 (*The Report of Education Commission, 1966*). The academic freedom as propounded by reports calls for giving sufficient autonomy to teachers, i.e. the concept of learning organisation should be applied in the higher education institutes. Learning organisation helps faculty and students to better respond to external pressures, maintain a level of competitiveness and creativity and thus improves students' performance at all levels.

The report by the "Committee to Advise on Renovation and Rejuvenation of Higher Education" known as the Yashpal Committee Report (*Report of The Committee to Advice on Renovation and Rejuvenation of Higher Education, 2009*) points out that the higher education system is suffering from the disconnect between the theoretical knowledge and its practical exposure. The committee further suggests that to overcome this problem knowledge should be treated in a "holistic way". This also points towards the need to address issues towards the well-being of the people

associated with the university as a system rather than only creating a culture of excellence and peak performance. The report also advocates decentralisation of decision-making and active involvement of faculty and students in the policy decisions that impact academics. A sense of infinite possibilities enables learning and innovation in young minds. Thus, the universities have to offer an enthralling proposition to attract and retain the best of the students, faculty and staff.

In the same context, the Knowledge Commission Report, 2006-2009 (*National knowledge commission report to the nation*, 2009) addresses the challenge of maximising the productivity of the faculty in Indian universities and calls for a befitting system of appointments and incentives. The report also emphasises on providing better working conditions along with incentives for performance to attract and retain talented faculty members in an institution. The report accentuates increased focus of research towards overall development and well-being of a nation and enhanced quality of life.

Since India gained Independence in 1947, the education sector has witnessed a tremendous increase in the quantum of higher education institutions. In India, the higher education institutions are majorly governed by the University Grants Commission (UGC) and can be categorised under the central university, state university, private university, deemed-to-be university, the institution of national importance, and institution under state legislature act. The gross enrolment ratio (GER) in the higher education sector has witnessed a steep rise in the past decade. The GER in 2015-16 was reported to be 24.5% and is expected to increase to 30% by 2020 (AISHE, 2016).

But due to rapid economic expansion, a number of quality teachers in higher education have remained grossly inadequate. The twelfth five-year plan (TFYP)

aimed at doubling of faculty from the current eight lakhs to 16 lakhs. A large increase in capacity at the postgraduate and doctoral levels to enable this would require all institutions, whether Central, State or private to work in collaboration. The plan also proposed to raise the retirement age of faculty to 65 years with provision for further extension to 70 years

A large portion of faculty teaching in HEIs is currently casual or part-time academic staff, and this is likely to continue. To improve their performance, improvements in their hiring practices and working conditions, and engaging them in faculty development programs, including using online technologies for faculty development are needed. Most of the sixty-six Academic Staff Colleges (ASC) established for faculty development have been observed by NAAC not to deliver the desired results. NAAC has proposed to remove institutional weaknesses in ASCs and a qualitative change in their content and methodology of faculty development.

Faculty motivation is crucial to improving academic quality. For faculty to be actively engaged in the teaching-learning process, they need control over their task, time, technique, and work environment. The absence of basic amenities is one of the most de-motivating factors for a large section of faculty. The strategy for motivating faculty would focus on developing a healthy work environment with high-quality facilities and a flexible framework of accountability and performance evaluation. Consistent with international best practices, faculty selection, performance evaluation and promotion should be handled at the department level. New faculty may be kept under probation for five years, and confirmation could then be done by rigorous performance evaluation including peer review and student feedback.

2.7 Job Stress in Faculty members

Since the education boom in India, a faculty member's role is not restricted to teaching alone, but towards management and institution building activities as well. Common stressors identified in the literature are work overload, lack of promotion opportunities, inadequate recognition, inadequate salary, changing job role, reducing resources and funding, "publish or perish" policy, job insecurity in private institutes etc. (Gupta, Rao, & Mukherjee, 2015).

The role that job-stress plays in human well being have been an important concept in the corporate but has seldom garnered much attention in the field of education. Historically, the studies which do explore on occupational stress in academia focus primarily on school teachers (Singh, 2014). However, in the past few years, some researchers have turned to study job stress among faculty engaged in higher education institutes, but the instances of such studies are sparse in engineering and medical domain.

Interestingly, although teaching, research, and service are the recognized areas of faculty responsibility, literature shows that a collection of stressful circumstances subdivides into five distinct areas not reflective of the traditional research, teaching, and service categories, namely, reward and recognition, time constraints, departmental influence, professional identity, and student interaction. Two of the five factors, time constraints and workplace influence, appear in studies of stress in other occupations. However, the other three factors-reward and recognition, professional identity, and student interaction-are newly identified stressors appearing to be unique to academe. Faculty attrition is documented to be driven by job stress. One noted the cause of job stress which features prominently in attrition studies was frustration due to excessive time demands (Clark, 1987; Gmelch et al., 1983; Moracco et al., 1983).

The other most prevalent reason for attrition was found to be a general lack of a community sense at the institution under study.

A study (Barnes, Agago, & Coombs, 1998) performed using data from a national survey of 3070 senior faculty members in the United States of America found that the stress created when work infringes upon the family time of the faculty members was predictive of intent to leave academia. Similar studies conducted in the western countries found that time pressure was the strongest explanative variable for faculty attrition. Time over-commitment, long working hours, constant pressure to multi-task was revealed to be major contributors to stress.

Historically, the role of any teacher, be it at primary, middle or higher levels, has been to provide nurturing care to students for them to develop and hone skills that they need to wield for survival in the professional world. In the recent decades, teachers/ faculty have been put under immense pressure for widening their work domain to include learning and disseminating new information and skills, keeping themselves and their students updated towards technological inventions, and deal with pressure from parents/ community. These increased expectations have birthed a growing concern about teacher/ faculty well-being and its effect on teaching prowess because of which attrition rate, burnout due to stress have seen a spike around the globe. Therefore, it has become imperative that faculty well-being is discussed at length by the researchers working in the field of academics.

A study by Johnson et al. (2005) compared occupational stress across 26 different vocations relating to health, job satisfaction and well-being. It concluded that stress experienced by teachers was worse than average on all the studied factors. Another study showed that day level work mediated the impact of co-worker support, job satisfaction and mental health (Simbula, 2010). Also, the study found that work

exhaustion affected family-work conflict daily. A review of studies conducted over a decade concluded that studying stress and burnout in teachers could foster the reduction of stress levels in schools (Kyriacou, 1987). Students' attachment to their respective schools and their willingness to attend classes has also been found to be driven by job satisfaction felt by the teachers (Wei & Chen, 2010)

While many studies can be found in literature contemplating school teacher well-being, mental health and job satisfaction (Day & Qing, 2009; Hall-Kenyon, Bullough, MacKay, & Marshall, 2014; Pillay, Goddard, & Wilss, 2005; Travers, Cheryl & Cooper, 2007; Van Der Doef & Maes, 2002; Van Horn, Taris, Schaufeli, & Schreurs, 2004; Webb, Vulliamy, Sarja, Hamalainen, & Polkonen, 2009), very few such endeavours have been undertaken to study the stresses experienced by the faculty at higher education institutes (Hubbard & Atkins, 1995). This is a gross oversight by the researchers, which has only recently begun to place in the researchers' community.

Studies exploring stress levels and their impact among faculty engaged in higher education institutes have remained even rare in the Indian context. The studies that are present in the literature are lacking in one form or another in providing a clear picture of the study aim. Most of the research exploring job stress in Indian higher education institutes study institutes in specific geographical region (Jadhav, Jadhav, & Collins, 2014; Kumar, Anand, & Shrivastava, 2015; Maheshwari, 2012; Reddy & Poornima, 2012; Sabherwal, Ahuja, George, & Handa, 2015; Singh, 2014). Moreover, these studies base their findings on very small sample sizes as compared to research in developed countries, which might affect the reproducibility of results when a statistical model is developed. Since the nature of human well-being and its enclosing attributes is highly subjective, it bodes well to view the problem structure and the consequential research through subjective methods.

2.8 Gaps in Existing Research

Looking at the above research and the Indian education commissions, policies, practices, programs and initiatives taken in the past, it becomes evident that nothing substantial had been done to assess, study and improve the students' well-being, faculty well-being and institutional well-being. That is, all the aspects of positive organisational scholarship have largely been ignored. Moreover, at a higher level in India, the focus of engineering and technology institutes have always been on academic excellence and performance. However, the institutional practices which lead to students' well-being, faculty well-being and institutional well-being have gained partial attention.

Thus, Indian educational agencies at a higher level (like UGC and MHRD) and social science bodies must be sensitive and open to these aspects of positive organisational scholarship to formulate policies and incorporate them into practice. To some extent, certain policies have been formulated, and programs have been initiated at the school level in India for enhancing life skills, which covers few aspects of students' well-being. But in addition to this, there is a dire need to create a sustainable positive environment in a higher education system that promotes well-being, optimal personal growth, health and development (Corral-Verdugo & Frías-Armenta, 2016).

In this context, as Bernstein (2003), pointed out that the words “win”, “beat” and “competition” have overshadowed words such as “virtue”, “caring” and “compassion” in the business press in the last two decades. Therefore, the scholarly literature has tended to lay higher emphasis on non-positive terms such as survival, reciprocity and justice, managing uncertainty, overcoming resistance, achieving profitability, exercise power and influence or competing successfully against others.

In another study, Mayne (1999) found that the ratio of the study of negative phenomena to positive phenomena outnumbered by 11:1. And it was also reported that negative events and experiences strongly impact the emotional aspects and overpowers the positive factors (K. Cameron, 2017). In organisational context hitherto the conscious examination of positive phenomena is vastly underrepresented and it becomes imperative to study organisational practices and processes in the domain of positive organisational scholarship. This specifically calls for extensive research in positive organisational scholarship at higher educational institutions and analyse the various institutional/ organisational practices in various environmental contexts or domains of an institution.

In the last decade, the intake of students in Indian engineering and technology institutes has increased manifold. The MHRD has further increased the intake of students in the IITs. This poses a challenge to the faculty members as the student to faculty ratio has increased. Moreover, the increased focus on research and competing for international ranking has surged up the performance pressure on the faculty members.

The gaps can be summarised into the following points:

- The focus of research studies in the area of psychology has majorly remained on curing the negative aspects rather on developing and nurturing the positive aspects (Bernstein, 2003; Mayne, 1999).
- Positive psychology is a new revolution has spread its wings to several work contexts and areas, but the attention on studying positive practices in an organisational setting are hitherto overlooked (Lyubomirsky et al., 2005).
- Study of positivity and its implications in the areas like healthcare, school children, corporates, etc., have received consideration of researchers but the

review of the literature suggests that the examination of the impact of positivity and positive practices in the higher education sector, especially in India, is scant (See Fig. 2-6).

- Few studies conducted in the Indian higher education sector have focused primarily on the well-being of students, but faculty well-being has not received adequate attention (See section 2.5.3).

Faculty members are considered the backbone of an educational institution. The satisfaction of the faculty is important as it directly impacts the experience of students in a class. Thus, to incorporate the positive aspects in an educational institution, it is imperative to focus on the well-being of faculty along with the students. In this regard, there is a need to take proactive steps to address this issue. The Indian Engineering and Technology Institutes, being the best in the country is supposed to follow such practices that enhance the well-being of the faculty along with the attainment of the institutional goal. The present study aims to identify those positive organisational practices that enhance the well-being of faculty members in these institutions and propose a model to depict the relationship between these practices and the outcomes. The central research question around which this thesis is centred and key research objectives that emerge to answer the research question are presented below.

2.8.1 Research Question

What are the positive organisational practices that lead to the well-being of faculty members in Indian Engineering and Technology Institutes?

2.8.2 Research Objectives

1. To identify the positive organizational practices prevalent in Indian Engineering and Technology Institutes.

2. To identify the antecedents and consequences of positive organizational practices prevalent in Indian Engineering and Technology Institutes.
3. To study the relationship between various positive organisational practices and propose an empirical model.

2.9 Conclusions

This chapter illuminated a detailed review of the literature available on positive psychology, positive organisational scholarship, positive organisational practices, faculty stress and pressure and Indian higher education status. The literature review suggested that the investigation of the positive practices in the higher education sector, especially for the faculty members have not remained the focal point of the researchers. Also, in the Indian higher education sector the engineering and technology institutes have gained international importance. Thus, the research question was framed to address this gap and study the positive practices that impact the well-being of faculty members in Indian Engineering and Technology Institutes. The research questions further led to the research objectives of this study. The research objectives mainly deal with identifying the positive practices, highlighting the antecedents and consequences of such practices and propose a model explicating the relationship among them. In the following chapters, we elaborate on the methodology and steps are taken to achieve these research objectives.

Chapter 3. Research Methodology

3.1 Introduction

The present chapter elaborates on the research approach, the methodology used for addressing the research question, and achieving the research objectives stated in the previous chapter. A description of how the research methodology has guided data collection, analysis, and development of theory is discussed in detail. This chapter is divided into seven sections that summarise the research methodology undertaken in this study and how critical research aspects such as the process of coding, data sampling, and data collection techniques are practically employed in this thesis. The chapter begins with describing the theoretical foundations of the Grounded theory methodology, and at the end, due emphasis is placed on the use of NVivo as a data analysis software.

3.2 Theoretical Foundations

For shaping the research study the data gathering and analysis involve ontologies and epistemologies that underlie the research question and motivate the methodological framework (Lincoln, Lynham, & Guba, 2011; Birks & Mills, 2015). The ontological beliefs such as relating to one's existence and the epistemic relationship between the knower and the known are critical to the approach followed by the researcher in understanding the underlying phenomenon. Ritchie, Lewis, Nicholls, & Ormston (2013) reckon that questioning the nature of reality is an essential feature of the grounded theory approach for qualitative research because it sheds light on the theoretical approaches that are essential and meaningful for drawing connections between how the reality is understood and the meaning is

shared. The origins of the grounded theory are based on the pragmatist philosophy and symbolic interactionist sociology of the Chicago School (Charmaz, 2003; Clarke, 2003; Bryant, 2009).

Charmaz (2006) notes that the strength of the grounded theory lies in its ability in how meaning is navigated and derived from within social setting and in the way people situate themselves in their social worlds. The ontological belief states that meaning is both shared as well as constructed and therefore it influences the epistemic theories of knowledge as a social construct of the human confluence and therefore influences the appropriateness of the research methodology used in the study. In light of the above discussion, the next section details the methodological underpinnings resulting in the selection of grounded theory methodology for achieving the research objectives.

3.3 Grounded Theory Methodology (GTM)

3.3.1 Introduction to GTM

Grounded Theory Methodology (GTM) is used to develop a new theory from the data gathered and analysed and relies principally on the process of coding (Holton, 2007). The main purpose of GTM is to generate or discover a theory for process or action that has distinct steps or phases that occur over time. Grounded theory (GT) is more like a narrative and focuses on individuals and their experiences. It focuses on multiple individuals and how their perceptions contribute to the understanding of the underlying phenomena. For example, the GT approach highlights steps to a process that a person goes through (e.g. a grieving process, or a happy process) and therefore provides a broad and rich description on various thematic aspects. The approach aids in identifying the core phenomenon central to the process, the strategies that were

employed during the process, and finally the consequences or effects that emerge from the responses of individuals. For achieving the research objective using the GT approach, usually the data is collected within the range of twenty to fifty participants, and personal interview is considered as a preferred mode for this purpose (Lewis, 2015; Morse, 1994). Charmaz (2003) advocates the preparation on the part of researchers to prepare them especially for interpreting the interviews and to have awareness about the interviewee's background, e.g. a researcher's prior exposure to an engineering institution before interviewing engineering faculty would be desirable. Familiarity about the participants and their background is therefore useful for drawing broad concepts and lay out a general framework.

3.3.2 Split in the GTM School of Thought

Barney G. Glaser and Anselm Strauss in their seminal work (Barney Glaser & Strauss, 1967) laid the stepping-stone for carrying out qualitative research using the GTM. In the years that followed, Anselm Strauss teamed up with Juliet M. Corbin and developed a new approach known as a *systematic design* that aids in developing themes and categories. The two schools of thoughts that emerged following the intellectual disagreement between Barney G. Glaser and Anselm Strauss is now classified as (1) the Glaserian approach and (2) the Straussian approach. Hence, selecting a research method for carrying out qualitative research is not a convenient process and involves further complications when carried out using the GTM approach as the process guidelines are usually ambiguous (Charmaz, 2014).

Charmaz (2000) takes the middle ground between the two approaches and resorts to a constructivist approach by suggesting focusing on participant's values and their beliefs. She points out that as the researcher also brings values, experiences and priorities to the research process, any conclusions that are developed in the research

process are only suggestive, incomplete, and inconclusive, and it is impossible to remove the research bias from the data and observations.

According to Creswell (2007), a grounded theory design is a systematic, qualitative procedure used to generate a theory that explains, at a broad conceptual level, a process, an action, or interactions about a substantive topic. It is a research design where the inquirer generates a general explanation (a theory) of a process (such as workplace motivation), or action, or an interaction shaped by the views of a large number of participants. Therefore, the central objective of using GTM approach in a qualitative study is to develop a novel theory.

3.3.3 Grounded Theory Process

The grounded theory aims to generate or discover a theory. Glaser & Strauss (1967 p. 2) defines it as *“the discovery of theory from data systematically obtained from social research”*. A frequently encountered question regarding using the GT is when and in what circumstances does one resort to grounded theory. Glaser (1978, p. 7) *“get through and beyond conjecture and preconceptions to understand exactly the underlying processes of what is going on, so that professionals can intervene with the confidence to help resolve the participants’ main concerns”*. Crooks (2001) suggests that the GT approach is ideal for exploring integral social relationships and the behaviour of groups where there has been a little exploration of the contextual factors that affect individual lives.

Qualitative research under the GT framework broadly involves the following steps:

1. Data collection (field-notes, interviews, scanned material etc.).
2. Data preparation and transcription.
3. Initial read through (gain general sense of the data).
4. Coding (identify critical segments and assign code labels).

5. Interpret code texts to develop themes.

In this study data collection was taken from premier engineering and technology institutes of India. The data were then transcribed verbatim to reduce the degree of biases of the researcher. As the GTM demands, all the interviews were transcribed and open coded as soon as they were collected. Before beginning to code the data, the interviews were thoroughly read to gain a sense of the underlying meaning hidden in the data. Open codes were constantly compared to generate higher-level concepts, and the relationship between these concepts was established to theoretically integrate the higher level concepts and generate an umbrella that is indicative of the properties and dimensions of all the other categories. These points are discussed in detail in the coming sections.

3.3.4 Elements of GTM

3.3.4.1 Theoretical Sensitivity

Theoretical sensitivity refers to the generation of concepts from the data collected and relating them in context with the underlying theory being developed. In essence, it refers to the researcher's ability to suspend judgement about the possible outcomes and interact continuously with the data and its analysis. Theoretical sensitivity permits the researcher to perform open coding and handle the categories that emerge from data effectively.

3.3.4.2 Theoretical Sampling

In the grounded theory framework the theoretical sampling is a deductive approach followed for undertaking the analysis of data and deriving key categories from the data. A researcher starts with gathering the data that follows the analysis, that in turn gives an idea further data gathering by answering questions like where next, why,

what, from whom. This is an iterative process and continues until the categories reach a point of theoretical saturation.

3.3.4.3 Reflexivity

Schwandt (1997) notes that reflexivity is the process of self-reflection on the biases concerning the research process (also see Urquhart, 2012). It is usual for the researcher to go through several emotions while collecting data like a researcher might feel sad, angry or happy when collecting and analysing data. Though in an unconscious level, these emotions are conveyed to the participants and impact the way participants choose to respond to the questions. This process of self-reflection also impacts the way the data is analysed. Thus, a conscious effort is required to control this unconscious state of mind of the researcher.

3.3.4.4 Theoretical Memo

Writing memos is an inseparable part of data analysis for theoretical construction and aids in the interpretation of data (Charmaz, 2006). She also suggests that during the initial stage of research analysis, writing memos provides prudential guidelines for initial coding and formation of the tentative category, thereby enabling better understanding of the raw data. Subsequently, memos help in elaborating the existing categories and examining the sufficiency of codes for developing insights into the inherent relationships among categories. Finally, memo writing enables segregation and integration of concepts and themes and their emerging patterns by bringing together abstract analysis into a robust conceptual account of the phenomenon (Tweed & Charmaz, 2012). In this study, 33 memos were written that formed a basis of data collection, question framing and grouping of codes and categories. List of all memos used in this thesis is given in the Appendix to this thesis.

3.4 Coding and its Relevance in Developing Themes

The merger between the abstract nature of data and the final development of the theory is achieved via the process of coding. Labelling the codes and developing themes from codes is central to the process of coding for arriving at meaningful conclusions. There are various approaches to coding, namely: (1) Open coding (reading transcript line-by-line to identify and code concepts) (2) Axial coding (organising concepts to make them more abstract) and (3) Selective coding (focussing on main ideas to finalise the theory). First and the third, i.e. open coding and selective coding are generally clubbed together and referred to as substantive coding.

3.4.1 Open Coding

In the open coding method, the text data is broken down analytically for developing the concepts that systematically emerge as the building blocks that eventually lead to developing the theory. The prescription for carrying out line-by-line coding entails analysing single short textual messages (Böhm, 2004). Subsequently, larger text content or a whole passage is coded, if required. For avoiding common pitfalls of simple paraphrasing, this procedure involves asking theory generating questions from the text such as ‘what, who, how, when, why and by what means’.

3.4.2 Axial Coding

The process of axial coding serves the purpose of refinement and differentiation of concepts to arrive at core categories. Conventionally, axial coding is used in the middle and later stages of the analysis. Like open coding, the axial coding approach initially considers smaller textual analysis and later broadens the coverage by analysing larger texts or the entire text.

3.4.3 Selective Coding

Selective coding is the process by which all categories are unified around a central ‘core category’ and usually occurs in the later phases of research (Corbin & Strauss, 1990). The core category indicates the core phenomenon and is tackled by asking questions by conceptualising and summarising the main ideas discussed in the study like - What is the main analytic idea presented by this research? Selective coding involves the integration of the categories for elucidating the broader theoretical framework.

3.4.4 Constant Comparison in GTM

The first principles of open coding are captured in the concept-indicator model (Strauss, 1987). The concept-indicator model is predicated on the constant comparison of the indicators, i.e. regularly identifying variations and similarities in the text (LaRossa, 2005). The basic rule of defining constant comparison is that while coding an indicator for a concept that indicator is compared with the previous indicators that have been coded in the same way. The word *indicator* refers to a word or series of words, or phrases or series of phrases or sentences in the text being analysed. A *concept* refers to a label or name associated with indicators, i.e. it is a symbol or sign attached to a referent. So happiness, satisfaction, honesty etc. are concepts. If two or more statements seem to belong together, such statements are classified as an indicator for the concepts, such as social well-being or feeling of a common community. As coding continues and progresses through the application of constant comparison, some concepts and their corresponding indicators are identified and linked together. Upon reaching a point when a researcher realises that further addition of another indicator, to those already grouped under a concept, does not

provide any incremental information about generating new insights, then according to GTM, the constant comparison is said to be theoretically saturated.

3.4.5 Theoretical Saturation

A conventional norm of grounded theory is theoretical saturation that signals the completion of the study. Glaser (1978) points out that developing the conceptual framework from the data depends on researcher's ability to transcend through various theoretical aspects about the data, generating concepts from the data, and develop a sound theory. For developing various themes that bridge concepts and aid in developing a theory the researcher begins by asking several questions about the data, such as, how does the data contribute to the study, what are the major concerns of the participants, and like. Therefore, saturation of categories is both a desirable and inevitable outcome that ultimately leads to the development of themes and ensures the relevance of the emerging theory. This goal is the primary concern of line-by-line coding. The iterative procedure ensures a constant stimulation of the core ideas and categories. New incidences subsequently emerge, and incidences merge into existing categories at different levels. Theoretical saturation enables the concretization of the theory that is relevant to the field of study.

3.4.6 Summary of the Coding Process

The coding process involves profound challenges such as dealing with researchers' bias, preconceived notions about the research outcomes, and ambiguity in transitioning from the abstractness of the data to the conceptual findings (Holton, 2007). As mentioned above, the coding process is a cumbersome and iterative process, which constantly interprets the fresh clues that the data provides. The tedious procedure of coding and memoing simultaneously helps in integrating the core

conceptual ideas that emerge from coding, which eventually leads to the identification of patterns and provides direction on follow-ups.

In conclusion, we can say that coding enables us to make sense of data and aids in developing themes, which may vary from three to seven or even more. The themes that emerge are then used for stating the findings and drawing major conclusions to meet research objective and makes the task easier for drawing wider conclusions. Finally, the findings and discussion are reported using a narrative approach by stating own statements that support the theme. Also, multiple perspectives and contrary evidence are put-forth for highlighting the contradictions observed during the study.

3.5 Data Collection and Analysis using GTM

The above section gives an overview of the concepts and process of GTM. The following section describes various steps in the data collection process that were undertaken. These steps were designed considering the GTM process and requirements. Though there were few modifications made during the process due to the feasibility issue or to capture the richness of data. The steps taken for data collection are discussed in detail below.

3.5.1 A sample of the Study

The sampling for this study was done in two stages. One was the sampling of the institution to be selected for the study and the second was the selection of the participants within the institutions (Refer to Fig. 3-1). As grounded theory focuses on theoretical sampling technique, the sampling was performed at multiple stages for both institutions as well as the participants. A combination of theoretical sampling along with other non-sampling techniques was used for collection of data. Other non-

random sampling techniques used were purposive sampling, snowball sampling and maximum variation sampling.

- Purposive Sampling: A purposive sampling is a deliberate selection of participants due to the qualities they possess. The characteristics of the population and the objective of the study form the basis for choosing a participant (Tongco, 2007).
- Snowball sampling: In this type of sampling the existing participants give referral about other participants who have the same characteristics that are of interest to the research area (Noy, 2008).
- Maximum Variation Sampling: Maximum variation sampling targets the extremes to capture variation in the sample and their responses. This is a kind of purposeful sampling where the variation in the sample might be based upon race, class, gender or any other characteristic of the sample (Coyne, 1997).

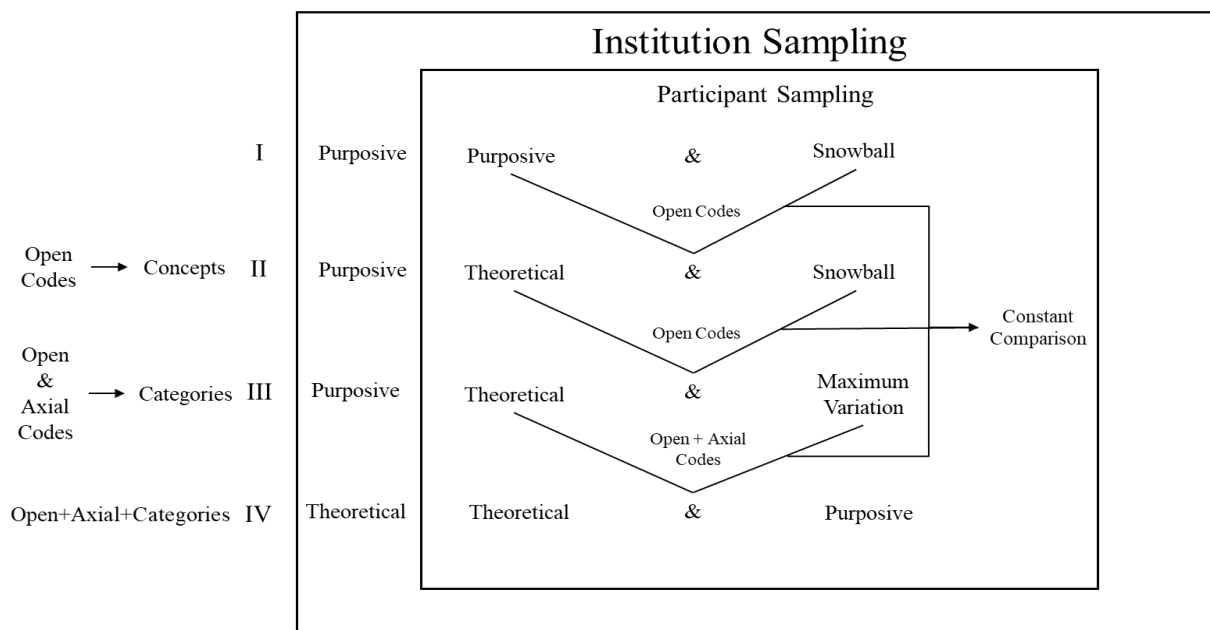


Fig. 3-1 Sampling techniques used in the study

3.5.1.1 Sampling of Institutions

The scope of the study is confined to engineering and technical institutes in India. To select institutes purposive sampling, as well as theoretical sampling, were used. At first, the question of selecting the type of institutes that can provide the best data to address the research question was considered. The research question derived from a review of literature aims at identifying the positive practices in Indian engineering and technology institutes to enhance the well-being of the faculty members. It was assumed that since the IITs are the premier technical institutes in India, they have such practices that address the need for enhancing the well-being of faculty members. By this assumption, the selection of the institute was limited to the IITs. However, for pilot study BITS Pilani was chosen. After that, as illustrated in the above figure, for the first three levels purposive sampling was used to select the institutes. These included the oldest IITs like IIT Delhi, Bombay and Chennai. But before reaching the fourth level, the categories started to saturate. Then to attain complete saturation of the categories, it was decided to cover another institute. IIT Kharagpur offered a promising insight as they had recently inaugurated the “Rekhi Centre for Happiness” that actively works on increasing the happiness factor amongst its members. And thus IIT Kharagpur was selected as the next institute, which also became the last institute as the codes got saturated.

3.5.1.2 Sampling of Participants

Along with theoretical sampling, other non-random sampling techniques were used to select the participants within the institutes. As depicted in Fig. 3-1 for the initial stage and pilot testing, participants were selected using purposive sampling, i.e. faculty members in BITS Pilani. Then these participants were requested to give

referrals to other faculty members in BITS as well as other IITs. Also, theoretical sampling was done by coding the first level interviews.

Similarly in the third level theoretical sampling was used. Maximum variation sampling was also applied to capture information from faculty members ranging from different departments and holding different positions. In the last level of sampling purposive sampling was used to interview faculty members in IIT Kharagpur who were active members of the “Rekhi Centre for Happiness. A total of 41 interviews were collected until the codes got theoretically saturated.

3.5.1.3 Distribution of Sample Characteristics

The analysis on sample characteristics is done based on categorising the respondents into the following characteristics namely, gender, age, work experience, the area of specialisation, current position, duration in the current institution and any administrative roles the faculty has undertaken in the institute.

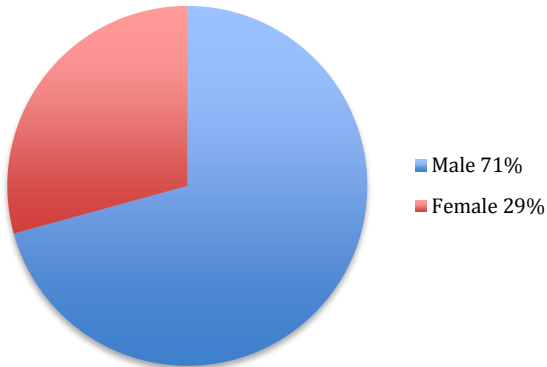
Fig. 3-2 presents the distribution of the respondents in terms of the above-stated categorisation derived by theoretical sampling and theoretical codes.

As can be seen in the “distribution by gender” section there were more male participants than the female participants. The difference is because there was no special emphasis placed on sampling by the gender of the participants. It can also be noticed that in “distribution by designation” section the participants holding the designation of “professor” were more. As the aim of the study was to identify the practices for the well-being of faculty members, the emphasis was given to capture the experience of the participants who were in the Institute for a long duration. As can be seen in the “distribution by years spent in a current institution” most of the faculty members have spent at least ten years or more in the current institution. This also included faculty members who have served their entire career in the same institution

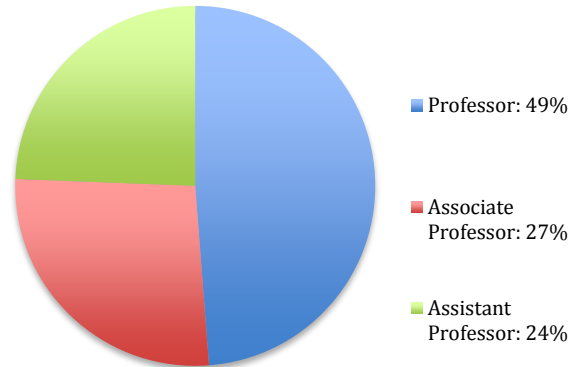
and have been a part of it for more than 30 years (5%). However, the people who have recently joined (0-10 years) were also interviewed to check for new insights. This also leads to criteria of the age group of the participants represented in the “distribution by age” section. Since we were focusing on the people at a higher level, it was obvious that they would fall under the higher age category (55years and above: 29% and 45-55 years: 32%).

Theoretical sampling also demanded the need to take interviews from people who hold or have held some administrative position (as they actively involved in framing policy decisions) in the institute to gain a wider perspective of the research interest. From the “distribution by administrative position” section, we can see that the participants are holding ‘Dean of faculty members (10%) and other (22%)’ constitute 32% of the total population followed by ‘associate dean (14%)’ and ‘departmental heads (10%)’. The theoretical codes also suggested that there was the difference in opinion of people regarding the research interest across various departments. Therefore, to bring variation and increase generalizability participants belonging to different departments were approached. As it is evident in “distribution by area of specialisation” section participants from ‘computer science (22%)’ and ‘management and humanities (22%)’ were more as compared to other streams. The ‘others’ category in this section includes faculty from departments like mining, physics, biology and textile (each containing one participant). A detailed list of the sample data for deriving these distributions is provided in the Appendix to this thesis.

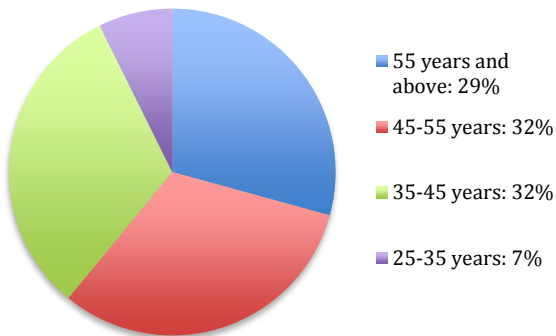
Distribution by Gender



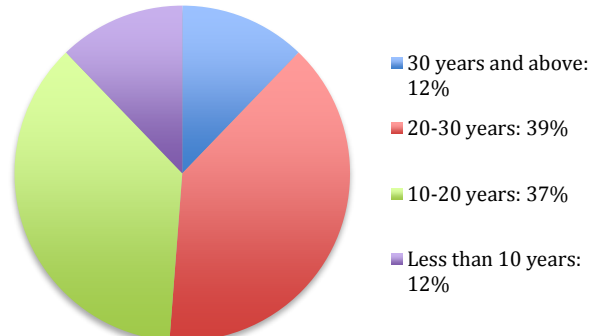
Distribution by Designation



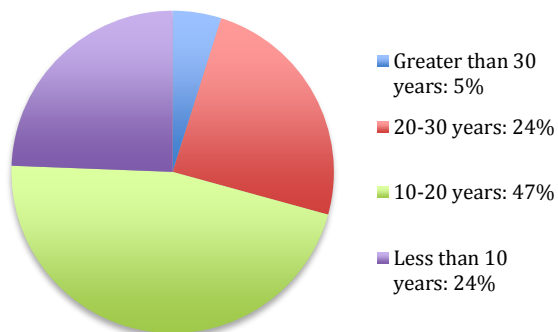
Distribution by Age



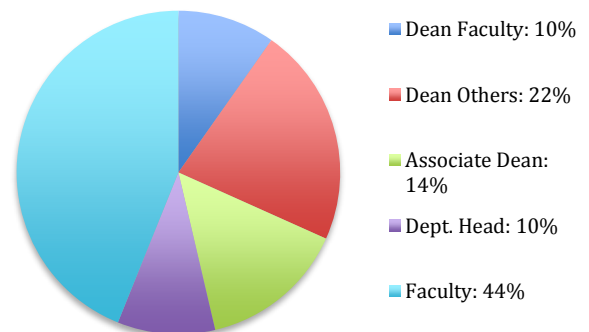
Distribution by Work Experience



Distribution by Years Spent in the Current Institution



Distribution by Administrative Position



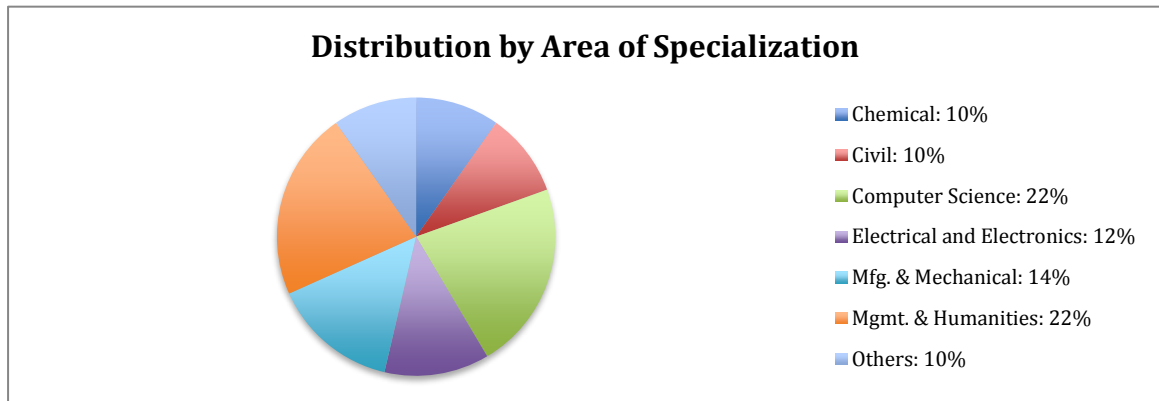


Fig. 3-2 Distribution of sample characteristics

3.5.2 Designing Questions for Interview Schedule

Qualitative interviews are used to study the process or phenomenon that has not been studied yet. It leads to the path of discovering new perspectives towards an issue by focusing on depth rather than breadth. For this purpose, designing questions that explore the depth and multiple perspective of the area under investigation is a priori. The guidelines adopted for designing the question format was from Rubin & Rubin (2011). But designing a question that captures such detail is a daunting task. In our study, multiple changes were made in the questions as we realised that the questions that were first planned were not capturing the experience of the participants in detail. Also, the principle of theoretical sampling of GTM demands constantly analysing data and then decides “whom to ask next” and “what to ask next”. Thus, there were gradual changes made in the questions that were asked during the data collection process.

To gain richness in the study, the questions were semi-structured and were divided into the following categories:

- The ice-breaking questions
- The main questions

- Probes
- The follow-up questions

For the semi-structured interview, we have a predefined area of investigation, number of questions in advance and then plans to ask to follow up questions depending upon the answers given by the participant. The categories of interviews are discussed below.

3.5.2.1 Ice-breaking Questions

These questions help build a rapport and a sense of mutual trust with the participants. These questions are asked in the first few minutes of the commencement of the interview to get the participant talking. These questions make the respondents comfortable and also give an idea to the interviewer regarding the willingness of the interviewee to participate. Such ice-breaking questions were used in our interview also. They were mostly structured, and an attempt was made to find out the basic information regarding the respondent. For example, the questions were:

- How long have you been in academics?
- How long have you been associated with the institute?
- What courses do you teach?
- What other roles and responsibilities do you have?
- Were you a part of any other institute? If yes, which institutes and how long?

These questions were addressed to know the details like the experience of the participant in academics and also the association of the participants with the current institute, teaching and research area, any administrative position currently being held or held in the past by the participant and information regarding the other institutes where they have worked so that a comparison can be drawn between several

institutes. These set of questions were mostly structured and asked all the participants before coming down to the ‘main questions’.

3.5.2.2 Main Questions

Main questions were questions that ensure that all the parts of the research area are covered. The questions focus on dividing the aim of the interview into broad segments and ensure that all such segments are covered. These questions tend to be unstructured and broad. Though the main questions are unstructured, still it is important to maintain a sequence and a flow that facilitates in making a clear connection. The questions were designed such that the knowledge and experience of the interviewees can be captured.

Our study was divided into various environments in which a typical academic institution functions. These environments were derived on the basis of a review of the literature and were classified into internal as well as external environments. The external environment that we considered initially for the study mainly consisted of the local community where the institution is located and that impacts the functioning of the system. The internal environment consisted of the formal learning environment, the administrative environment, the residential environment, and the research environment (Oades et al., 2011).

The questions were modified multiple times depending on the response of the interviewees. The following questions were asked to uncover the various positive practices that are there in the environments mentioned above. An example of the set of main questions that were asked in the initial interview stage is given below:

- What practices motivate you in formal learning or the classroom environment?
- What practices facilitate research in the institution?

- How does the administrative environment facilitate your work?
- What initiatives are being by the Institute for the betterment of the local community?
- How do you find the residential environment?

These set of questions were asked initially to the respondents, but it was soon realised that some jargons were being used and the questions are very directive and would force the respondents only to think on those specific areas. Due to this, the duration of the interview for the first few respondents was less (approximately 20-30 minutes). On analysing and coding these interviews, the doubt was confirmed, and questions were modified to make them more open-ended and broad. The questions were made abstract and that encouraged the respondents to describe their experience in detail. For example, the following set of questions were asked after modification:

- What practices of the institute energise you or motivate you?
- Could you describe to me the research environment in the institute?
- Could you describe the residential environment in the institute?

It was realised that the first question “What practices of the institute energise you or motivate you?” helped explore different aspects that impact the life and functioning of the faculty members in an institute. It also helped us exploring different other environments surrounding an institution. The other environments were; external: competition with other academic institutes (in India as well as outside India), industries and their association with the institution and the government rules and regulations; internal: family, rewards and recognition, performance appraisal, cultures, internal competition and so on. The follow-up questions were based on these areas to explore them in detail.

3.5.2.3 Probes

The main structure provides the overall structure of the interview and the key areas that should be covered. Probes on the other hand help in clarifying the concepts being shared by the interviewee. These are used to regulate the detail and length of the answers, clarify any ambiguous responses, fill in any gap that is identified, and to lead the interview on the right track. Probes were used during interview to, first, show the interest of the interviewer in the answers and keep the respondent engaged and attentive, second to regulate the detail and depth of the interviews and to clarify any information, and third, to check how credible the answers were and if there is any bias in the responses. The following probes were used:

- Attention probes: “yes”, “that’s interesting”, “so true”, “that’s a new perspective”, “Ohh..” etc.
- Conversational management probes: “Can you describe more on this topic?” General probing questions (probes) used during interviews are given in Table 3.1, and specific examples of credibility probes appear in Table 3.2.

Q: How frequently people interact beyond working hours?

A: There's a lot of social interaction. for hostel interaction there is a student teacher interaction program. There is known as STIC. So they keep dinners. And then all hostels have their house dinners. There is a board of Hostel Management annual dinner takes place. Then there is a lot of activities in the department also. I must say there is a lot of opportunities available but tactically speaking the number of faculty going to those opportunities are very few. That is the issue.

Q: What is the reason behind that?

A: this is young faculty who are there they are also having their obligation. They have young children which are there to see in the evenings. So they are hesitating to go beyond there working hours into other social functions. And senior who have done it multiple Times and those who found the utility of 8 they are continuing and those who have found the utility they have stopped.

Q: As per your opinion should it be increased or it is fine?

A: no, it is fine. It is more than enough at the moment and it should be the purely voluntary for the people to participate. There is another aspect which is there. Senior staff club is there. They keep hosting event. There many people turn up. Social life is good that way. But I must say the faculty on their own coming are less. Opportunity are many from the side of the institute

Table 3.1 Example of probing questions

Q: Can you please describe about the level of kindness and generosity in the Institute environment?

A: I felt that it is much more generous and kind than the environment just outside the campus.

Q: Can you please tell me about an incident?

A: you can approach any faculty. If you need something in a personal level there are faculty members not only faculty members who are great and will readily help you. One example I can tell you, last to last year I joined and I went to play cricket and somehow I got hit by the ball. So I had to rush to the hospital to get the first aid and got stitches so the staff was there immediately took me to the hospital and stayed with me until I got all the stitches and all the medicines and put me in a vehicle a taxi to go home comfortably and within an hour I received calls and whenever

we met the enquired about my status and this was from the staff side and also in few months down the line I met with people who didn't know me in person but knew about the incident and when they came across the found I am person they did enquire about my health. So that the kind of close knit community I see in IIT Bombay

Table 3.2 Examples of credibility probes

3.5.2.4 Follow-up Questions

These set of questions are used when the interviewee comes up with an unexplored path and seeks to gain more depth in the study and to clear an apparent contradiction for grasping a sense about the broader context. These questions are usually unstructured and are framed depending upon the answers given by the respondents to the main questions. An example from the study is depicted in Table 3.3:

Q. Can you give me some practices of the Institute, which energise you or motivate you?

A. Motivation is basically I would say the environment actually and the good students like these are the only two main factors like I'm in this profession because I love teaching and the people who live around are much more focused and they are aware of the state of the art and it is very good to have discussion with them.

Q. You said me that you love teaching and that is one of the major motivation so is there any kind of steps that has been taken to enhance or facilitate teaching here?

A. So far I didn't see any significant initiative taken by the Institute because I am very new here and I didn't explore all the possibilities here and I think IIT Kharagpur has got a very good structure to take the feedback and the faculty members are also aware of that like how the students evaluate the teachers and that is the main reason for being motivated.

Table 3.3 Examples of follow-up questions

3.6 Data Collection Technique

In an interpretivist study, the researcher faces the challenge of analysing problems and situations that tend to be complex. Variety of techniques like participant observation, in-depth analysis, documentary and conversational analysis are used for this purpose. The researcher often adopts a combination of the above techniques to comprehend the complexity of a given situation. In this study, in-depth qualitative interviewing was used as a primary tool for research.

An in-depth qualitative interview is one of the most common qualitative methods. This technique is used to capture a vivid picture of the perception of participant about the research question. In this type of interview, the participants are considered to be the expert of the field and the interviewee intends to discover thick data on a particular idea, situation or program (Turner III, 2010).

An in-depth interview shares the following characteristics (Rubin & Rubin, 2011):

- The researcher aims to excavate detailed and rich information about the research question. The focus is on deriving narratives, stories, examples and experiences from the participant.
- The questions are open-ended and do not give specific answer categories or hints to the participants. The participants can choose to respond in any way like by elaborating the answer, raising an issue over the question or may even choose not to give any answer to the question.
- The questions or the order are not fixed beforehand and do not have a structured format. The researcher is free to change the wording or add a new question or skip a question to follow up with new insights.

For conducting interviews in this study, the criteria mentioned above were fulfilled. The design of the set of questions were semi-structured, and the questions

were open-ended in nature. In the course of the data collection, the questions were changed on several stages to extract detailed information from the participants.

3.6.1 Topical interviews

The in-depth interviews, whether unstructured or semi-structured can be further classified by the type of information the researcher is seeking. The interviews that try to capture the vivid description of the events, facts or example that are addressed to a pre-decided research question fall under the category of topical interviews. Whereas, if the researcher is trying to understand the behaviour, ethics or traditions by studying the norms, rules and values in a specific setting then the interviews fall under the category of cultural interviews (Rubin & Rubin, 2011). However, it is possible that some of the interviews might have components of both the categories as an aspect of one category might overlap with the other or might be interdependent.

This study falls under the category of topical study as it aimed to explore questions like what, why, when, where, how and what consequences. The researcher pieced together a variety of information gathered from different people having distinct perspectives. The interview was initiated with a few main questions, and the follow-up questions were asked to gain depth of information regarding the main questions.

3.6.2 Responsive Interviewing Style

As per Rubin & Rubin (2011), this style of interview is based on the importance of building rapport and trust between the interviewer and the interviewee. The three requirements of responsive interviewing style are:

- The relationship - Since the participants share their personal experience, feelings and thoughts, it is important for the interviewer to develop mutual trust during the interview. The assumption is that both the parties involved in

the research are people with emotions and researchers must protect the information given by the interviewee.

- A friendly supportive tone: The tone of questioning is friendly and gentle. The confrontations are kept at a minimum. The questions are broad, and the researcher gives liberty to the participant to choose what and how to answer. The personality of the interviewer and the participant both play an important role in framing the questions.
- Flexible question and design - The response of the participant forms a basis of developing a set of questions for the further interview. The researcher is free to customise each question depending upon the participant. The interviewee is treated as a partner and not as a research subject as the idea of the interviewee impacts the subsequent questions.

In this study, these points were the pillars for framing questions and conducting interviews. As discussed earlier in the designing questions section, the questions were flexible, and the follow-up questions were framed depending upon the answer of the participant. Further, to establish a rapport and build a relationship the participants were visited a day before the interview was scheduled and a brief description of the research problem, as well as the method of collecting data, was clarified. Further, the tone of the questions was friendly, and confrontation with the participant was avoided that allowed the participants to provide rich and thick data.

Thus, from the above, it can be concluded that the data collection method used in this study was interviewing through semi-structured questions adopting a responsive style of interviewing. Pictorial representation of data collection techniques used in the study is illustrated in Fig. 3-3.

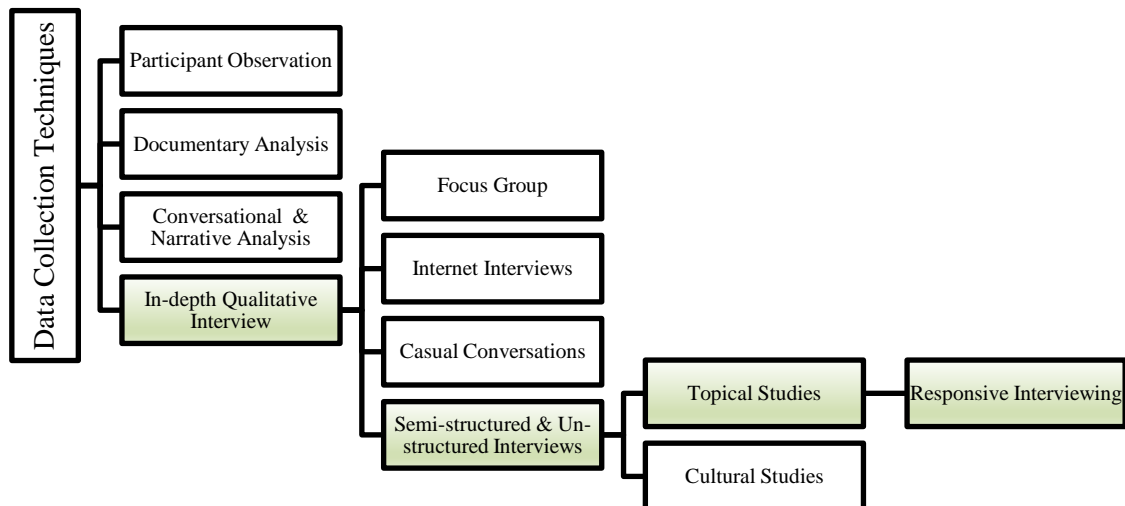


Fig. 3-3 Data Collection Techniques

3.6.3 Recording the Interview

To capture the richness of exact data version of participants' information is maintained. The common method to do so is to take a detailed note of the interview or to record the interview using an audio-visual recorder. However, a combination of both methods is considered best for this purpose. In this study, the combination of both methods was used to capture the information. The consent of the interviewee was taken before recording the audio data using a recorder, and occasional notes were also taken during the interview.

Recording an interview allows the researcher to trap verbatim data. Recording reduces the increased risk of the subjectivity of the researcher while comprehending the data. Also, it saves time and maintains the flow of the interview as the researcher can concentrate more on listening and understanding the information being provided instead of focusing on writing it. A limitation of recording the data is that the respondents get conscious while answering any sensitive information and might manipulate or cease to provide that information. To overcome this limitation and gain the trust of the participant a signed

document was provided prior to the interview ascertaining full confidentiality of the participant as well as the data being provided.⁵ However, in a few cases, the participants were not comfortable in getting the interviews recorded and hence a detailed note was taken in these cases.

It is taking notes while interviewing help the researchers to note down observations, which might not be otherwise captured in the recorded data. The notes also provide a guideline to frame possible follow-up questions and keep the pace of the on-going interview. In this study, regular notes were taken and referred during the interview as well as for analysing the interview later on. Information like the mood of the participant while answering a particular question, any idea that might need further probing, any new concept that needs to be explored, cross-examining any answer that differs from the previous answers etc. were noted down to maintain richness of the data. This also helped in checking the consistency of the information that was recorded while conducting the interview.

3.6.4 Transcribing the Interviews

Transcribing is the process of converting the audio data into text format. Transcribing was one of the most time consuming and tedious processes. The length of the interviews on an average was 45 minutes, and it took eight to ten hours on an average to convert them into text format. The process involved listening to the interviews and then typing them verbatim. After transcribing each interview was crosschecked to ensure that all the recorded information was converted in the text format.

⁵ Refer to the Appendix to this thesis.

3.6.5 Ethical Considerations

Ethical considerations serve as one of the most important parts of the research as it makes the study free from any controversy or any practice that might subject the researcher or participant to any form of harm. Bell & Bryman (2007) proposed principles related to ethical consideration that was adopted in our study. The following steps were taken to ensure the ethical conduct of researcher during data collection.

1. *“Permission from the institute”*: The Academic Research Division of BITS Pilani was informed about the data collection process, and the institute issued a bonafide certificate (mentioning the researcher’s status as a full-time research scholar in the institute) that further facilitated the data collection process.
2. *“Research participants were not subjected to harm in any ways whatsoever”*: It was ensured that the subject matter of interview, as well as the interview process, does not cause any mental or physical harm to the participants. An effort was made to establish rapport with the participants so that they feel comfortable while answering the questions.
3. *“Consent from the participants”*: Before conducting the interview, the participants were informed about the area of research, the procedure of conducting an interview and the process through which the data will be analysed. Only after the participants gave voluntary consent the date, time and place of the interview were agreed upon as per the preference of the participant.
4. *“Confidentiality and anonymity”*: The participants were given a signed agreement mentioning that their confidentiality shall be protected. To ensure

anonymity of the participant as well as the institute the details like name of participant or institute were removed from the transcripts and substituted with codes.

5. *“Transparency and honesty”*: The researcher asserted openness and honesty while communicating the information about the study to all the interested parties.

This chapter concludes the discussion on research methodology adopted in this thesis by providing an in-depth description of the NVivo software that was used for data extraction and analysis. The rationales for choosing the NVivo software along with its limitations are also discussed.

3.7 Data Analysis and Storage

At the onset of the project, the number of interviews was limited. As theoretical sampling principle of Grounded Theory was applied, the interviews were coded shortly after they were conducted. The constant comparison principle demanded revisiting the old interviews and their codes, every time a new code is being developed. It was feasible until the number of interviews was less and the length of the interview was also small. But as the study progressed, the interviews got lengthier and the number of open codes also increased. It became a hectic job to check all the interviews and their codes every time a new interview was being coded. Initial six interviews were coded manually, and then NVivo was used for the rest.

The NVivo software is used for carrying out qualitative data analysis and assists in analysing rich text-based information especially in the areas as diverse as social sciences, psychology, and marketing, to name a few. Tim Richards developed the software in the year 1999.

3.7.1 Why NVivo?

NVivo is one of the most advanced data analysis packages today. It has profound relevance in conceptualising and coding rich-text information that assists in interpretation and analysis. To answer research questions based on qualitative data, one is confounded with loads of information that requires accessing the data records and proper browsing and linking of such records for meaningful encoding and analysis. NVivo, for example, aids in summarising critical viewpoints and inputs expressed by the interviewee such as done by using colourful headings to categorise opinions.

3.7.2 GTM and NVivo

This thesis uses a Grounded Theory Methodology (GTM) for accomplishing the research objectives, and the NVivo software accommodates the GTM approach for qualitative research. Recent innovations in software technology have come handy for researchers by reducing the complexity involved in codifying and interpreting rich text-based data. Since GTM approach considered in this thesis is primarily text-based and relies heavily on coding the inputs received during the interviews, the NVivo software becomes an ideal choice for such analysis. NVivo is a useful tool that enables to entangle many characteristics and processes required for GTM.

3.7.3 NVivo and Data Analysis

NVivo software permits are carrying out specific project tasks such as managing data and managing ideas and thus requires a thorough knowledge of the software for using it efficiently. For this purpose, the tutorials provided within NVivo package are of great use. A brief discussion on creating a project in NVivo is discussed.

We first begin with the project by creating a project in NVivo, and it is recommended that the project is secured by creating a password to limit the access

and retain confidentiality. After that, the documents to be uploaded in the software are prepared. Coding lies at the heart of analysing qualitative data, and for that purpose first, the nodes are created and categorised into various types following which the coder function is used for extracting the codes from the text data. The final step involves filtering the information into various contexts such as categories, themes and narrative for analysis purpose.

3.7.4 Limitations of NVivo

It is beyond doubt that any qualitative data analysis software will be without any limitations. The sheer abstractness and subjectivity of the data in the qualitative study will inevitably cause hindrances in interpreting the text-based information for analysis purpose. Nevertheless, software packages have established their dominance within the academic community through the utility they offer by allowing high-quality data encoding, however, a note on the caution that a researcher must exercise while using these applications is in order. First of all, NVivo is a system driven application and hence is fallible because it is not comparable to human and hence will not completely delineate subjectivity and thematic categorisation of personal interviews that will ultimately affect the results.

Chapter 4. Analysis and Interpretation

4.1 Introduction

As described in Chapter 3, the grounded theory methodology was used for the collection and analysis of data. Corbin & Strauss (2008, p.45) note that: “analysis involves examining the substance and its components to determine their properties and functions, then using the acquired knowledge to make inferences about the whole.” This chapter extends the understanding of the approach of grounded theory used in this thesis and the steps undertaken to analyse the data. The first step taken for data analysis was the open coding also called as naming or labelling the data. The axial coding that includes establishing a relationship between the codes follows the open codes, and finally culminates with selective coding which leads to the generation of theory from the data. The constant comparison principle guided all the three steps of coding until theoretical saturation was achieved. This chapter describes the above processes in detail.

4.2 Glaser or Strauss – Adoption of a Combined Approach

Since 1960, the proponents of Grounded Theory have made several attempts to provide clarification and reconceptualisation of the approach to perform the coding process. This also led to the division in the school of thoughts leading to two approaches namely the Glaserian approach or the classical grounded theory and the Straussian approach. These approaches differ in the way the second level of coding should be done. The Glaserian approach proposes to draw the relationship between open codes on the basis of eighteen coding families, whereas the Straussian approach focuses on using ‘common coding paradigm model’ for this purpose. Glaser has

criticised the Straussian approach as being objectivist and notes that following the common coding paradigm leads to forcing of data instead of emergence (Kelle, 2007). This diversion in the coding approach often leaves the novice researchers unsure about the way to analyse qualitative data (Corbin & Strauss, 2008). Similar confusion prevailed during the adoption of one particular approach for analysing the data.

Initially, the data collection and analysis process began with the Straussian approach but during the later coding phase, to maintain the richness of the data and conclude on the theory that best describes the area under investigation, a combined approach was adopted. Thus, the Straussian coding paradigm model is adopted for clubbing the open codes to concepts and the Glaserian “type family” approach is used for clubbing the concepts to form the core category. The next section describes both the approaches of Grounded Theory and the rationale for choosing the way of coding for this research.

4.2.1 The Glaserian Approach

As per the Glaserian approach an area for investigation is selected, and then the researcher allows the data to guide the coding process to generate a theory or issue (Zarif, 2012). Glaser advocates that the researcher should be empty minded before entering the site of the research and commence the research with a broad enquiry. The coding procedure comprises of two levels namely substantive coding and theoretical coding. The process is less rigorous and depends on the constant comparison of the codes to generate a theory. The belief is that the data reveals theory (Heath & Cowley, 2004). The Glaserian approach has been criticised on the basis of the dichotomy of difficulties faced by novice and experienced researchers. While novice researchers get tangled into categorising the data into an unsystematic list of theoretical terms from various epistemological backgrounds, the seasoned researcher with a broad theoretical

knowledge would not need such a list. Another problem faced by researchers is the requirement of proceeding empty minded that might lead to duplication of some existing theories (Kelle, 2007). The list of codes overlap, but it also allows the grounded theorist to be sensitive towards data and gives the liberty to find additional codes that provide explicit subtleties about the relationship in the data. Such an approach stresses on parsimony, scope and modifiability as described by Heath & Cowley (2004).

4.2.2 The Straussian Approach

As per this approach the researcher is allowed to predetermine the literature about the area under investigation before entering the data coding process (Zarif, 2012). This approach is more structured and depends on three levels of coding namely the open coding, axial coding and selective coding. In the axial coding level, the common coding paradigm model is used to club the codes. The model lays the outline to club the codes by the conditions (causal, intervening or contextual), the action and interaction strategies, and their consequences. The belief is that data is prepared to divulge the theory. The problem with the paradigm model is that all the codes cannot be clubbed into a causal and consequential framework. Moreover, the notion about cause and effect does not specify which events can be regarded as cause and which event can be regarded as a consequence in different domains (Kelle, 2007). Another important perspective of the paradigm model that Corbin & Strauss, (2008, p. 90) propose states that “the paradigm is only a tool and not a set of directives”.

4.2.3 Adopting a Combined Approach

Both, the Glaserian and the Straussian approaches talk about the importance of the theory that emerges from the data and advocates flexibility and modifiability to describe best the relationship between the codes and the theory that emerges out from

the data. The precondition of the Glaserian approach to proceed without prior information along with the lack of clarity in the coding family prompted us to adopt the Straussian approach at the beginning. Gradually as we proceeded in the study, we realised the limitation of the Straussian paradigm model, as all the codes were not fitting well in the conditional consequential matrix form.

Though the paradigm described few of the phenomenon in the best way possible, it was realised the Glaserian coding “type family” was more suitable to represent the relationship between axial codes to form a higher level category. To maintain the richness and originality of the data and the liberty provided to modify the coding frameworks enabled us to adopt a mix of both the approaches. For the axial level codes, the Straussian paradigm model is extensively used. Whereas, in the selective coding level the codes were categorised on the basis of “type family” proposed by Glaser. The underlying principle was to let the data “emerge” rather than being “forced”. As stated by Corbin & Strauss (2008, p.71):

“There is no right or wrong about analysis. Nor is there a set of rules or procedures that must be followed. Analysis is, for a large part, intuitive and requires trusting the self to make the right decisions.”

4.3 Data Analysis Steps

The above discussion explains the utility of undertaking a combined approach; hence, the three levels of systematic coding using a hybrid-approach for categorisation was used to produce the theory and simultaneously memos were maintained to guide the analysis path. The stages of analysis were complemented with the theoretical sampling and constant comparison method that further assisted in evolving the storyline.

4.3.1 Open Coding

Open coding is the first step in analysing and interpreting data and involves naming and labelling the data. As described by Corbin & Strauss (2008), open coding involves breaking the raw data apart and sketching out the concepts that represent those blocks. The open coding is a step that is revisited multiple times by the researcher to develop possible insights into the meaning of data. The strategy used for open coding can be accomplished by line by coding, sentence coding, several phrases coding, paragraph coding and whole document coding. The questions like who, what, when, where, how and with what consequences are asked to label the data. Several open coding strategies were used depending upon the stage of research and saturation of codes.

4.3.1.1 Line-by-line Coding

This approach was used in the earlier phase of data collection and analysis soon after the first two interviews were conducted and coded. In this approach, every line in an interview is considered to be a meaningful set of information and is coded accordingly. The data is broken into each line and then labelled depending upon the theoretical sense it makes. This process was adopted for the first few interviews collected from BITS Pilani (three interviews for a pilot study) and IIT Bombay (eleven interviews). An example of line by line coding from the excerpts is provided in Table 4.1 below.

4.3.1.2 Paragraph Coding

Along with the process of line-by-line coding, the paragraphs that holistically made sense were coded with one name. Though this technique has been rarely employed or has been employed with line-by-line coding.

Data	Open coding
Teaching is actually a small part of our responsibility in the	Teaching responsibility
institute. We are also supposed to do research. So we do get	Research obligation
engaged into sponsored projects. Some of them for which we are	Engaged in sponsored projects
the principal investigators, we write the projects, get the funding	Get funding
and then execute the projects. And for some of them somebody	Execute projects
else is a principal investigator, we team up, sometime there are	Team work
large projects in which there are several faculty members and we	Several people involved
team up and then we do our part and these things do take	Team work/ collaboration
considerable amount of our time.	Take considerable time

Table 4.1 Example of line-by-line coding

Looking into only paragraphs might fasten the process but the essence of the interview might get lost. Table 4.2 describes an example of paragraph coding.

Data	Open code
I think we have become much more flexible from the time I joined 25 years ago, just to give an example, so as faculty members we are allowed to go on sabbatical leave something that is a bonus of being in an academic system that I can, it happens in 6 or 7 years, I can take a year off, recharge myself go and visit new places while university actually pays my salary so on and so forth. Now when I joined 20 years ago, there were a lot of restrictions imposed on us, how we were supposed to spend our Sabbatical could we go to and industry could we go there could we go there Show all that now is completely done away	Sabbatical facility flexibility, relating to past, academic system, recharge self, paid leave, less restrictions now

Table 4.2 Example of paragraph coding

The above paragraph as a whole was coded to “sabbatical facility”. To maintain the richness of the data the above paragraph was also coded at “flexibility, relating to

past, academic system, recharge self, paid leave, fewer restrictions now”. Thus the paragraph coding was accompanied with other forms of coding.

4.3.1.3 Sentence or Phrases Coding

This technique of coding focuses on the complete sentence or phrases that reveal relevant information or provides any insight into the research interest. These codes were usually done at the later stages of analysis after obtaining clarity about the emerging codes. Each chunk of data is given relevance and examined closely. If the chunk of new data was conceptually the same as the chunk from the previous interview, then it was coded using the same conceptual name. Refer Table 4.3 for an example of sentence/phrases coding from different excerpts.

Data	Open codes
P1: So infrastructure, autonomy, and there is a kind of a culture here, and that culture helps in disciplining both the teacher and also the students.	Disciplined Culture
P2: One should know how to balance. If you have too many things on your plate you will probably start losing out on other.	Striking work-load balance
P3: And you can also want to do something for the community, you can do that.	Contribute to wider community
P4: So what we have done in first of all we have tried to make a calendar of activities. So that no deadlines are missed for the faculty.	Prioritising punctuality

Table 4.3 Example of coding of sentences or phrases

4.3.1.4 Whole Document Coding

This technique is called as creating a case in the NVivo software. The whole document is created as a case, and the demographic details can be saved individually

for each case. Using this technique, all the interviews were created as individual cases and the sample characteristic details were formed.

Apart from the techniques mentioned above, In-vivo codes and constant comparison were used in the open coding process. Both of these techniques are described below.

4.3.1.5 In-vivo Codes

This is a technique of labelling the interviews using the actual words or phrases that research participants have used instead of conceptually naming it by the analyst. In-vivo codes acted as a significant feature of coding that helped in visualising a concept from the point of view of the participants. Using this strategy a section of data from the interview transcript was labelled using a word or short phrase from that section. Few examples of in-vivo coding are given below (Table 4.4).

4.3.1.6 Constant Comparison

This technique is used to develop conceptual awareness within a phenomenon. In this method, the newly collected information is compared to the data from previous interviews. As per Charmaz (2014), this method is an iterative process that compares data with data, data with code, code with code, code with the category, the category with category and finally category with the concept. This comparison is important in all stages of analysis as it helps in identifying the properties and dimensions of one category and allows the researcher to differentiate one theme from another.

For constant comparison, NVivo served as a useful tool, as all the interviews were stored in one place and the “query” function of NVivo made it easier to search and compare codes from previous codes.

Data	Open Codes
Here it is very very frank and also we have different schemes like go to picnic together, so that helps kind off to break the barrier.	Break the barrier
Well I would say that our primary resource is the intellectual curiosity of the students. And that is what I would say is what inspired me to choose this career in the first place because I was also a student in IIT	Intellectual curiosity of students
But this kind of work like faculty is more focused on creating an individual mark. You are the Boss of your own work. You are not account to go to anybody. Except the system.	Boss of your own work
What like what you want to do. So, therefore the faculty member reaches the stage of self-discovery. And moving alone. Like Rabindra Tagore “Ekla chalo, Ekla chalo, Ekla chalo re”. if nobody there with you, you walk alone. That’s the thing message.	Ekla-cholo
Addition to whatever is being followed here, not much that I can add really. I am pretty content with what we have.	Pretty content

Table 4.4 Examples of InVivo coding

It also helps to identify which codes are heavily used in multiple interviews and thus gave an idea about the importance of that particular code. An example of constant comparison for open coding appears in Table 4.5. As can be seen in the above table, the intellectual capacity of the students and faculty members of the institute was frequently mentioned by the participants. Responses from multiple participants were coded in the “best brain”. Later on, the other responses that talk about intellectual stimulation was clubbed together to form a higher-level conceptual code named “intrinsic motivation through intellectual stimulation”.

Data	Open codes	Conceptual codes
I was talking to someone who had just joined that the first thing I told him you will be exposed to here is a different way of thinking which I would say is analytical thinking the IT way of Thinking it like analytical thinking	Analytical thought provokes	
<p>P1: getting an opportunity to interact with probably the best brains around I think that is very healthy.</p> <p>P2: And the best thing the teacher gets it is the student. The quality of students is so high which almost no better and the best universities can very easily claim.</p> <p>P3: Very very knowledgeable people first of all, all are very highly capable.. now we can sue this word differently.. very intelligent people and academically committed people.</p>	Best Brains	
Well I would say that our primary resource is the intellectual curiosity of the students. And that is what I would say is what inspired me to choose this career in the first place because I was also a student in IIT	Intellectual curiosity of students	Intrinsic motivation through intellectual stimulation
Very very knowledgeable people first of all all are very highly capable.. now we can see this world differently.. very intelligent people and academically committed people. If you look at their academic background they will be toppers of their field.	Intelligent and academically committed people	
We are in Academics in intellectual class rounding I find that very challenging as in very stimulating environment means that at one place you get to interact with some of the absolutely brightest of the people that is the biggest privilege	Intellectual stimulation	

Table 4.5 Examples of constant comparison for open coding

In this example we can see that the interviews were compared to a group under the same open code, codes were then compared with other codes and labelled with higher a conceptual name. The process of constant comparison and grouping of codes was captured using a sample memo (Memo 4.1) described below.

In the second stage of coding that is the axial coding there was a huge challenge, as I could see plethora of open codes. The interviews were 6-8 pages long on an average and since the coding was done incident wise, there were around 300 to 700 open codes in one interview. The challenge was to organise this huge set of open codes to so that the pattern can emerge. Right now all I could see was an ocean of open codes with no or less similarity to each other. Drawing relationship between these codes was impossible without sorting them for axial coding. So, the first step taken was to segregate the codes into different headings. These headings were derived from the first few open codes and addition was constantly made as there was an encounter with a code with new property. For segregating the codes were grouped only on the basis of fundamental property that it has. For example, the headings were communication, cultural aspect, balancing domains of life, intrinsic motivation and so on. Then all the codes that had some linkage to any of these codes were clubbed together. This brought all the similar codes under one category and made the work of finding relationship between them easier.

During this process the codes and interview excerpts were revisited to ensure that they are being grouped under the right category. This is to note that at this stage the codes were grouped under the heading only on the basis of their fundamental property and there was no other form of relationship identified or established at this point of time.

Memo 4.1 Grouping of open codes

4.3.2 Axial Coding

Axial coding is the second level of analysis where an attempt is made to find the relationships between the open codes and merge them into higher-level concepts, which later combines to form the core category of the theory. As per (Corbin & Strauss, 2008) in this step, the data that was broken down earlier in the open coding section is put back together relating to some concept or category. The second level of coding is called ‘focused coding’ which is an iterative process that identifies the most conspicuous themes of the area under investigation and relates them to a higher level of abstraction. As mentioned earlier, in the axial coding level the common coding

paradigm proposed by Strauss and Corbin (1990) was used to categorise the data to form higher-level concepts. However, it was later realised that all the chunks of data could not be represented using the common coding paradigm as it will cause forcing the data leading a theory that might not be the true representation of the data. Thus, the Glaser ‘type family’ was used for further categorisation. The conceptual thought process leading to the shift from paradigm to the type family was captured using a memo (Memo 4.2) described below.

A major dilemma faced by the researcher in GTM is the selection of the approach to club the codes. There is a split in the Glasserian and the Straussian approach over the emphasis on clubbing of open level codes. Glaser gave a model of 18 families of codes to club them whereas, Strauss and Corbin gave it a more structured framework i.e. the common coding paradigm model/ the conditional consequential matrix. Glaser argues that the Straussian approach is more objective in nature and would force the data to fit in the model, which might hide the true story depicted that the theory would have depicted. This division in school of thoughts from the proponents of GTM has left the naive researchers in dilemma and confusion.

Initially we adopted the Straussian approach as the nature of the problem appeared to be more of causes and consequences (practices leading to the well-being of faculty members), but soon after the open coding I realised that fitting all the open codes in a causal consequential model wasn't an easy task. Though it was apt to explain some of the phenomenon emerging from the open codes. However, the 18 family of codes as suggested by Strauss and Corbin were explaining the other phenomenon in a better way.

Now the issue arises over the consistency of the approach to be followed while clubbing the open codes to form a higher level category. Being consistent to either of the approaches wasn't doing justice to the nature of the data. It became important to adopt a mix of both the approaches to club the open level codes. Adopting a mixed approach helped us in maintaining the richness of data and explaining few concepts in a better way. However, in the highest level of coding consistency was maintained and we selected the type family of Glaserian approach to describe the holistic scenario. We resorted to a mixed approach as the proponents of GTM claim that the models proposed for clubbing the data is only a guideline and can be modified to suit the need of the researcher.

In my opinion, the researcher should be flexible in adopting any of the approaches to club data in the second level of coding. Maintaining the richness and essence of data should be given priority over the issue of division in school of thoughts.

Memo 4.2 Split in the GTM approach

4.3.2.1 Common Coding Paradigm

Strauss (1987) proposed the common coding paradigm as the second element of axial coding that focuses on hypothesising the codes into condition, contexts, interactions, strategies and consequences. This is also called as the process of relating the categories theoretically. The coding paradigm can be further presented as the condition “that include the causal condition, the intervening strategies and the contextual conditions, the action/interaction strategies and the consequences that can be immediate, cumulative, foreseen, reversible or unseen” (Urquhart, 2012, p. 25). This paradigm helps the novice researchers to “think systematically about data and establish complex relationships between them” (Corbin & Strauss, 1990 p. 99). The categories and concepts are examined and investigated to know whether they relate to any one of the following (Fig. 4-1):

- The phenomena: The phenomena is the central idea, event or happening around which the action and interaction strategies are directed.
- Causal conditions: These are the events, incidents or happenings that influence the central phenomenon and led to its occurrence.
- Context: These are the attributes of the phenomenon or simply put the location of the events.
- Intervening conditions: These conditions shape, facilitate or constrain the strategies that take place within a specific context.
- Action/interaction strategies: These are the actors used to handle the central phenomenon. These are the purposeful goal-oriented strategies to manage or respond to a phenomenon under a set of perceived conditions.
- Consequences: These are the outcomes of the action/interaction strategies.

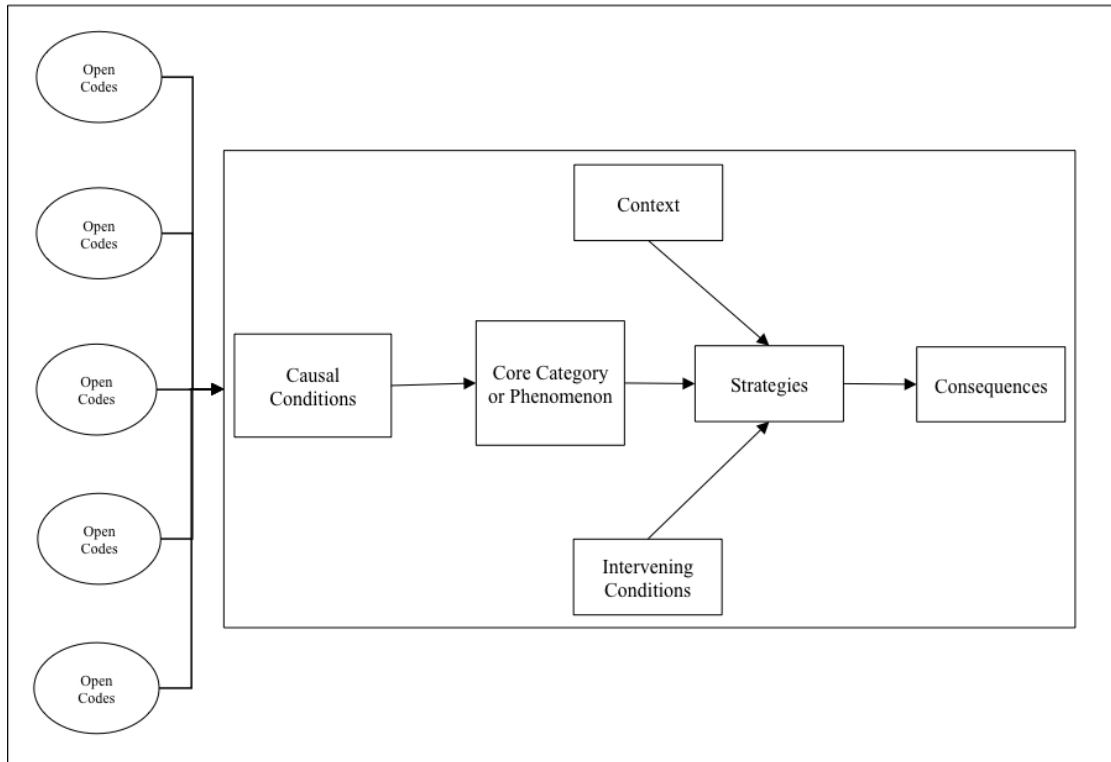


Fig. 4-1 Open coding to axial coding paradigm

4.3.2.2 Conditional/consequential Matrix

Corbin & Strauss (2008 p. 90) introduced this matrix as an addition to the paradigm. This model encompasses the macro conditions that impact the central phenomenon. This was represented as a series of concentric and interconnected circles with conditional arrows that lead toward the centre and consequential arrows that move away from the centre. The centre of the circle contains the actions about a phenomenon. A macro area with the outermost being ‘international’ and the innermost being ‘group, collective individuals’, represent each circle around the action/interaction. In between, there are areas like national, community, organisational and institutional and sub-organisational and sub-institutional. The researchers have modified the classification scheme of this matrix to suit their purpose or based on critique developed alternative approaches.

Common coding paradigm and the conditional consequential matrix were extensively used in this study for axial coding. Each transcript was revisited, and the codes were compared to the existing categories that were identified in the open coding process. Memos assisted in further development of categories along with the comparison and categorisation. The other driving factor of this process was the research question of the study. Theoretical sampling was done to achieve the pre-stated research objectives until the theoretical saturation was achieved.

4.3.2.3 Stages of Axial Coding

The open codes were grouped into two stages. The first step was grouping the codes on the basis of common properties and dimensions. And the second stage was to establish the relationship between those codes within the group to give a meaningful theoretical concept. These theoretical concepts were later merged in the selective coding to develop the core category. The stages of axial coded are described below in Table 4.6.

- Grouping of codes: After open coding few interviews, the constant comparison within the codes was initiated, and the codes were grouped depending upon their properties and dimensions. On the basis of this categorisation theoretical sampling was derived. The questions like what to ask, whom to ask and when to ask were framed. This categorisation went on until the theoretical saturation was achieved. Memos were also used to capture the thought process behind these categorisations. Table 4.6 shows an example of an initial grouping of codes.

The table provides an example that shows how the open codes were grouped in the first level of coding. The table is only for reference purpose and does not depict all the codes.

Axial Code (2 nd stage)	Axial codes (1 st stage)	Open Codes	Examples from interview
Performance evaluation and appraisal	Appraisal positives	Fair and smooth, flexible appraisal weightage, well-in time promotion, clarity for promotion, 360 degree feedback, continuous process	“So if somebody is publishing in nature or somebody is publishing in journal of high impact factor so apparently he will get paid”; “if I have to fill my appraisal form I have to give weight age. How much weight age I am giving to teaching and how much to research, to the extension activity”; “they are growing up in time and the promotion is well in time. That motivates us. If they are not able to get the promotion in time then that discourages them”
	Appraisal negatives	Research for promotion, research skewed evaluation, teaching overlooked, teaching not awarded, unclear promotion criteria	“If I am doing research only for the promotion that is associated with it and if that gets rewarded it's very unsettling we don't feel good about”; “so we are still in unhappy on that account I personally lot of faculty members who have a passion for teaching definitely that is skewed evaluation, assessment is bit skewed”; “I can't say feedback but some information about the teaching in the parameters which are considered at the time of promotion that is not explicit right now”
	Evaluation Criteria	Clear evaluation criteria, ignored teaching effort,	“Some people can spend more time on grooming themselves. Some people can do high impact research, if

		flexible appraisal criteria, less weightage to admin duties, straight jacketing	we start Straight jacketing everybody its not done”; “So the weightage is definitely low to the administrative responsibility”; “the faculty members are also aware of that like how the students evaluate the teachers and that is the main reason for being motivated”
	Suggestion	Indexing quantum of work, decentralise evaluation, defined mechanism for promotion, more weightage to teaching	“Somebody wants to spend more time in teaching let that person be evaluated on teaching”; “I personally feel this that there should be indexing of quantum of work. There should be a threshold number beyond which people should not get”; “So the department will find out the criteria and it will be submitted to the senate and they will just discuss that weather they can improve this”;

Table 4.6 Stages of axial coding

Using NVivo, we got the information about how heavily an open code or set of codes were loaded. In the case of performance evaluation and appraisal, there were 38 open codes, and after grouping, it was found that 96 times participants talked about performance appraisal. The screenshot of NVivo on performance appraisal code explains the software steps (Fig. 4-2) for clubbing codes. Similarly, all the other open codes were first grouped into broad headings depending upon the content of the codes and their relevance to the purpose of research. This stage of grouping the codes gave us clarity about the broad areas that are emerging from the interviews. Also, these categories formed a basis of theoretical sampling. The open codes as well as these axial codes were revisited time and again.

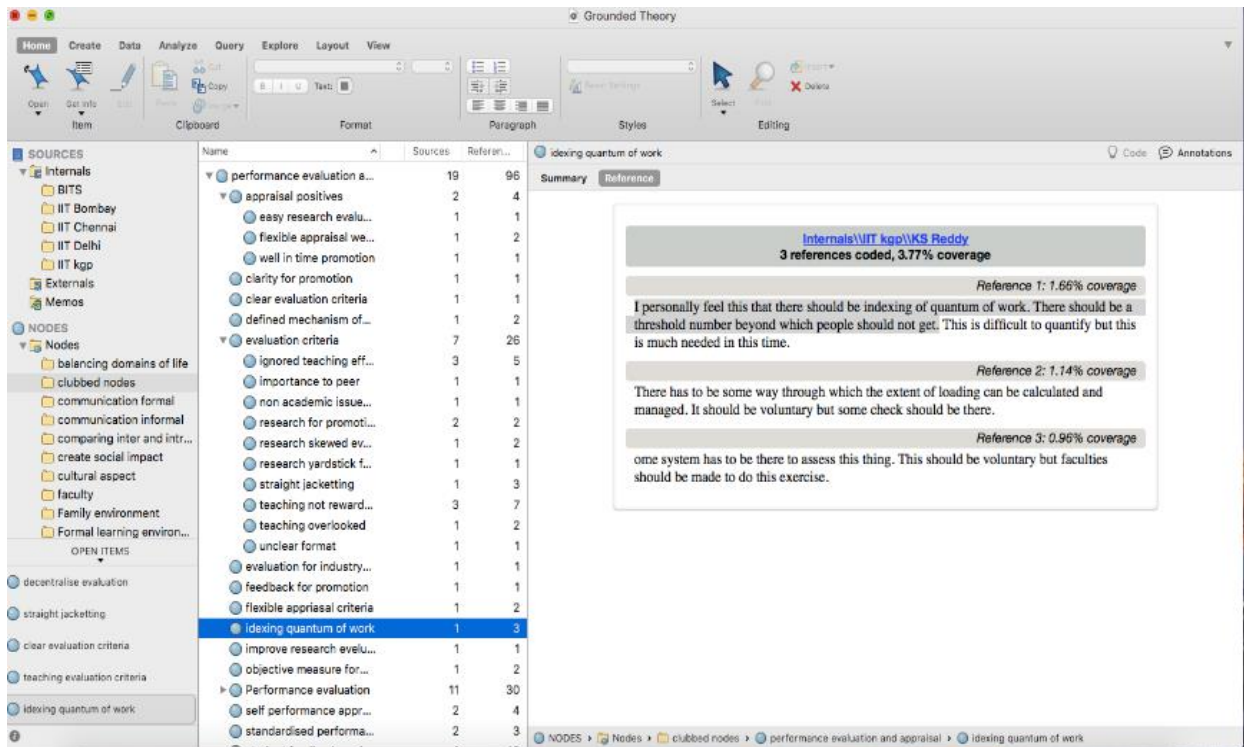


Fig. 4-2 NVivo snapshot on performance appraisal code

With every addition in the transcript, the axial codes were changed to give more meaning and shape them to address the research aim. In this screenshot from NVivo, we can see that there are several categories formed like the administration, compensation, sources of feedback, communication formal, cultural aspect etc. Within each such categorisation, there were open codes that were used to name chunks of data in the transcript, for illustration refer to Fig. 4-3.

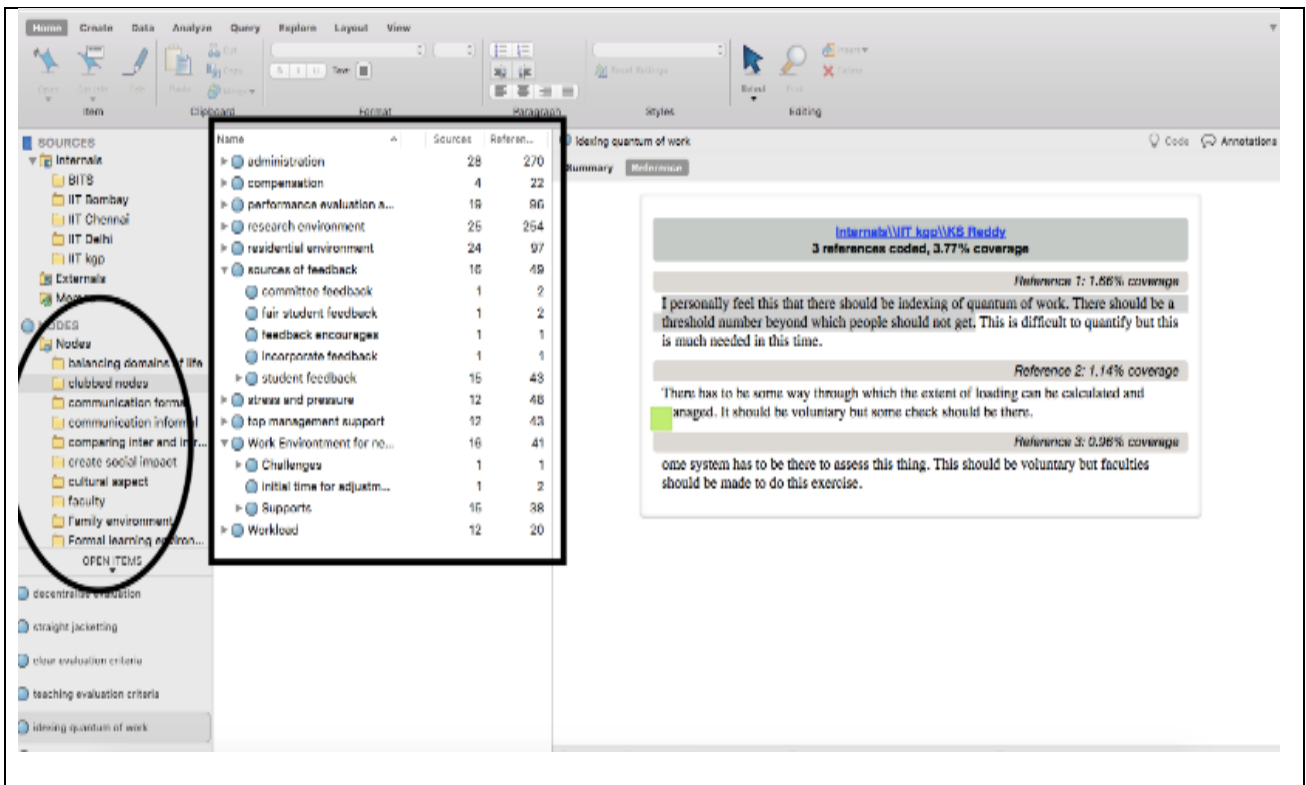


Fig. 4-3 NVivo snapshot for open code categorisation

- Establishing relationships: In this second stage of relating concepts and categories to each other, the clubbed open codes in the above stage served as the basis. A deliberate effort was made to draw relationships between the categories and within the codes to represent them using the common coding paradigm model or the conditional consequential matrix. As the common coding paradigm is just a guide for the researcher, several modifications were made to provide the best description of the data. The initial codes were categorised on the basis of the following aspects:
 - Positive practices: The data prompted a list of positive practices or sometimes referred to as strategies while coding. Under each head, the practices that the participants perceived as good or motivating for them were classified as the positive practices.
 - Negative practices: As mentioned earlier the aim was to identify the positive practices, an initial set of questions were framed to explore

only these practices. For example, the question asked was “How does the institute facilitate the teaching experience?” Through constant comparison, it was later realised that the questions are directive in nature and might force the participants only to answer the positive side of the institutional practices. To overcome this problem, the questions were made open-ended. For example, the question then asked was “Can you please describe your experience when it comes to teaching?” This prompted the participants to respond more broadly and that generated practices that not only enhance the teaching experience but also diminish it. Thus, the codes were further grouped under the head negative practices around the phenomenon.

- Suggestions: The open-ended questions along with the negative practices encouraged the participants to provide the possible suggestions that can help in overcoming the negative experiences. Later a deliberate effort was made to figure out the suggestions that the faculty members see as a possible solution to the problems faced.
- Positive and negative outcomes: Along with the practices the outcomes of those practices were captured. These outcomes could be attributed both in terms of personalised feelings as well as at the larger institutional level.
- Contextual factors: Though the contextual factors are referred frequently in the research, there is a lack of precise definition of this term. Kronsbein, Meiser, & Leyer, (2014) defined contextual factors as “context is any implicit and explicit information about circumstances or situations which affect an entity. A certain characteristic of such a

circumstance or situation is termed as a contextual factor”. These represented the conditions for the existence of the central theme or the phenomena.

Therefore, the codes were categorised around the themes on the basis of the common coding paradigm mode, the conditional consequential matrix and the aspects mentioned above. This analytical thought process was also captured in Memo 4.3.

4.3.2.4 Central Themes of this Research

This section describes the central themes that were identified and the codes that were used to describe those themes. First, we describe those themes that fall under the macro-environment and are beyond the control of an institution. These themes impact the practices of the institution as a whole. These have been termed as the macro contextual factors and include the phenomena like competition, government regulation, cultural aspect and location. These four contextual factors are now discussed.

On the basis of initial grouping of codes under specific heads it was realised that there were few things common under all the heads. This helped us in establishing the relationship between the categories and arranging them to address the research question. The common concepts under all the heads were the positive practices, the negative practices, the outcomes and the suggestions. These heads formed the basis of classification and the open codes were put under these heads to explain a central theme or phenomena. However, there were few central phenomenon that were better described using the common coding paradigm and the conditional consequential matrix. A flexible approach was adopted to categorise the codes and establish a relationship between them.

Memo 4.3 Basis of grouping

4.3.2.4.1 Competition

Facing and fighting competition is an integral part of any business organisation or institution. An educational institution faces competition in terms of the selectivity of students and research performance (Marginson, 2006). The competition starts right

from the group level or termed as the sub-institutional level, where the faculty members compete with each other in terms of sharing resources and extend up to the international level where the institutes compete to bag an international ranking position. As described in the figure below the competition is the central theme, and conditional/consequential matrix is modified to represent the codes relating to this theme. There are codes related to the conditions that impact the central theme. The central theme is then influenced by the practices of the institute, which is termed as the moderating factors. The moderating factors are further divided into the practices that strengthen competition and the practices that weaken completion. The different environment represented in the concentric circles raging from the sub-institutional level to the international level interacts and influence each other. The interaction of the conditions and the moderating factors within different level produce certain consequences. Examples from the interview that were coded at these codes are given below Table 4.7.

Codes	Examples
Salary comparison	So they want a certain lifestyle So if you are not able to compete with what the private industry can offer for you You know over the years there's only going to be a decline So unless we wake up to the fact that there is a market for the faculty And then we devise schemes to address that, How do we incentivise someone how do we attract people.
Creates resource scarcity	Competition is good, competition is healthy. Competition, sometime competition means grabbing of resources, scares resources and that creates issues.
Aspiring international foothold	P1: And for both we are criticised in IITs over the years. One is that we do not have a high global ranking. Nationally we might be on the top but our global rankings are very poor. Only in QS ranking we entered

	<p>into 100 and times higher education we are above 400</p> <p>P2: Well there is no other way currently you see Indian University don't rank in the top 200 In the world out of 500 in the world you keep hearing these things from the past for 5 years suddenly The media has picked this up earlier No 1 used to worry about it</p>
Create corporate connections	The systems are creating best to its advantage. So, these places are more in corporate hubs. So, they create more corporate connections. And are more closer to the, you know corporate systems.

Table 4.7 Coding of competitive features

The above table shows examples of interview transcripts that are coded and clubbed under the central theme competition. The few of the codes in this model (Fig. 4-4) are higher levels codes, which were derived clubbing the initial codes, and few open codes were directly taken for representation. For example, the code “aspiring international foothold” is a higher level code and the open codes like “adopting the foreign system, global ranking aspiration, international interaction” were clubbed to form the higher level code. Whereas, the code “create corporate connection” is a lower level code and directly taken to represent the phenomenon.

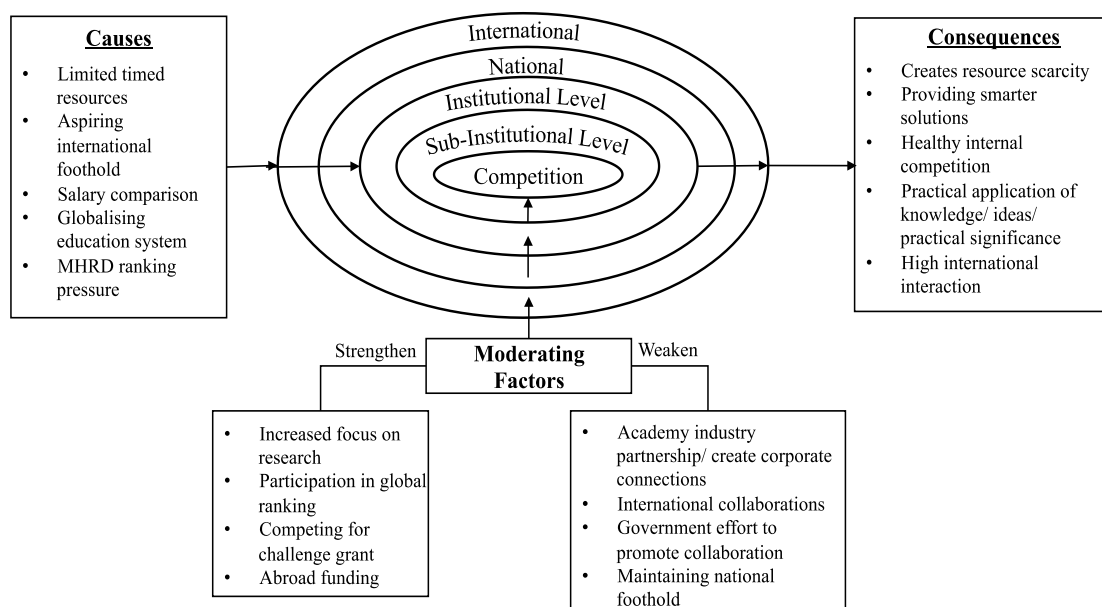


Fig. 4-4 Axial code for the competition

4.3.2.4.2 Location

The location of the institute is another contextual factor that influences the internal functioning of the institute. The location of the institute in our study is an important factor as the institutes chosen for this study belong to different tiers of cities. Like IIT Delhi, IIT Chennai and IIT Bombay are located in the metro cities, whereas BITS Pilani and IIT Kharagpur are located in underdeveloped areas. These factors influence the other practices of the institute and play an important role in shaping the experience of faculty members about the institute. For example, the faculty members in Delhi, Bombay and Chennai are appreciative of the location and have a positive experience about the facilities they have. Whereas, the faculty members despite have access to it do not have a positive experience and have shared several problems that they encounter being in a remote location. One of the major problems discussed by the faculty members is the lack of employment opportunity for the qualified spouse, which has been in-vivo coded as the “two-body problem”. This phenomenon is separately discussed in the coming sections. As can be seen in the figure below the location is divided into two overlapping areas. The codes mostly represent the conditions and are grouped on the basis of the Glaser “type family”. The overlapping area represents an important issue that irrespective of the type of location the IIT system has a closed environment that is disconnected from the outside world. Participants have used several metaphors like “frog in the well, been in a cocoon, life outside little well” to describe this disconnect of the system beyond the campus boundaries. Examples from the transcript that represent this phenomenon are given in Table 4.8 (also see Fig. 4-5 for axial codes on location).

Code	Examples from transcripts
Been in cocoon	So consequently we can work longer hours because the transportation time is

	insignificant. And been in the cocoon and confinement of the campus is it a catalyst for socialization between the faculty members.
Frog in the well	P1: The interaction between the faculty is not enough, there is no social interaction outside of of IIT system. P2: So, you know, we all in village and we are continued to be that village growing, within ourselves, but outside the village there is no growth. So, we are depending on each other for our professional growth, spiritual growth, our intellectual growth, for everything we are depending each other.
City in heart of city	It feel completely different when you enter the main get it does not look like has everywhere in the heart of the Dehli
Iceland- disconnected from outside world	These are the things which should be here, radius, that has to be there, that has be there, that is not like that. I think it is a life is very serious, we are not pert out by what is happening just outside, may be just from outside of our wall. It is an Iceland. It's like an Iceland, and as long as inside, you are not going to be bother about whatever is happening outside.

Table 4.8 Examples of location for axial coding

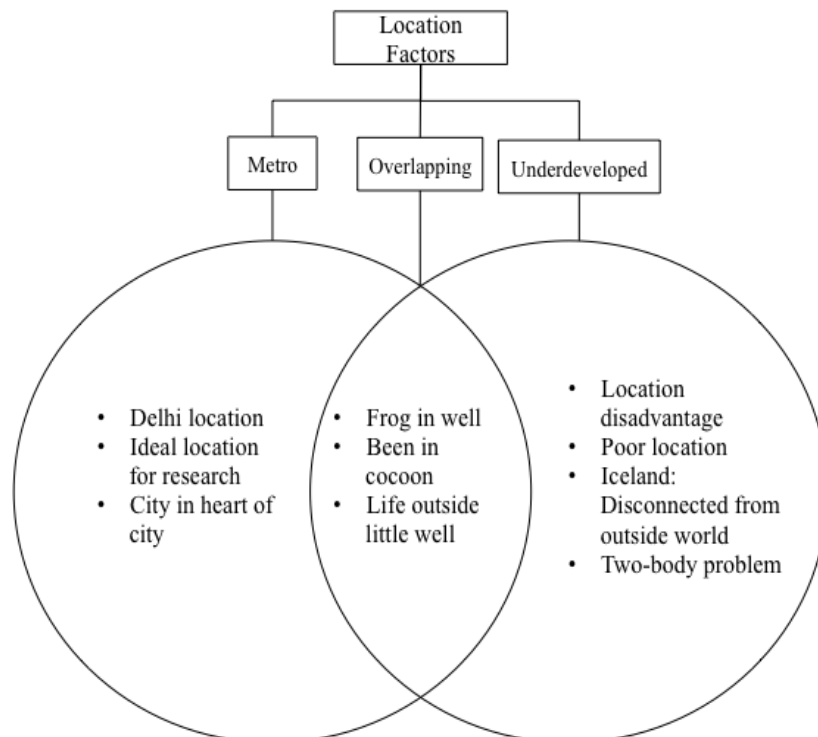


Fig. 4-5 Axial codes for location

4.3.2.4.3 Cultural Aspect

The educational institutions exist in a specific culture or the socio-cultural environment. In an IIT, the faculty members, staffs and students come from different cultural backgrounds and influence the functioning of the system. According to (Cotgrove, 1978), culture is the shared norms and values of a social system which are the most important aspects of society. Fig. 4-6 describes the cultural aspects that shape the experience of the faculty members of an institution. The figure shows both the positive and the negative practices that were experienced by the faculty members because of cultural diversity. Participants also mention two important cultural aspects, one is that they want to adopt the western culture and the second is that they also wish to retain the eastern culture. As per the participants, the eastern culture is linked to the satisfaction and sense of happiness one gets from seeing the people in their close surrounding (like family and friends happy). The other codes describe the line of division drawn within campus on the basis of different cultures. Another negative impact is that the institutions employ administrative staff from the local areas that create a cultural bias in the functioning of the system. Examples of the codes from the transcript are given in Table 4.9.

Codes	Examples from transcript
Collective culture exists	The people whom we care about or who care about to us. If they are not happy, we will never be happy. Particularly in eastern partition society where collective culture exists.
Cultural diversity in staff needed	So, the issue is, if much of the administrative staff almost 80%, I will say, are from West Bengal. So, they have similar kind of mind set. But at the faculty level, at the student level, we are from all over India. Ok, so, everybody has different mind-set. I am a Bengali. But not to Bengal from West Bengal. So,

	I have very different way of my mental said. So, when you have homogene idea of mental said, it creates lot of problems in having mental fixation over certain things and certain issues.
Cultural division inside campus	I think what is missing is the bond that keeps everybody together. So, we, and I do not know that's all of the country now, we have the leges group, we have the cultural groups, we have the local groups, state wise groups, and department wise groups. Lots of there will groups, in which there is no single event that gets everybody's heart pumping with joy at the same time.
Adapting western culture	The suggestion is we need to consider or see the process which we can streamline further so right now we deal with more paper work so one of the philosophy in the western countries is that paperless,

Table 4.9 Examples of cultural aspects for axial coding



Fig. 4-6 Axial codes for cultural aspect

4.3.2.4.4 Government Regulations

All the IITs are governed by the ‘Institutes of Technology Act, 1961’. This act has declared these institutions as ‘Institutions of national importance’. The powers, duties,

framework for governance etc. are all managed by this Act. Thus the government regulations play an important role in the functioning of the IIT system. This is a macro contextual factor, as the institution cannot control it. The government regulation theme is categorised as the constraints and facilitators. The facilitators lead such practices in the institution that enhance the working culture whereas the constraints act as a hindrance in framing certain policies and practices. Few examples from the interviews are given in Table 4.10 below (also see Fig. 4-7: axial codes for governmental factors):

Codes	Examples from the interview transcript
Government effort to promote collaboration	Now the government is also trying to find out ways to make this happen. So while for a professor to get individual research funding is it still possible to a large extent but to get really large volume funding to create state of the art infrastructure the schemes that have been introduced by the government like the Avishkar Yojana these are there to promote people to come together and submit proposals which achieves realistic objectives taking the competence of people from various background into consideration.
MHRD concerns	Certainly MHRD is also very concerned everybody is concerned about ranking so they are trying to do proactively things which would improve ranking
Bound by government requirements	I don't have any such suggestion the suggestion is the government should review all these rules and you can do some internal study so that you can improve this administrative process but since we are bound by the government rules we cannot go beyond certain limits.
Government constraints	The other important factor is I have noticed the government policies and that is the another factor. The way the Indian system works for example one particular thing that I have noticed is this like when the government is setting

	a policy everybody will jump on this. Now, you know lot of people tell me that, you know, this is government, we cannot do anything different.
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Table 4.10 Examples of government regulations for axial coding

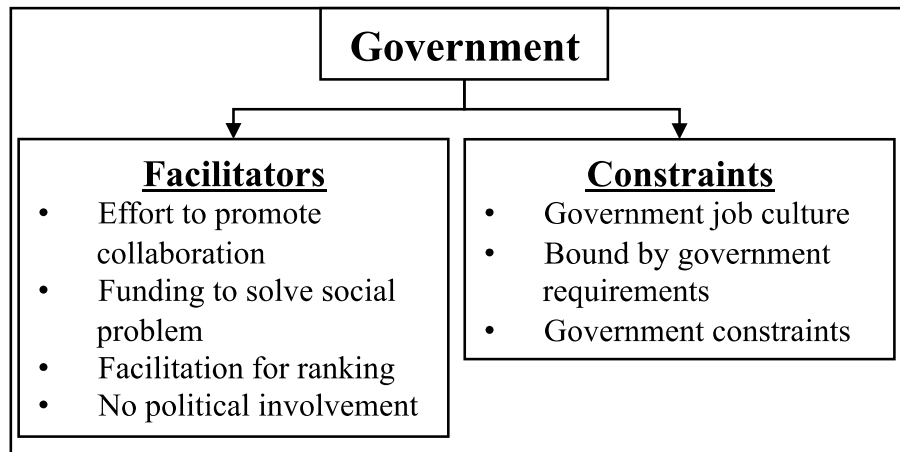


Fig. 4-7 Axial codes for governmental factors

These above four themes are termed as the macro contextual factors that impact the institutional microenvironment practices. The next stage was to categorise the practices on the microenvironment level. During this stage, the research question played an important axis to decide upon the categories and further categorise them to derive a theory that addresses the research aim.

In this context, a paper by Oades, Robinson, Green, & Spence (2011) served an important tool for theoretical comparison. The authors propose a framework for building positive universities and stressed five key aspects of university life. These aspects were named as different environments viz. the classroom or formal learning environment, the social environment, the local community environments, faculty and administrative work environment, residential environment. However, this paper focuses on creating positive education practices to enhance the well-being of the students. But it gave an impetus to categorise the internal environment of an institution.

Along with these, the responses from the participants also clarified the division of microenvironment of an educational institution. From the transcripts, we could deduce that participants mainly talked about three duties that they perform. Teaching and research were termed as the primary duties. Also, the participants also mentioned that there is an administration role that forms a significant aspect in discharging their duties.

Along with these, since the IITs that were selected for this study provide residential facility to the faculty members, it also became an environment that impacts the well-being of faculty members. In addition to the above environments, it was figured out the interaction of faculty members beyond formal working hours also impacts their sense of satisfaction within the institution. Their contribution to the local community or society as a whole gives them a greater sense of meaning and purpose in life. And at last the facilities available for the family members of the faculty plays a significant role in performing their basic duties in an institution.

Thus, from the responses in the interview it was concluded that the institutional practices could be divided into seven different environments namely, (1) classroom or formal learning environment, (2) research environment, (3) administrative environment, (4) social environment, (5) residential environment, (6) Local community environment, and (7) family environment. The codes were then categorised under these seven environments on the basis of the positive practices, negative practices, positive outcomes, negative outcomes, suggestions and micro contextual factors. Mostly the Glaserian “type family” is used for this categorisation. However, there were few central themes under these environments that needed special attention; those themes have been separately grouped before merging them in the broad environments. These themes are described in the respective environments. The

following section describes the development of a conceptual category under different environments.

4.3.2.4.5 Teaching or classroom environment

Recent research studies in learning and teaching have provided a variety of concepts, methods, and findings that are not only of theoretical interest but are also of practical relevance (Richardson, 2005). An inherent relationship exists between teachers' approach to teaching, their conceptions of teaching, and their perceptions about the teaching environment. Compared to the teacher-focused approach, studies suggest that teachers who implement a student-focused approach to teaching achieve more desirable goals and deeper learning experience among the students (Keith Trigwell, Prosser, & Waterhouse, 1999). A teacher-focused approach aims at the transmission of information from the teacher to the student, whereas the student-focused approach aims about bringing conceptual change in the students (K Trigwell & Prosser, 1993). In every academic institution the teachers take the central position and perform an invaluable service to the society by filling the knowledge gap of the students, and therefore the successful academic institutions are characterised by the positive and work-friendly environment they provide to the teachers.

The practices and outcomes are further categorised by factors. These factors are personal, institutional, system and structure, reward and recognition. The context factors in the teaching environment are “fundamental duty, imbibed expectation, teaching institute”. An outline of the teaching environment appears in Fig. 4-8.

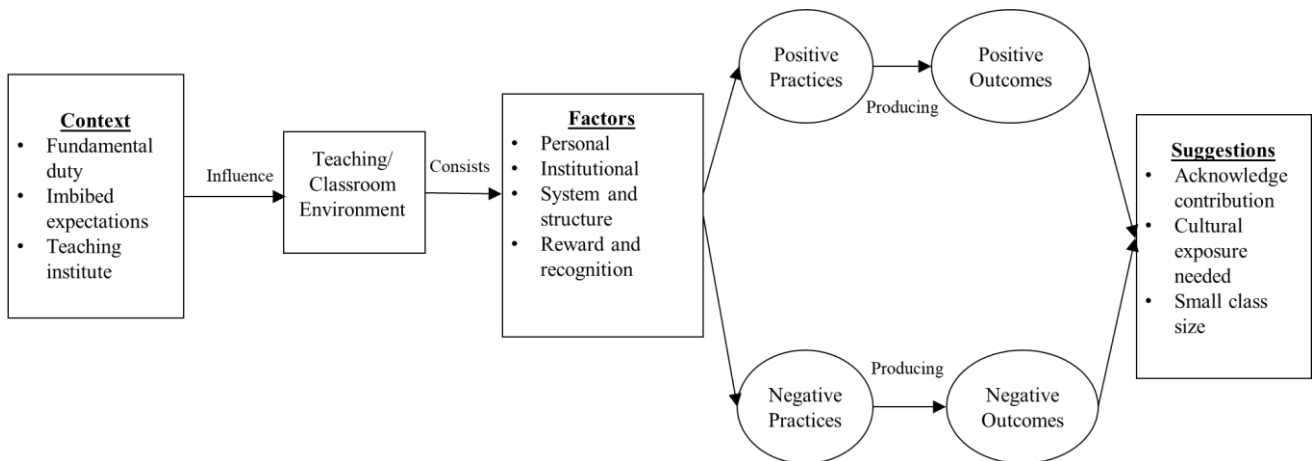


Fig. 4-8 Outline of the teaching environment

The codes that fall under these themes are described below in detail Table 4.11.

Under all the themes there are open codes as well as the aggregated codes. The practices are divided as per the factors, but the outcomes are common for all the factors. The personal factors represent the practices that the faculty employ to enhance the experience of teaching. Rest all the factors represent the practices that are taken by the institute to facilitate teaching (see Table 4.12 for examples of aggregated codes).

The codes represented in the factors were compared to the existing codes, and then the open codes were merged depending upon the properties and dimensions. These higher-level codes are used in this model to explain the relationship between the different facets of the teaching environment.

Factors	Positive Practices	Negative Practices	Positive Outcomes	Negative Outcomes
Personal	Available beyond working hours Focus on student need Experience is important Teach trending topics Stage acting Active faculty			
Institutional	Teacher training Smart campus initiative Expected to teach Facilitate teaching Innovative pedagogy Technology embedded classroom Manageable teaching load Guest lectures	 Less faculty student ratio Large class interrupts interaction Structured freedom Workload reduced interaction	Enjoy work Love teaching Flexibility motivates Student interaction pumps energy Love interacting with students Friendly department atmosphere Rewarding when old students interact Contribute to society by teaching	 Student interaction gone down Teaching a formality Less connection with students

Factors	Positive Practices	Negative Practices	Positive Outcomes	Negative Outcomes
	Teaching assistants Flexibility Autonomy Rare interference Prioritizing punctuality Selection of best students		Continuous learning process Disciplined culture Professional culture	
System and structure	No bossing culture Legacy of good relationship Tea culture Flat structure			
Reward and recognition	Teaching excellence award Student feedback a mirror Reward with good feedback	Ignored teaching effort for evaluation		

Table 4.11 Factors and practices affecting teaching or classroom environment

Axial codes	Open codes	Examples
Small class benefits	Class size matter, ease and rapport in small class, small class better connection, small class enjoyable, smaller class larger interaction	<p>P1: if the number of student increase, the number of student who are not interested that proportion also increase. So what happens they generally well not.</p> <p>P2: so workload varies a lot. When I have a large glass to teach , The core undergraduate any class with 100 students and then there is a lab we have labs, so there is a lab to conduct then personally I feel it gets very burdened.</p> <p>P3: But the moment you touch numbers like hundred twenty R 150 and so on I think you cannot even have eye contact with the student then it is very difficult to keep them motivated.</p>
Flexibility	Flexibility to float new courses, choose teaching pedagogy, decide exam structure, evaluation, designing course structure	<p>P1: which is an advantage so you can get your word across then there are other I mentioned about see courses and you can collaborate an international faculty and offer a course so besides if you wish to float a course any course as an elective or a core you have an optio</p> <p>P2: All of them are experimenting every time. First of all, everybody used to be on chalk and talk kind of thing. Now we are using various kind of audio visuals. We are using all ICT techniques.</p>

Table 4.12 Aggregated codes on different teaching environments

4.3.2.4.6 Research environment

Hazelkorn (2005) notes that in the past, the research in the academic institution was primarily confined to carrying out basic research. Manathunga (2005) observes that in recent years the concentration of research in higher education has transitioned from being undergraduate research specific to post-graduate research. In the last two decades, the Indian education system has witnessed similar patterns and has

undergone a significant transformation in terms of increasing emphasis on faculty members to undertake high-quality cutting-edge research through university-industry collaborations and by availing research grants from the government. Cheetham, (2007) argues that developing a research culture is crucial for improving the quality of education at the university level. Today, academic research takes a high priority for the overall assessment of the ranking of the institution, and therefore it has become imperative that the universities develop a good research culture where both faculty members and students undertaking research are guided, supported, and rewarded. This entails the commitment of the senior management and the top leadership.

The practices are further categorised under the factors namely personal, system and structure, reward and recognition, projects, institutional facilitation and macro. The practices in the macro environment overlap with the macro environment contextual factors discussed above. But they have been discussed under this head as they framed important policies that impact the other research practices. There are contextual factors that impact the research environment. The outline of the research environment is discussed in given below (Fig. 4-9).

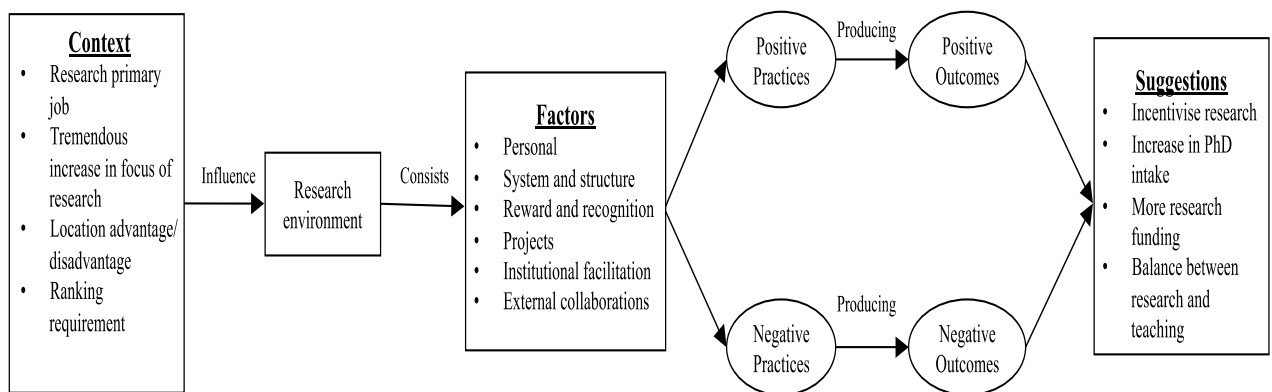


Fig. 4-9 Outline of the research environment

The positive and negative practices under the mentioned factors and the outcomes of those practices are given below in Table 4.14.

These codes were derived from clubbing the open codes from the initial stage of coding. Few examples of aggregating the codes are given below Table 4.13.

Axial codes	Open codes	Examples
Research resource support	Lab care, lab facility, research support staff, research grant support, research support facility	<p>P1: have a small lab to do some kind of observational study for the children and space is a huge issue but we went and said that we need a subspace, a small lab space, where we could have a little observation room for the children</p> <p>P2: for example I say funding, we get quite good funding actually from the Institute. Almost like faculty member is getting more than 30 lacks or something.</p>
Cross disciplinary approach	Collaborative work, different committee, inter-disciplinary, inter-department collaboration	<p>P1: Most of us, at least if I talk about the department as such, unlike some science and technology departments where there are labs and thrust areas where people work collaboratively</p> <p>P2: One where i as a psychologists and another friend of mine who is a linguist and another economist we worked together and then there was another one which a philosopher, as a linguist and as a psychologist we work together.</p>

Table 4.13 Examples of axial codes for research environment

Factors	Positive Practices	Negative Practices	Positive Outcomes	Negative Outcomes
Personal	Aim for breakthrough research	Individual level research		
	Effort to strengthen research			
System and structure	Diversify research activities			
	Research primary job			
	Active research committee	Less support for experimental work	Engagement in research	
	Balance teaching and research	Cumbersome purchase procedure	Enjoy challenging research problems	Handful students for research
Reward and recognition	Cross disciplinary approach	Process delay	Enjoy working in collaboration	Low success rate of big projects
	Continuous learning process		Understand research feasibility	Struggle to get good PhD student
	Career research award	Quantity versus quality	Expert interaction creates positive impact	Compromised quality of publication
	Incentive for publishing		Good scholars motivate	
Projects	Recognition for research			
	Research linked to promotion			
Projects	Science and heritage interface	Less projects		
	Institutes mega projects			

Institutional facilitation	Seed grant for new faculty	Less PhD intake	research	
	Research freedom	Less support for experimentation	Increased publication	
	Promote collaboration	Teaching-research trade-off	Research driven environment	
	Research resource support		Research improvise teaching	
	Conference grants		Snowball effect for research	
	Encourage for good research			
	Funding PhD students			
	High focus on research			
Huge funding				
External collaborations	Industrial collaboration			
	High impact research for ranking			
	International collaborations			

Table 4.14 Axial code for research environment

4.3.2.4.7 Administrative environment

The roles that faculty plays in an academic institution may range from research centric, teaching centric or administrative centric roles and responsibilities they discharge. Across Indian universities, similar distribution of roles and responsibilities prevail. Therefore, all three aspects of research, teaching, and administrative duties encompass the overall assessment of faculty performance and appraisals. Research studies on work environment and management effectiveness are commonly found in the context of corporate and government organisations, but relatively less in the context of higher education (Volkwein & Parmley, 2000). Researchers have also observed that few research studies exist that relate employee work environment with job satisfaction and productivity, especially in the context of higher education (Johnsrud, 2002). As individual preferences vary widely, similarly the job satisfaction that people derive from work also vary among individuals; thus, those faculty members in an institution whose major component of employment requires rendering of administrative services require a positive administrative environment that fuels their enthusiasm and motivates them.

The administrative environment is the most complex environment of an educational institute. It impacts the practices in two ways. First, because the faculty members play an administrative role, secondly, the administration acts as a support system of the institution. The administrative environment can be divided into academic and non-academic. The academic practices directly impact the teaching and research environment. Whereas, the non-academic environment cover the practices that act as a support system and perform various HR functions.

This section describes the practices that fall under the non-academic environment. The practices are described under factors such as personal, institutional, system and structure,

staff, top management support, communication and HR. These themes are derived on the basis of the emphasis faculty members have laid on them. The HR practices range from recruitment of the faculty members to the performance appraisal. These practices play a significant role in shaping the experience of faculty members in educational institutions. Almost all the participants have mentioned about the HR practices in their interview. Because of their relevance, these practices are described under a separate category and then later on merged with the non-academic environment.

Performance Appraisal/Evaluation: Performance appraisal convert a variety of activities that influence the satisfaction level of employees in an institution. It includes assessing the employees on the basis of teaching, research and other activities performed and played a major role in their promotion. Thus this theme is discussed separately in this section. As can be seen below in the figure the performance evaluation of the faculty members is done by three duties they perform, i.e. teaching, research and administration. The practices related to performance appraisal is further divided into positive and negative practices producing positive and negative outcomes respectively (Fig. 4-10). There are several suggestions also that is highlighted.

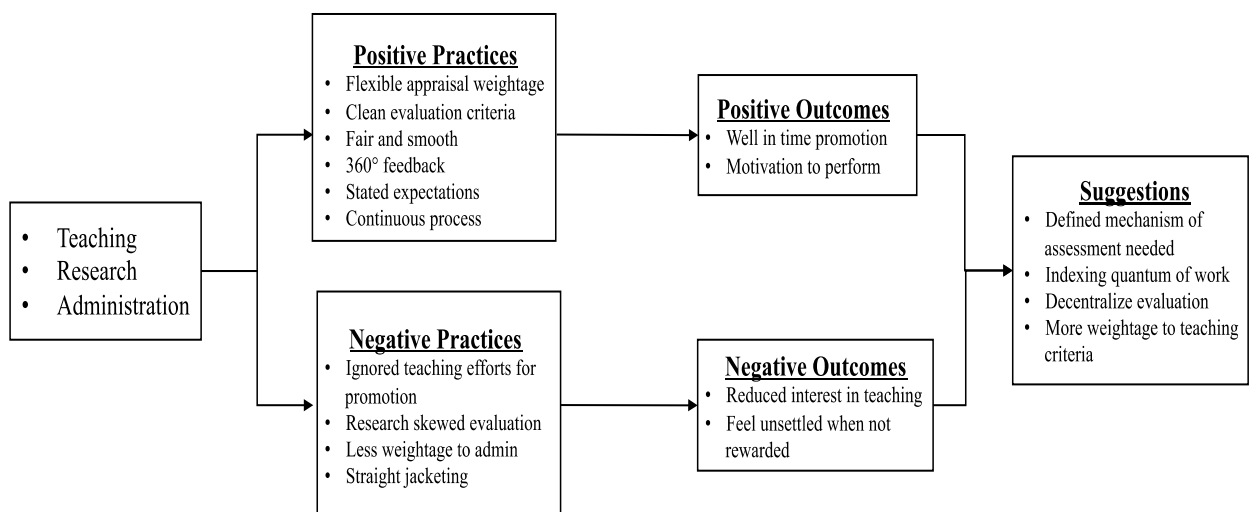


Fig. 4-10 Axial codes for performance appraisal

Recruitment: This theme describes the practices undertaken by the Institute for the recruitment of the faculty members. Due to increase intake of students, the recruitment of high-quality faculty members has become a challenging task. This is one of the most important functions that the HR department performs. As can be seen in the figure below, the codes are categorised under the ‘causes’ that highlight the reason why the recruitment process has become crucial for the institutions. The causes mainly focus on the shortage of faculty members as compared to the number of students. This leads to a misbalance of the faculty-student ratio and increases in the number of students in each class. These further have a negative impact on the teaching experience of the faculty members. This calls for recruiting more faculty members to address the issue. The strategies that the Institute adopts to address this problem are the practices that are influencing the recruitment process. The figure describing these codes is given below Fig. 4-11.

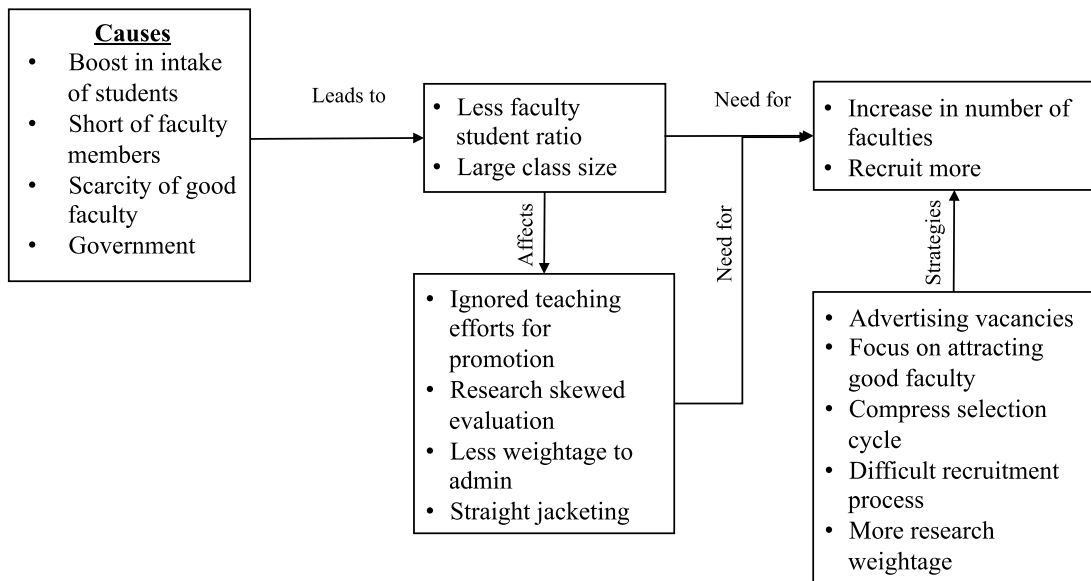


Fig. 4-11 Axial codes for recruitment

Feedback: Another important theme that was widely shared by the participants during the interview was the feedback process. This feedback process has its relevance as it acts as a measure for performance appraisal and promotion of faculty members. The institute follows a 360-degree feedback system, out of which the student feedback holds special

relevance. The feedback theme has been given importance as it generates outcomes that impact the faculty experience in the institution. The below figure describes the open codes leading to the central theme feedback (Fig. 4-12).

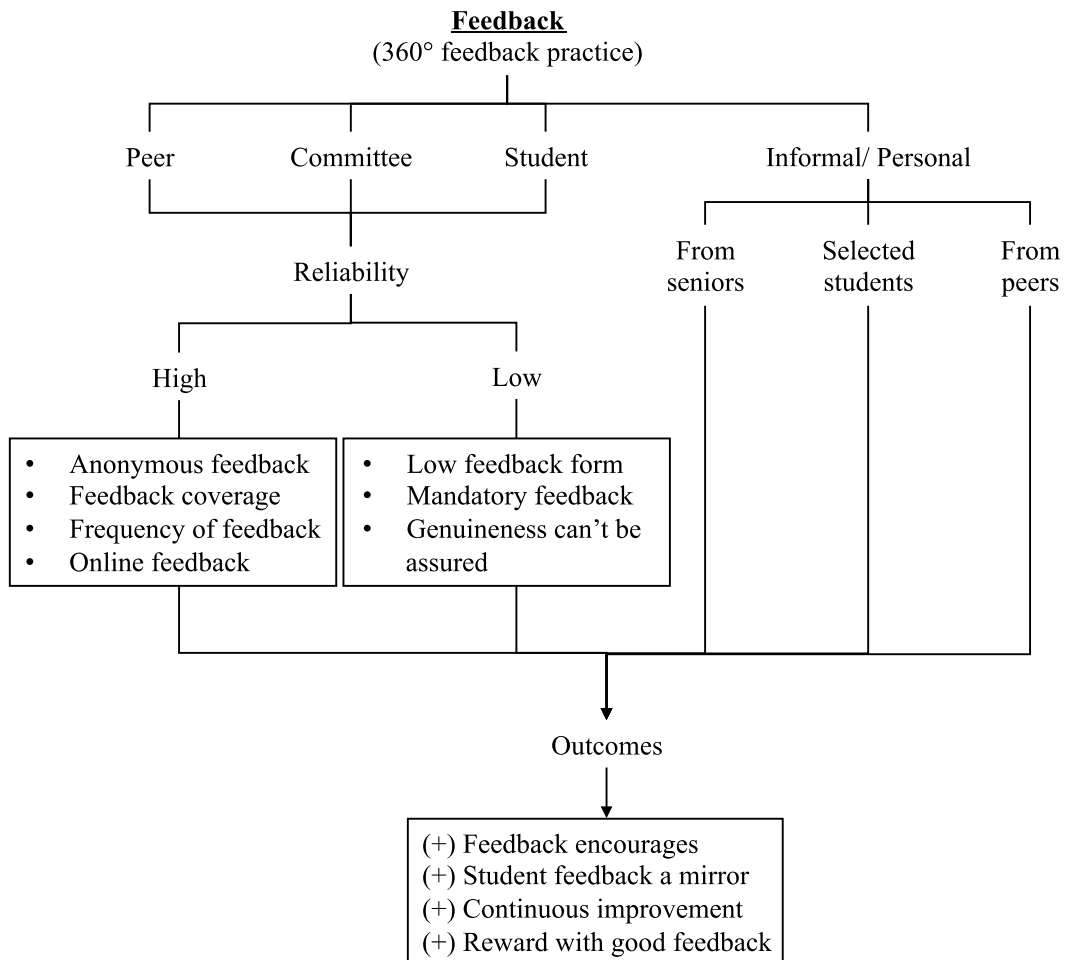


Fig. 4-12 Axial codes for feedback

Reward and recognition: Rewarding and recognising is an important function that the HR department performs. Rewarding is directly linked to the sense of satisfaction of employees. Faculty members in these institutions perform multiple tasks and are expected to deliver high-performance standards. It becomes imperative to recognise the efforts of the faculty members to keep them motivated. The reward and recognition practices have independently appeared in the research and teaching environments. But since it is an

important function of the HR department, it is separately shown here. The open codes under this theme are described in Table 4.15 below.

Axial Codes	Open Codes	Examples
Reward and recognition	Automatic reward system, reward with good feedback, acknowledge contribution, good amount of return, teaching excellence award, career research award	<p>P1: You need not have to bother, it is so perfect system, I am telling you, you did remark reward automatically come automatically. You need not to the rewards. Institute will take care of this.</p> <p>P2: I think if I have passion for something that should get recognised unfortunately there is no need to recognise that. We are always going for number that is little unfortunate.</p> <p>P3: institute also gives lot of awards every year, teaching awards, and this is based on the responses that the students have given from large classes, smaller classes, and 6 to 7, some more sometimes faculty, very young to anybody is given just to encourage this.</p>

Table 4.15 Axial codes for reward and recognition

Job aspect: Job aspects include the codes that are specifically related to the job (Table 4.16). These aspects require physical and mental involvement and can be defined, recognised and assessed. The HR department is responsible for defining the various aspects related to the job. The codes that are categorised under this theme are given below.

Axial Codes	Open Codes	Examples
Job aspects	Job engagement, job profile clarity, stated expectations, job recognition, personal growth	<p>P1: Similarly a faculty members also given approximate code of conduct he is given that this is what is expected.</p> <p>P2: But the point is that when you come here the clarity about your job profile is there. So it's not like you are being unfair. 50% research, 30% teaching, 10% is this Administration, that the weighted here.</p> <p>P3: But most of the things I could see, and if you are motivated enough... So this is kind of conducive environment in order to Excel because no one stops you as such.</p>

Table 4.16 Axial codes for job aspect

The figure representing the structure of the administrative environment is shown below in Fig. 4-13.

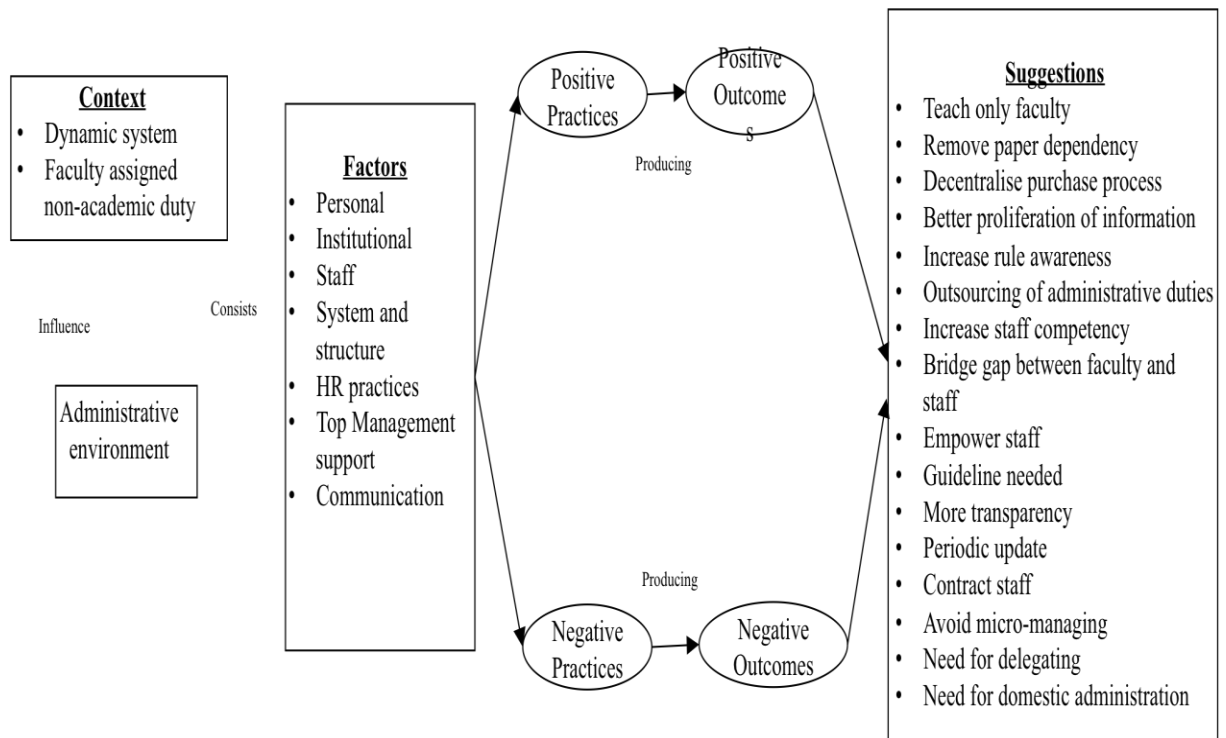


Fig. 4-13 Axial code structuring of the administrative environment

The above HR practices are merged into the administrative environment as represented below (Table 4.17).

Factors	Positive Practices	Negative Practices	Positive Outcomes	Negative Outcomes
Personal	Administrative responsibility by choice	Reluctance for administrative role	Helpful staff Time minimised through online system Fast decision making Autonomy and flexibility motivates	Additional responsibility Extra workload Non-academic responsibility and burden Pressuring administrative burden Administrative burden demotivates Time consuming meeting Disconnect with top management Implementation difficulty Staff competence issue Communication gap between faculty and staff
Institutional	Open door policy Administrative responsibility not compulsion Administrative job rotation Supportive administration	Insufficient duration for implementation Long working hours Lethargic processing speed		
Staff	Contract staff better Training staff	Overstuffed staff Recruit incompetent staff Lack of proper training Recruit local staff only Government limit for staff recruitment		
System	Egalitarian structure	Bureaucratic inefficiency		

and structure	<p>Computerisation</p> <p>Decentralisation</p> <p>Flat structure</p> <p>Restructuring to become research institution</p> <p>Open and transparent</p> <p>Integrated system to reduce hassle</p> <p>Flexibility and autonomy</p> <p>Participative decision making</p> <p>Fast decision making</p>	<p>Lots of paperwork</p> <p>Reliance on primitive infrastructure</p> <p>Process delay</p>		<p>Inefficient staff</p> <p>Overwhelmed with too many things</p>
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Factors	Positive Practices	Negative Practices	Positive Outcomes	Negative Outcomes
HR practices	Performance evaluation positives Recruitment of good facilities Rewarding teaching and research 360° feedback Job aspects Funding for personal development Workshop for enhancing skills	Performance evaluation negatives Teaching not recognised	Job engagement Personal growth Provides motivation Trust in management Group harmony Good professional relations	
Top management	Open door policy Treat people equally No monitoring Address issues Proactive top management Participative decision making Ethical leadership			
Communication	Technological advancement Interactive workshop Web portal Two-way process			

Table 4.17 Detailed axial codes for the administrative environment

4.3.2.4.8 Residential environment

One of the most significant aspirations of the faculty in an academic institution is the availability of an on-campus housing facility and proximity between their residence and workplaces. Studies have also propounded that providing residential facilities to faculty members ensures higher student retention because it forges a deeper engagement and interaction between students and the faculty (Lowther & Langley, 2005). Providing a positive residence environment to teachers not only helps in community building among faculty members but also deepens the student-teacher relationship that in turns facilitates a better learning environment for the student and reduce the instance of student and faculty attrition. As described earlier, the location of the institute is divided into two sectors, those that are located in metro cities and those that are located in underdeveloped cities. The residential environment was divided into factors depending upon the location as well as the overlapping areas. After grouping the codes under the following heads, it was realised that the location didn't play a significant role in deciding the practices of the residential environment and majorly the practices fell under the overlapping category. The codes under this environment are described below (Fig. 4-14 and Table 4.18).

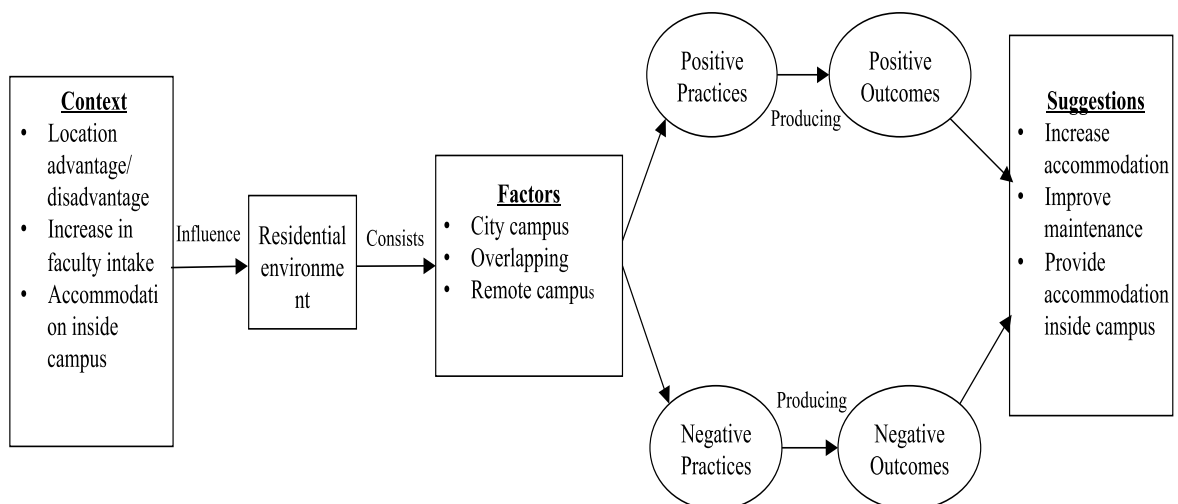


Fig. 4-14 Axial code structuring of the residential environment

Factors	Positive Practices	Negative Practices	Positive Outcomes	Negative Outcomes
City campus	Adjustable accommodation facility More like a city	Temporary accommodation in guest house More commute time Outside campus accommodation	Less commute time Benefits of staying in the campus	Shortage of accommodation/ dearth of residential space Overlapping personal space Residential shortage
Overlapping	Pleasant campus Self-sustained campus Close knit community Good residential facility Less maintenance burden Good eating outlets Good market Good living condition Green campus Safe campus environment	Unplugged outside campus Not maintain proper standard Take responsibility for accommodation improvement Lack of chance to interact	Comfortable living Campus environment grows on you Home away from home Easier life Friendly residential environment	
Remote campus	Decent accommodation facility Lots of space	Lack of recreational facility		

Table 4.18 Detailed axial codes for the residential environment

4.3.2.4.9 Social environment

In an ever-increasing competitive world, where all members of society seek maximisation of their career ambitions very often neglect the value of social relationships, which hampers their sense of belonging to the larger community. Individuals often exaggerate their emphasis on pay-rise and promotions overlook social dimensions by not engaging in pro-social behaviour. To enable the best practices for fostering better engagement among its members the institution must create a conducive social environment where very diverse groups of people interact in a variety of settings like organising sports events, celebrating religious festivities etc. McGrath & Noble (2010) suggest there are numerous opportunities for the formation of enriching, supportive relationships that enhance educational culture. If the university life adopts an approach toward fostering social life and a common bonding with the members to establish a strong relationship between social support and well-being than, the universities will be an ideal platform for the systematic promotion of positive relationships and generation of the social capital and sharing of common values (Seligman, 2002). The social environment here refers to the informal environment where the faculty members interact with other faculty members as well as a student beyond the formal structure of the institution. The practices in this environment are divided into three factors viz. personal, institutional and social. The personal factors represent the effort made by the faculty members for such interactions. The institutional environment describes the factors where faculty members interact beyond working hours and the social factors refer to the informal gatherings. There were no codes belonging to the contextual factors or suggestions discovered under this environment. The codes categorised under the social environment are described below.

Factors	Positive Practices	Negative Practices	Positive Outcomes	Negative Outcomes
Personal	Conscious decision for interaction	Busy lifestyle	Cordial relationship Good communication Good informal relationship	Overlapping personal space Social reluctance Redundancy in interacting with people
	Voluntary social participation	Common bond missing		
Institutional	Passionate about interaction	Less faculty participation in informal activities	Good social life	
	Abundant interaction opportunity	Workload reduced interaction	Break barrier	
	Common interest groups		No animosity	
	Different fests		Joint informal environment	
	Engaging student cultural fests		Helpful and supportive people	
Social	Movie screening			
	Institute funds informal interaction			
	Informal gatherings	Digitization affected socialisation		
	Lunch club and book clubs			
	Informal societies and clubs			

Table 4.19 Detailed axial codes of the social environment

4.3.2.4.10 Family environment

In the pursuit of a happy life, an individual continuously strives to create a balance between the professional and personal life. In the context of an academic institution, the organisational environment must favour and facilitate individuals to effectively undertake familial responsibilities such as schooling of children, access to medical facilities, grocery shop, and employability of the spouse. Researcher studies on positive practices have largely overlooked the aspect relating to family well-being with job satisfaction.

The family environment encompasses those practices that are taken by the institute to facilitate the experience of the family members of the faculty members. The satisfaction of the family plays a significant role in the job performance of the faculty members. All the institution selected for the study is residential; therefore almost all the faculty members stay within the campus along with the family members. Thus, proactive steps are taken by the institutes to address the needs of the family members also. Fig. 4-15 given below describes the codes categorised under the family environment.

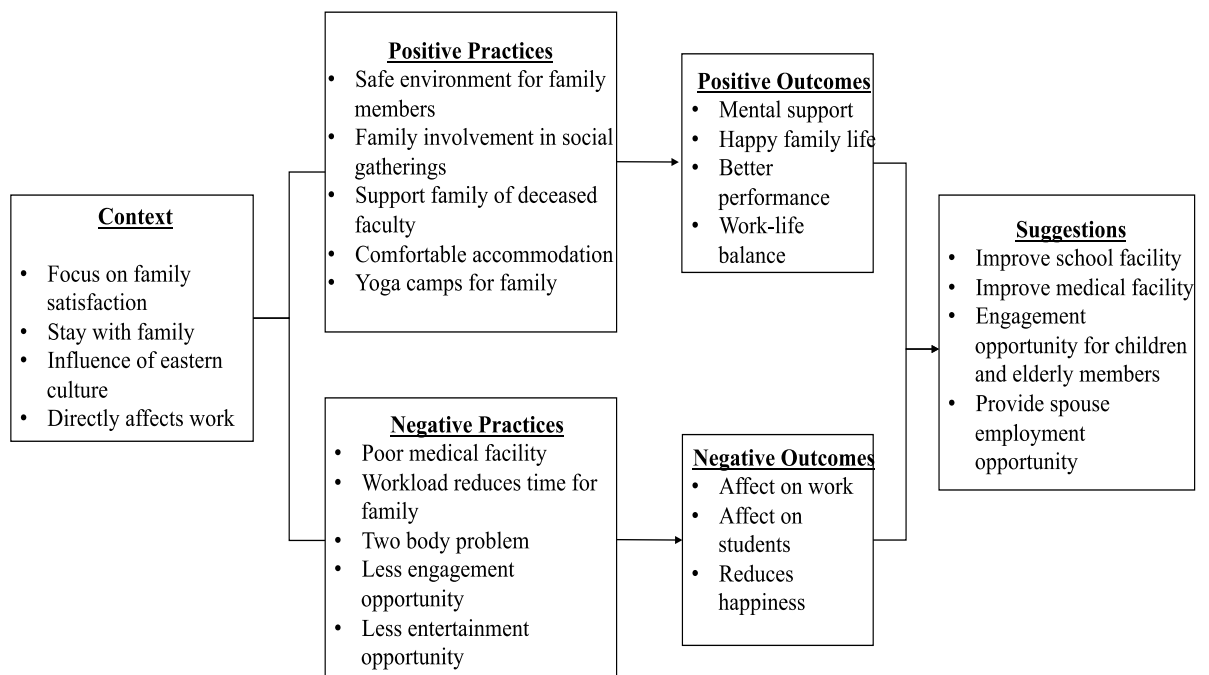


Fig. 4-15 Axial code structuring of the family environment

An important aspect that emerged from the family environment was the two-body problem. The two-body problem was in-vivo coded from the responses of the participants. This problem highlights the lack of employment opportunities for the qualified spouse of the family members. This problem is attributed because of the location disadvantage and was developed as a new insight from the interviews of IIT Kharagpur. This new insight was rigorously followed, and the following figure (Fig. 4-16) describes the codes belonging to this category.

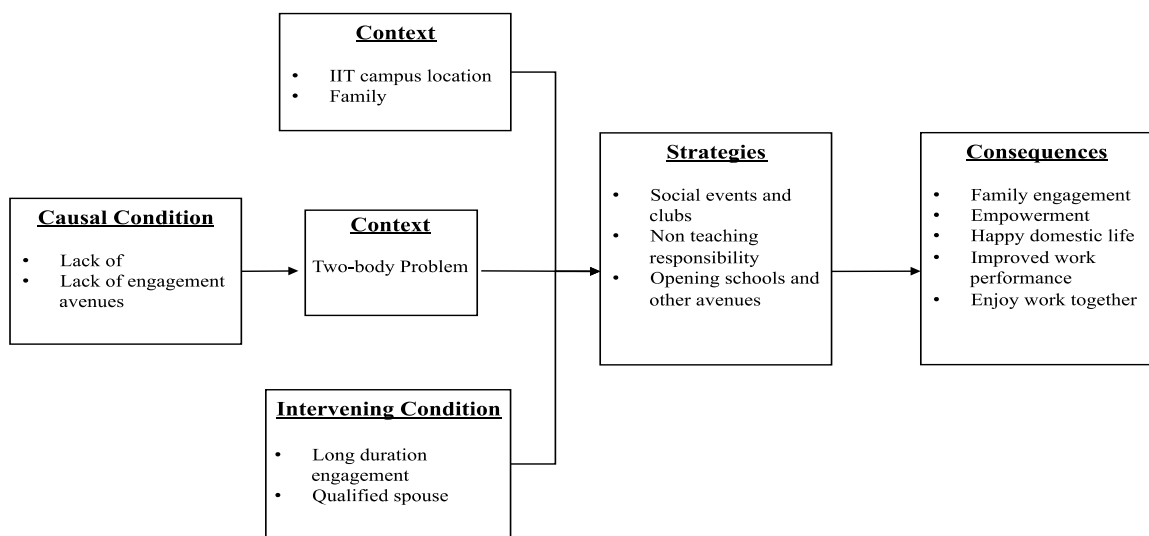


Fig. 4-16 Axial codes for two-body problem

4.3.2.4.11 Local community environment

An academic institution resides within a local community and receives a material advantage in terms of access to workforce. The purpose of the institution is not only to produce knowledge but also to disseminate it beyond the classroom. Acting as a social institution, the university must play a crucial in empowering the members of its local community. Today, most of the modern corporations are required by the law to contribute a fraction of their profits toward their social responsibilities, commonly known as corporate social responsibility (CSR). Educational institutions in India, both government and private, are largely not-for-profit entities and hence do not fall in this purview. The premier academic institutions in India must associate themselves with the local government and

engage in their welfare programs such as donating clothes and blankets, educating nearby villagers about rain-water harvesting, sex-education, birth control, empowerment of women through their association with the self-help groups, where student volunteers participate under the guidance of senior faculty members. For creating an environment toward local community service, the institute must support local NGOs and work along with them engaging in initiatives such as clean campus and green campus, avoiding the use of plastics, and sensitisation toward animals and birds.

This environment is also important as the government emphasises on the contribution of the IITs for the development of the local community as well as society as a whole. The codes under this environment are categorised under the heads like causes, strategies that can also be addressed as the practices and the outcomes of those strategies. Fig. 4-17 illustrates the codes that are categorised under this category.

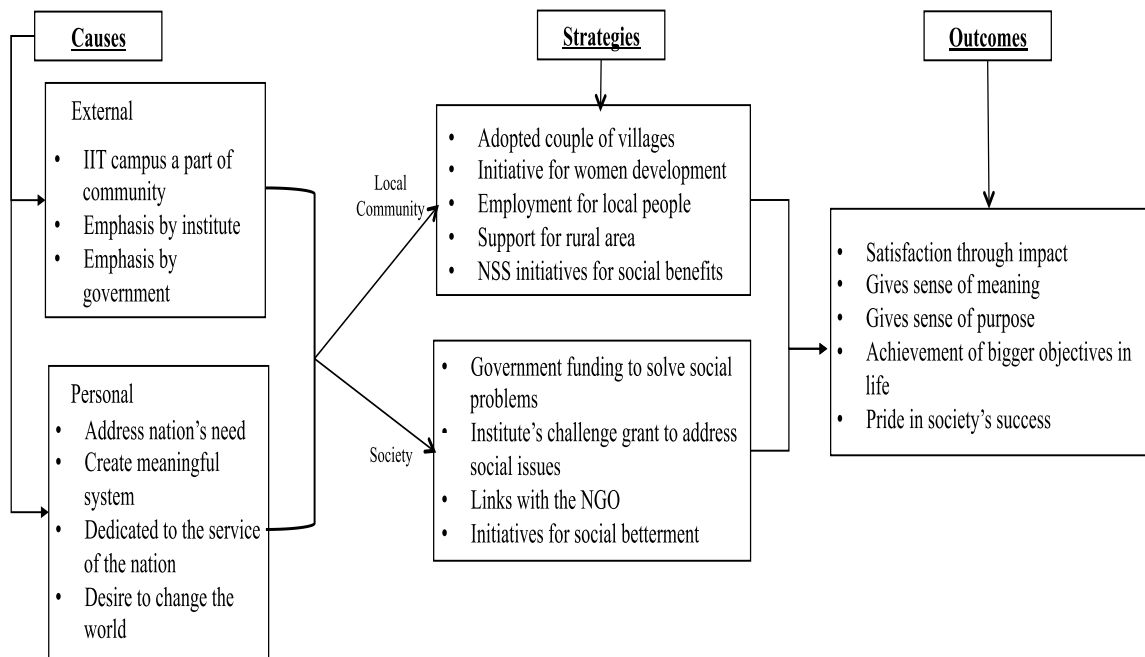


Fig. 4-17 Axial codes structuring for the local community environment

4.3.3 Theoretical Codes

This stage of coding is also known as the theoretical coding where all the core categories are linked to each other to develop an essential storyline and give it a complete picture.

Everything else that is derived in the earlier stage of coding is given meaning and structure in this stage. This is the stage where the theory grounded in data is emerged and presented. As Corbin (pg 103) correctly pointed out, the categories developed in the earlier stages of coding are the individual spokes of an umbrella. But until all the spokes are linked and covered with some common material, it does not form an umbrella neither it serves the purpose of keeping the rain off. Thus, in this stage of coding the purpose is to link all other categories derived in the earlier stages and present it in the form of a meaningful story.

Concepts, when presented individually, do not make a theory. These concepts must be linked and filled in with detail to construct a theory out of data. In our study, the codes were grouped under few major categories like the different environments, the positive and negative practices that lead to faculty well-being, the positive and negative outcomes of these practices and the macro environment contextual factors. After several iterations and constant comparison of codes the grounded theory started to emerge, a theory that illustrates a holistic view of practices adopted in different environments in Indian engineering and technology institutions. The finding of this study is depicted below (Fig. 4-18).

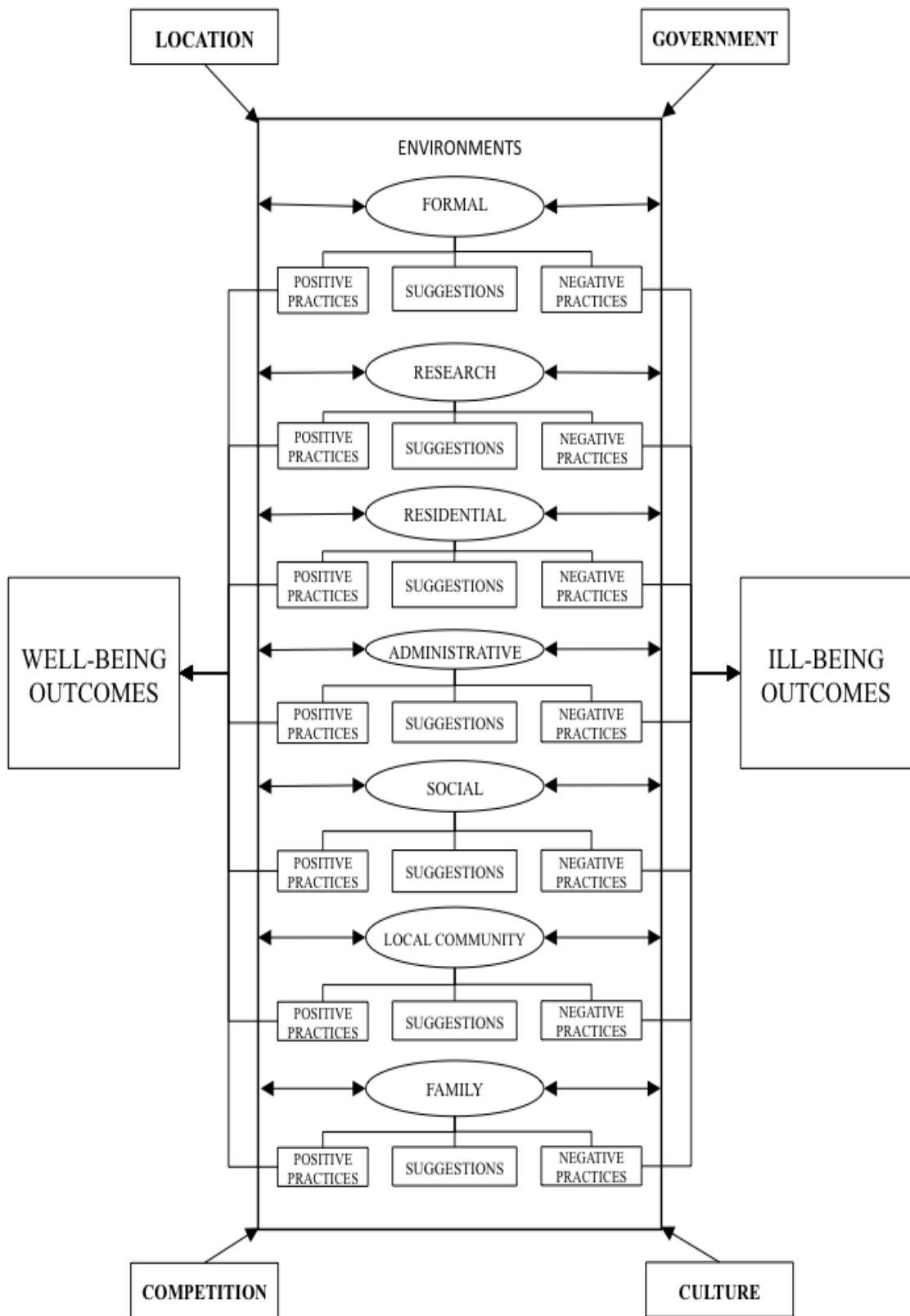


Fig. 4-18 Theoretical integration model

The different environments represent the positive, negative practices and suggestions given by the participants to make it better. These practices have different outcomes. The

positive practices produce the positive outcomes also termed as “well-being”, and the negative practices produce negative outcomes also termed as ill-being. It is worth mentioning that the study aimed to explore the positive practices only. However, the open approach to the data collection process generated negative practices along with positive practices. These different environments do not function in isolation rather are inter-dependent on each other. The two-way arrows from the circle encompassing respective environments represent this process. The microenvironments impact and get impacted by other environments inside the system. The box bordering all the environments represent an enclosed system. Also, the contextual factors are represented in four different sections and belong outside the periphery of an institution. These contextual factors impact the practices in different microenvironments and play an important role in framing them. Thus, keeping all the facets together gives a holistic view of practices that are followed in Indian engineering and technology institutions.

4.3.4 Conclusion

This chapter explains in detail the coding process adopted to fulfil the objective of the research study. The description emphasised on the use of open codes for labelling the data followed by a focus on the Glaserian and Straussian approach for axial coding of data. Memos and examples were depicted to ensure transparency in the analysis procedure. It concludes by describing the final theory derived by using theoretical integration.

Chapter 5. Assessing the Quality of the Study

5.1 Introduction

To understand a phenomenon a researcher embarks upon the journey of unravelling the latent nature of the underlying research problem. In this pursuit, the researcher confronts two different approaches namely the quantitative approach and the qualitative approach. Both approaches have a universal appeal in research and depending on the topic of interest, the underlying research question, and the process through which those questions will be tackled, the researcher chooses among these approaches. However, a central question that bothers researchers in both of the above paradigms is proving the utility of the research outcomes in terms of quality and goodness. Following the above discussion, the description that follows provides a brief introduction to both approaches of research, i.e. quantitative and qualitative research and how the central question of ensuring the quality of research is tackled in each of these approaches. Since, this thesis adopts the qualitative method for answering the research question posed in an earlier chapter, much of the discussion that is centred toward the qualitative paradigm.

5.1.1 Quantitative and Qualitative Research Methods

5.1.1.1 Quantitative Research

What is quantitative research? It is the research approach that explains a phenomenon according to numerical data analysed through mathematical and statistical tools. Researchers following the quantitative research paradigm first familiarise themselves with the problem or concept to be studied to generate a testable hypothesis. Largely, the emphasis is given to the measurement and analysis of causal relationships between variables by adopting specific terminologies such as variables, cause and effect, population, and sample.

Under this paradigm, the emphasis is put on facts and causes of behaviour, the information is collected in numeric forms, and mathematical tools and techniques are employed to illuminate underlying patterns, which eventually culminates into statistical representations. A quantitative researcher's focus is involved with explaining phenomena by fragmenting it into measurable or common categories that apply to all subjects or wider and similar situations (Winter, 2000).

5.1.1.2 Qualitative Research

In contrast to the quantitative research paradigm, Corbin & Strauss (2008) broadly define qualitative research as any research aimed at describing a phenomenon without resorting to any statistical techniques or quantitative methods. Qualitative research adopts an interpretive approach to understand the phenomena in a context-specific setting like “real-life” situations while refraining from manipulating the phenomenon of interest. The objective behind qualitative research is collecting data through means of interviews for facilitating understanding of the underlying phenomenon in question.

5.1.1.3 Establishing Credibility in Quantitative and Qualitative Research

However, both quantitative and qualitative researchers are required to demonstrate the credibility of their study. The credibility of quantitative research comes from testing the validity and reliability of research outcomes while that of qualitative research depends to a great degree on the ability and effort of the researcher in explaining the phenomenon. Though the approach of verifying the credibility in quantitative research is separate for reliability and validity, these terms are not viewed separately in qualitative research and instead encompassing terminologies such as credibility, transferability, and trustworthiness are used (Golafshani, 2003). Table 1 provides usual terminologies that are referred under both Qualitative and Quantitative approaches in the context of quality of research.

Aspect	Quantitative Terms	Qualitative Terms
Truth values	Internal validity	Credibility
Applicability	External validity or generalizability	Transferability
Consistency	Reliability	Dependability
Neutrality	Objectivity	Confirmability

Table 1 Criteria for Judging the Quality of a Research Study: Quantitative vs Qualitative Terms⁶

Commonly used approaches for evaluating quantitative research are reliability, validity, objectivity and generalizability. However, in the context of qualitative research, adopting these measures is not as straightforward as in quantitative research (Sinkovics, Penz, & Ghauri, 2008), and in a strict sense are not appropriate for qualitative inquiry (Morse, 1994). Sandelowski (1993) argues that issues of validity in qualitative studies should be linked to the trustworthiness of the study rather than the truth or value of the research.

Therefore, to establish the trustworthiness of qualitative research, *credibility*, *confirmability*, *transferability*, and *dependability* must be established (Lincoln, Lynham, & Guba, 2011). *Credibility* means that the participants in the study found the results of the study true and honest. *Transferability* is achieved if the findings of the study are transferable to other similar settings. An elaborate description of the context and the people involved in the study is prerequisite for transferability. *Dependability* requires that the process of selecting, justifying, and applying research studies, procedure and methods, are explicitly spelt out. Finally, the *confirmability* of the study is achieved when the findings of the study are based on the analysis of the collected data and examined by an auditor to ensure that the study findings are grounded in the data and inferences are logical and clear.

⁶ Source: (Lincoln & Guba, 1985)

5.1.2 Quality of Qualitative Research

The most important test of any qualitative study is its quality that assists in understanding a seemingly complex or confusing phenomenon (Eisner, 1991). Lincoln & Guba, (1985, p. 290) asked: “How can an inquirer persuade his or her audiences that the research findings of an inquiry are worth paying attention to?” Subsequently, researchers wrestled with each other pondering over this question and offering a range of best practices for ensuring quality in qualitative research studies (Creswell, 2007; Morse, 1994; Stenbacka, 2001).

Naturally, in this pursuit, several scholars looked toward the quantitative research paradigm and borrowed the concept of *reliability* and *validity* to authenticate qualitative research. However, as argued by (Stenbacka (2001), the difference in the motive of evaluating the quality of study in the qualitative and quantitative study is one of the reasons that renders the concept of reliability irrelevant in the qualitative study and is even misleading for researchers. She further commented ... “If a qualitative study is discussed with reliability as a criterion, the consequence is rather that the study is no good” (p. 552).

However, the issue of testing the reliability and validity in qualitative research has garnered immense academic interest, and many researchers echo in favour of considering reliability and validity as quality criteria for the qualitative study. Patton (2002) emphasises the importance of having a keen concern on reliability and validity for qualitative researchers during the design, analysis, and judging the quality of research. On the other hand Lincoln et al., (2011) observe that quantitative and qualitative approaches fall under two different paradigms and qualitative research paradigm should be judged by its own set of criteria as credibility, neutrality, or conformability, consistency or dependability, and applicability or transferability.

5.1.2.1 Approaches to Measure Quality of Qualitative Research

The literature on measuring the goodness of qualitative research is vast and includes concepts such as catalytic validity (Lather, 1986), empathetic validity (Dadds, 2008), tacit knowledge (Altheide & Johnson, 1994), and transferability (Lincoln & Guba, 1985). (Lincoln & Guba, 1985) Also recommend ‘inquiry audit’ as a measure to enhance the dependability of qualitative research. Campbell (1997) suggests verification of research steps through examination of raw data, data reduction process, and field notes, for achieving the consistency of the data.

Nevertheless, the range of approaches for testing the quality of qualitative research can cause confusion and bewilderment in the minds of the researcher as noted by Seale (1999), “the difficulties that qualitative methodologists ... have had in making their ideas stick” (p. 467). Therefore, for judging the dependability and credibility of the qualitative research undertaken in this thesis, we ask the following questions for quality validation.

Dependability (instead of reliability) questions {source (Yilmaz, 2013)}:

- Are research questions clearly defined and the features of the study design congruent with them?
- Were data connected across the full range of appropriate settings, times, respondents suggested by the research questions?
- Were coding checks made and did they show adequate agreements?
- Were data quality checks for bias, deceit, informant knowledgeability etc. made?
- Do findings show meaningful parallelism across data sources (informants, contexts, and times)?

Credibility (instead of validity) questions {source (Yilmaz, 2013)}:

- How context-rich and detailed are the basic descriptions?
- Are the presented data linked to the categories of prior or emergent theory if used?
- Are the findings internally coherent and concepts systematically related?
- Were guiding principles used for confirmation of propositions made explicit?
- Are areas of uncertainty identified?
- Was negative case or evidence sought for? Found? What happened then?

- Have rival explanations been actively considered? What happened to them?
- Were the conclusions considered to be accurate by the participants involved in the study? If not, is there a coherent explanation for this?

Tracy (2010) provides a parsimonious pedagogical tool through an eight-point conceptualization of qualitative quality that includes (a) worthy topic, (b) rich rigor, (c) sincerity, (d) credibility, (e) resonance, (f) significant contribution, (g) ethics, and (h) meaningful coherence. These criteria are summarized in Appendix 4.

5.2 Quality of this Study

The *'Eight Big-Tent Criteria'* acted as a guideline to appraise the quality of this study. The following sections discuss the above criteria and how they were met in this study to maintain qualitative rigour. The examples of individual parameters concerning its application in the study are described in detail.

Credibility: Charmaz (2006) proposed that the researcher should have sufficient familiarity with the data to assure insights to the phenomenon through the participant's experience and to derive empirical observations of the data. Credibility was maintained in the study by providing a transparent description of analytical tools adopted for conducting this study in the methodology section. Further, the examples from the interview transcripts gave a transparent description of how codes were developed from participants' interviews and how they were constantly compared to derive the theoretical integration. Moreover, a detailed description of the sample characteristics was provided to elucidate the relevance of experience shared by them and the resonance of the same with the purpose of the study. Another factor adding on to the credibility was the prolonged engagement with the participants. The interview questions were kept open-ended that allowed the participants to share their experience in detail. Asking probe questions to provide examples made the interview details reliable. Another way to establish credibility in the data was through

'member checks' (Lincoln & Guba, 1985). While conducting the interview, the researcher constantly summarised or restated the participants' responses as per the researcher's understanding. Then the participant's agreement or disagreement provided clarification about the researcher's understanding of the phenomena being discussed.

Dependability: The dependability enhances through the use of in-vivo codes to describe the phenomenon in the best possible form. Use of in-vivo codes reduced the researchers bias while interpreting the data and adding on the dependability of the study. To ensure that the observations remain grounded in the experience of the participant's memos were used to guide data collection and analysis process. These gave theoretical insights to the constant comparison process and justified the rationale to derive the theoretical constructs. Dependability was enhanced as the codes were theoretically saturated before theoretical integration. Thus the similar questions were asked to faculty members from different institutes, holding different designations, with experience in the institute ranging from five years to more than thirty years and performing varied roles. The theory was integrated only after the codes that were derived from different participants were saturated. Thus the dependability was ensured. Further, discussing the codes with the colleagues, who hailed from different backgrounds ensured accuracy and helped in the development of stronger and better reliable findings.

Transferability or resonance: Thick description of the data and the analytic procedure used make the findings of the data transferable to other similar settings, people, time and situation. The previous chapters exemplified a rigorous method for data collection and coding for identifying the practices that lead to the well-being of the faculty members in an educational institute. Theoretical sampling procedure adopted for this study provides a thick description of the range of participants who were interviewed for data collection and thus making it apparent that the theory derived in this study is generalizable and applicable to the

larger section of society. The theoretical integration of the codes articulates the different environments in which the practices are framed, and the interdependence of these environments further enhances the understanding of the internal factors that impact the faculty experience in the institute. The depiction of an exhaustive list of practices that impact the faculty experience in an educational setting can be used as a guideline by other institutes for framing policies and practices that enhance the faculty experience in the respective institutes. Thus the findings of the study are transferable and can be easily adopted by other educational settings.

Conformability: Conformability assures that the findings of the study are derived by the experience shared by the participants and not on the basis of the characteristics and the preferences of the researcher. The conformability was assured by maintaining an audit trail. An audit trail keeps a record of the transparent description of what was done right from the beginning of the project until the emergent of the theory. The chapter discussed before, provide a clear and thick description of how the research questions were derived from the literature review and how the data collection and analysis aided in the development of the theory. Maintaining field notes and theoretical memos further added on the conformability of the study.

Worthy topic: The review of the literature and the identification of gaps add on to the worthiness of the topic. The problem of stress and depression is on the rise in the higher education scenario. The literature on faculty well-being is scant. Thus using a positive organisational scholarship approach in a higher educational setting is of high importance.

Rich rigour: As described earlier, to derive theoretical integration, the appropriate procedure was adopted for the collection of data and analysis of data. A rigorous attempt was made to maintain the richness of the data. The theoretical saturation ensures that the data was sufficient to support the significant claims made in the study.

Sincerity: To check the researchers' bias member check and colleague check was adopted. The transparency through which the data was collected, analysed and presented adds on the sincerity of the researcher.

Significant contribution: The study aims to address the faculty well-being issue especially in the Indian higher education sector. Review of the literature suggests that such studies have begun to emerge in the western contexts but is majorly lacking in the Indian contexts. Thus the theory emerged in the data provides new insights for policymakers to focus on the issue which is hitherto ignored.

Ethical consideration: As described in the methodology section ethical measures were maintained during data collection as well as analysis. The data collection process did not cause any harm, by any means to the participants and due care was taken to maintain their confidentiality. The values, beliefs and the experiences of the participants were duly respected. Moreover, prior consent was taken from the participants before conducting the interview.

Chapter 6. Discussion

6.1 Introduction

The previous chapter concluded with the theoretical integration of the codes and presentation of a theory, which was grounded in data. This chapter enhances the understanding of the theory and highlights key findings of the research. The chapter describes the different environments derived from the analysis performed and practices in those environments. It also focuses on how these practices are leading to the well-being of faculty members in the institution. An exploration of the link between positive outcomes and the elements of the PERMA model further enhances our understanding of the practices leading to the well-being of faculty members. The suggestions made by faculty members to make the workplace better are also highlighted. Finally, the chapter concludes by emphasising on the quality of the qualitative data used for this research endeavour.

6.2 The Grounded Theory

After several stages of coding, we arrived at a theory that explicitly explains the several practices prevalent in Indian engineering and technology institutes. To derive this theory, we have interviewed participants from top five Indian engineering and technical institutes. Since the sample was homogenous, it can be said that the theory is a substantive theory and applies to this specific area. A substantive theory is derived from one substantive area, whereas, a formal grounded theory is more abstract and is derived from a comparison of several substantive theories. Strauss and Corbin mention that it is important to establish strategic links between the substantive theories to generate a formal grounded theory (Glaser, 1978; Barney Glaser & Strauss, 1967).

The theory derived in our study applies to the Indian engineering and technology institutes, and is specific to a substantive area, leading to the generation of substantive grounded theory. The theory in our study highlights that there are seven different microenvironments that impact the experience of the faculty members in an institution. These seven environments are teaching, research, administration, residential, social, family and the local community. Oades *et al.* (2011) made a similar bifurcation in their study that discussed the relevance and development of positive education practices and building a positive university. But this study, primarily, was focused on the well-being of the students and the scantily highlighted the practices for faculty members. The family aspect of the faculty members that play a major role in the performance was also not highlighted. In another study by Leck (2016) facets selected to understand the job satisfaction level of faculty in higher education were the work itself, administration, salary, advancement and collegial relationship. In this study, the authors consider collegial relationship and administration as environmental conditions. As described in our study, none of the studies was found that highlight the practices impacting the experience of faculty members in higher education from a holistic point of view. This points towards the gap that has been addressed in our study. Now we discuss the aspects of each of the environment individually in the coming section.

Teaching or classroom or formal learning environment: The teaching and classroom environment covers all the practices that enhance or diminish the experience and satisfaction of faculty members in higher education. The main objective of IITs is to impart world-class knowledge in engineering and technology. The satisfaction of the faculty is important as it directly impacts the experience of students in a class (Csikszentmihalyi, 2014).

As pointed out in our study the positive practices that enhance teaching experience of faculty members are greatly dependent on the institutional facilitation in terms of

infrastructure, technology, autonomy and freedom, reward and recognition, and personal factors. It was found that the concern for the well-being of students in a teaching environment is addressed well in the western countries but, especially in the higher education sector, little attention has been paid towards this aspect concerning faculty members.

Research Environment: There is a tremendous focus on research in the IITs. It is considered to be a primary duty of faculty right after teaching. Among the academic institutions of repute, one common aspect that concerns individuals is an increased emphasis for performing high-quality research to obtain high-value research grants from government bodies. In a study (Folch, Labao, & Ruiz, 2015) the authors advocated that the best-ranked universities establish structures that promote research and scholarship and maintain practices that assist institutional research support. These practices include a scholarship for research, provision of generous funding, support for publication and visibility of successful results. A similar set of findings is reported in our study that focuses on the practices enhancing the experience of faculty members in higher education institutes. In addition to these practices, our study also reports the importance of recognising and regarding research effort, institutional focus, international rankings and institutional support for collaborations for research.

Administrative Environment: Faculty members play an active role in maintaining the administration of an institution. The administration is also responsible for framing practices and policies that impact the well-being of faculty members in several domains within the institution. During the literature review, it was observed that no study highlights such practices in the context of higher education. However, there were studies pertaining to various other contexts which laid emphasis on HR practices such as performance evaluation, recruitment, job aspects, reward and recognition etc. leading to well-being of the employees

(Anitha, 2014; Brun & Dugas, 2008; Gillespie, Walsh, Winefield, Dua, & Stough, 2010; Guest, 2002; Wayne, Shore, Bommer, & E., 2002). Job satisfaction is an important outcome of the practices adopted by the administrative department but as pointed out by Kinser (2006) the research about job satisfaction of faculty members working in higher education is scant.

In another study, it was pointed out that the well-being in a university setting is more than accentuating on the tangible sides like salary, profit or benefit and extends to the intangible sides where the employees are free to develop themselves and improve their creativity to enhance the higher education system. The study also emphasises on maintaining a positive work relationship for enhancing the well-being of its members.

Social Environment: The social environment highlighted the practices taken by the institute to increase informal interaction and socialisation of the faculty members. Socialisation is defined as the process through which one acquires the values, beliefs, attitudes, habits, behaviour patterns, skills and knowledge of one's society, organisation, or group (Calhoun, 2002; Gardner, 2010a). Research advocates that through socialisation and integration the interaction between peer and faculty affect positive outcomes. Integration in this context is referred to the frequency of interaction between a person, their social network, and the feelings of belongingness that arises due to the integration process (Hoskins & Goldberg, 2005; Tinto et al., 1993). Similar results are found in our study that shows the impact of socialising on the positive emotions and positive relationship of employees.

Residential, family and local community: For all the three environments we couldn't find substantial studies that explain or relate to those practices that contribute to the well-being of faculty members. However, in the family environment few studies mentioned the importance of supervisor support for work to family related aspects in increasing

organisational commitment and satisfaction (Bhargava & Baral, 2009; Ramadoss, 2012). Also, in the local community environment Thoits & Hewitt (2001) advocated that volunteer work do have positive impact on six aspects of well-being namely life-satisfaction, happiness, self-esteem, sense of control over work, physical health and reduced depression. In resonance, Chandra (2017) mentioned that the university structure, its teaching and research mandate to address social issues has helped individual to understand themselves and the society much better and thus, serving the society and themselves in a better way.

From the above discussion, it is evident that in the higher education sector very few studies have addressed the topic of experiencing the positive practices that lead to the well-being of faculty members. Measuring well-being has been a challenging task for the researchers. Well-being is a subjective feeling and personal due to which the measurement/quantification of well-being has remained complex, and its comparison between groups of people or contrives has remained controversial (Hadley Centre for Adoption and Foster Care Studies, 2015).

In this study, we have addressed the well-being of the faculty members by relating the outcomes of the positive practices with the five elements of the PERMA model proposed by Seligman (2011) for measuring well-being. In the coming section, we describe the well-being, the PERMA model and intrinsic motivation as a moderating factor for well-being.

6.3 Well-being

Psychological well-being of people requires having an inner sense of positive feelings, job satisfaction, optimism, and self-appraisal for evaluating overall success. However, a well-defined metric for systematically assessing the well-being of people is lacking and yet to be developed. Well-being has been conceptualised in several ways by including different

facets such as emotional, subjective, psychological, and social dimensions (Keyes, 2007; Rath & Harter, 2010).

Academic institutions seem to be appropriate places to study the well-being of its members that include the teaching staff, non-teaching staff, and students. The concept of well-being is of growing scientific interest to academic institutions, for example, the Cambridge University's Institute of Well-Being ("The Well-being Institute,") is dedicated to furthering the scientific understanding of the concept of well-being and advocates use of this new knowledge in helping people and institutions develop their full potential. The institute defines well-being as positive and sustainable characteristics which enable individuals and organisations to thrive and flourish. Well-being is an evolving concept and encompasses subjective, social and psychological dimensions as well as health-related behaviours.

Similarly, there are other academic institutions which have emphasized developing well-being amongst the members (for example, *University of Leeds; Centre for Health and Well-being*, 2013). However, these programs are actively directed towards students, and the faculty aspect remains undermined. Similarly, in our study, we found that IIT Kharagpur has taken active measures to increase the well-being of students by introducing courses on happiness and techniques for measurement of well-being for students. The "Rekhi happiness centre" serves as the founding base for this initiative. But in this endeavour, active steps are yet to be taken to address the concerns for the faculty members.

Universities and schools have similar capacities for cultivating prosperity, which is a demographic wealth and well-being of the nation. The educational benefits of well-being seem clear (Seligman et al., 2009b) and analysis of positive psychology interventions conducted by Sin and Lyubomirsky (2009) suggest that such interventions significantly enhance well-being and decrease depressive symptoms. Though substantial research work has been carried out on the well-being aspect of students, there is a paucity of research work

undertaken in the context of the well-being of the faculty members and especially in the context of Indian higher education institutions. In this context, our study holds an important position as this draws attention towards the need for addressing the well-being of faculty members, especially in the Indian higher education system.

There are many things that impact the teacher well-being such as heavy workload, fierce competition with peers and demanding leadership. A recent study conducted by Well-being Australia (Casey, Mathews, & others, 2011) found an overwhelming agreement (almost 75%) among participants that a focus on teacher well-being in an institution also promotes student well-being (Murray-Harvey, 2010). In a recent study by Locke and Bailey(2013), around 40% of teachers surveyed reported the highest level of occupational stress in Australia. The major sources of high levels of teacher stress include excessive workload, workplace conditions, and expectations. Sanford(1980) points out that if institutions of higher education aspire to enhance student learning, then they must take a substantial interest in their faculty members' development at the individual level. Baldwin (1990) notes that faculty members experience a multitude of challenges at every stage of their career. Therefore, adopting proactive practices by the educational institutions need to adapt to address the issue of well-being among faculty members.

Given the highly competitive culture followed in most universities, it is easy for individuals (both students and staff) to ignore social relationships and emphasize on extrinsic motivation (e.g. grades/promotion) over intrinsic interest (i.e. learning/innovation), work excessive hours and engage in other patterns of behaviour that diminish well-being over both the short and long term (e.g. drug use, inadequate sleep). Positive psychology helps in enhancing the experience within the campus by influencing the development of a higher educational culture sensitive to the psychosocial determinants of well-being (e.g.

positive emotions and institutions) and seeks to create conducive conditions for cultivating well-being in students and staff (Oades et al., 2011).

Our study throws light on the importance of aspects like a cordial relationship, development of intrinsic motivation, structuring job that creates engagement and flow and rewarding and recognising the efforts of faculty members for improving the quality of life in the educational institution. The system needs to take proactive steps to enhance the experience of the faculty members. IITs have certain practices that lead to positive outcomes, and these outcomes can be categorised under the elements of PERMA model which acts as a measure of well-being. Such positive outcomes are discussed below.

6.3.1 Introduction PERMA Model

The theory of well-being propounded by Seligman (2011) describes a multi-dimensional framework that can be used for building positive universities based on what is known as the PERMA model. The PERMA model describes the five core elements of psychological well-being that includes positive emotions, engagement, relationships, meaning, and accomplishment, which are essential for a happy and fulfilled life. Given that there is emerging evidence of the components of well-being (PERMA), it is possible to analyse the well-being of university faculty. According to Positive Psychological Program, the PERMA model can be applied to academic institutions to develop programs to help people in developing new cognitive and emotional tools. We now briefly describe the chief elements of the PERMA model.

P – Positive Emotion such as pleasure, happiness, peace, joy and contentment involve generating a positive outlook towards life by looking at the past, present, and future through the lens of optimism. This internal positivity helps in building effective relationships and instils creativity in the individual which in turn causes within the individual a sense of enjoyment in their work.

E – Engagement is closely identified with the act of creation both at work and while pursuing hobbies and spending time with friends. Engagement is an important aspect of an individual's life that helps them grow and nurture personal happiness. The act of engagement in work reduces distractions and helps in increasing concentration that is important for cultivating intelligence, skills, and emotional capabilities.

R – Relationships and social association are one of the most important aspects of life. Humans are social animals that require connection, love, intimacy and strong personal interaction with other human beings. Nurturing positive relationships strengthens engagement with the society and fellow humans that are critical for reducing the risk of isolation.

M – Meaning and purpose of life are important for living a complete and fulfilled life. Contrary to the pursuit of material well-being concerning personal wealth and status, having a sense of the meaning of life gives us greater control over our desires and wants and naturally leads us toward the goal of happiness. Therefore, finding the meaning of our actions is important for fostering an overall sense of well-being.

A – Accomplishment is the last element in the PERMA model but is no less important than other elements. To strike a healthy work-life balance, individuals must be aware of the energies they devote to the pursuit of their career goals and aspirations. An important aspect in having a sense of accomplishment is to realise what one truly wants to accomplish in life and if one realises that he/she is expending an inordinate amount of energy toward such accomplishment, devoting attention to the other elements of the PERMA model may be a useful strategy.

Our study reveals the outcomes of positive practices that can be attributed to the PERMA model of well-being. In the section below, we present the outcomes of positive practices in different environments and relate them to the PERMA.

Environments	Outcomes	PERMA
Teaching	Love Teaching, Enjoy work, flexibility motivates, Student interaction pumps energy, love interacting with students, Friendly department atmosphere, rewarding when old students contact, contribute to society by teaching, continuous learning process	
Research	Engagement in research, enjoy challenging research problems, enjoy working in collaboration, clarity in understanding research feasibility, expert interaction creates positive impact, good scholars motivate, research publication, research award motivates, research for wider contribution	Positive Emotions Engagement
Administration	Job engagement, provides motivation, trust in management, group harmony, good professional relationship, autonomy and flexibility motivates, personal growth	Relationship Meaning
Social	Cordial relationship, good communication, good informal relationship, good social life, helpful and supportive people	Accomplishment
Family	Mental support, happy family life, better job performance	
Residential	Friendly residential environment, comfortable life, home away from home, easier life, campus environment grows on you	
Local Community	Satisfaction through impact, gives sense of meaning, gives sense of purpose, achievement of bigger objectives in life, pride in society's success	

From the above illustration, we can summarise that practices in different environments are leading to positive outcomes. These outcomes can be categorised under the PERMA model of well-being and thus ascertain the practices in these institutions that are leading to the well-being of the faculty members. It is to be noted that these positive outcomes show an overlapping effect in different components of PERMA, i.e. one outcome can fall into different categories of PERMA. For example, the code “enjoy work” is linked to positive emotion, but it can lead to enjoyment in work that can also lead to engagement in work. This clear distinction couldn't be made because of the subjectivity element in PERMA.

In the above discussion, we can also notice that the intrinsic motivation is an important component of the overall well-being of an individual and leads them towards enhancing individual performance. It is also linked to the psychological as well as the psychosocial well-being of the members of an institution. In contrast with the extrinsic motivation that

involves a focus on promotions, rewards and recognition, and pay-hike, are intrinsic motivations which are a feature of the self-internalization process and provide non-material but positive benefits in the long-term. In the subsequent section, we discuss the concept of intrinsic motivation factors that we have discovered in our study. These factors enhance intrinsic motivation in individual and hence lead to well-being.

6.3.2 Intrinsic Motivation and Well-being

Intrinsic motivation not only enhances performance at work but also energises an array of positive behaviour, emotions, and attitudes. Intrinsic motivation is found to be related to a sense of greater autonomy and feeling of effectance (Cho & Perry, 2012), i.e. the tendency to explore and influence one's environment (White, 1959). Research studies have also documented a positive association between intrinsic motivation and lower job burnout and work-related stress (Fernet, Guay, & Senécal, 2004) and are found to be positively related to affective commitment (Kuvaas, 2006). Gagné et al. (2010) observe that intrinsic motivation has a positive association with optimism, job satisfaction, organisational commitment, and improved well-being. In a multi-dimensional work-place environment, where an individual is expected to perform multiple tasks, intrinsic motivation is found to assist individuals in better resolving conflict between work and family (spouse, parents etc.) (Greenhaus & Beutell, 1985) and are able to strike a better work-life balance (Senécal, Vallerand, & Guay, 2001).

From the above discussion, we can realise the importance of intrinsic motivation in the well-being of faculty members. In our research, the codes were separately coded at intrinsic motivation factors and then categorised under several heads like personal factors, teaching, research, system and practical contribution. These factors are represented in **Error! Reference source not found.** below.

As described in the figure there are several personality factors (like attitude and personality type) of the faculty members that affect the intrinsic motivation. An important point to be noted here is that the faculty members in IITs are given a lot of autonomy and flexibility. From our study, we can also conclude that the “IIT-system” has a flat structure and most of the activities are decentralised. The top management follows active, participative decision-making style, and the faculty members are involved in framing policies that affect them.

From here we can relate it to the Theory X and Theory Y style of motivation proposed by Douglas McGregor (see, McGregor, 1989). As per this theory, the motivation style is dependent on the two contrasting perceptions that the management holds about a workforce. In theory X the employees are assumed to be unmotivated and avoid responsibility. Thus, an authoritarian style of management is adopted to motivate the employees. Whereas in theory Y, employees are self-motivated, creative and enjoy working with greater responsibility. Thus, a participative style of management is adopted to motivate employees. About our study, we can conclude that the faculty members are perceived to be falling under the Theory Y category. Thus, decentralisation, autonomy and participative

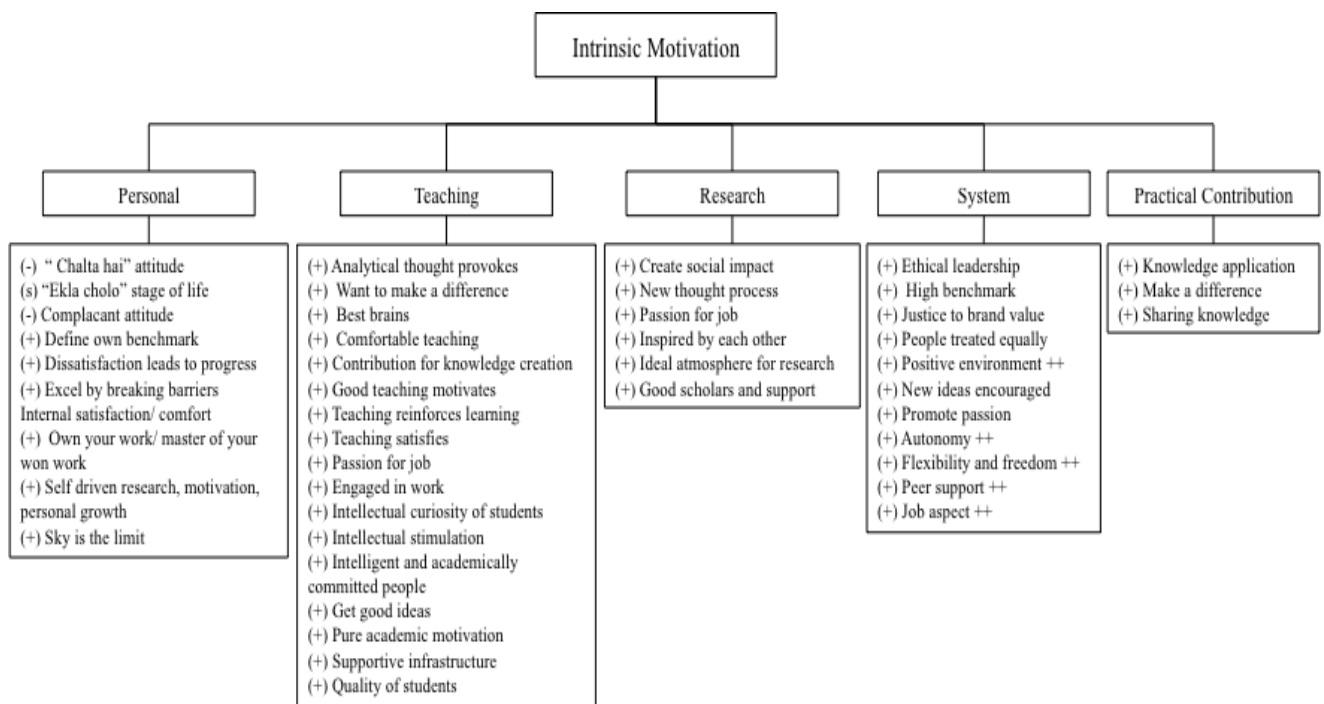


Fig. 6-1 Factors of intrinsic motivation

management style of management enhance the motivation in faculty members. Burke (2011) proposes the integration of individual and organisational goal and urge managers to adopt a more evidence-based management than the traditional style of management. Similarly, the practices in the IITs seem to follow the Theory Y style of management and provide greater autonomy, responsibility and flexibility to the faculty members to carry out their operations.

6.4 Can the Best Get Better?

IITs are the best engineering and technology institutes of India. The government of India has described them as “Institute of national importance”. Thus, it was obvious that these institutes will have practices and policies that are the best in the nation. But the question remained whether these institutes could still get better. Our study has discovered that even though these institutes are best in the country, with some of the positive practices, there is a considerable scope to make these institutes even better. Incorporating these practices can serve a dual role, one by benefiting the faculty members individually, and second, benefiting the institute as a whole.

The present study emphasised on finding such positive practices that lead to the well-being of faculty members only. However, during the process, it was also discovered that these practices would not only improve the experience of the faculty members in an institution but will also lead the institutions to become more efficient and better than before. The coming section gives a brief description of changes that can be made in the educational institutions to make them better. These points only give a glimpse and are not exhaustive. Further research can be conducted to gain an extensive understanding of this area.

- The bureaucratic evil: IIT’s are autonomous institutes but are governed by the norms of MHRD. From the response of the participants, it could be inferred that there exists a government job culture even in the best institutes of the country. Also, the

complicated administrative procedure paves out a way for securing the bureaucratic system that has engulfed almost all the government organisations in India since decades. The participants across all the IITs have reported that due to the bureaucratic system they face administrative hassles leading to delay in important decisions and actions. For example, faculty members face process delay while procuring raw material or lab material for conducting experiments. The delay in process due to bureaucracy in the educational system is not highlighted in the scholarly literature, but it is extensively studied in the other areas like operations, civil construction, organisations, government institutions etc. (Duncombe, Miner, & Ruggiero, 1997; Mauro, 1995; Seboru, 2015; Wyckoff, 1990).

- Similarly, in other spheres of research and teaching bureaucratic procedures might lead to the inefficiency of the faculty members. Thus, removing administrative hassles can increase the efficiency and research productivity of faculty members in educational institutions. Increasing research output will increase the ranking of the institutes on international standards. Thus, removing bureaucratic inefficiency can benefit institutes and help them in gaining international foothold.
- The upsurge in student intake: The MHRD has increased the intake of the students in the IITs not only in the undergraduate level but also in the postgraduate and PhD level. This upsurge has decreased the faculty-student ratio in the classroom negatively impacting the experience of the students as well as the faculty members. The less faculty to student ratio have an adverse impact on the learning of the students and the efficiency of the faculty members (Cuseo, 2007; Gibbs & Jenkins, 2014). This defeats the sole purpose of an educational institution, i.e., to enable learning in students, and affects the overall performance of the institute. Thus, for maintaining a proper faculty to student ratio, the participants of the study have

advocated to increase the intake of faculty members and to hire ‘teach only’ faculty members. The culture of ‘teach only’ faculty members is prevalent in the western education system but gravely lacks in the Indian higher education system.

- Attract and retain high-quality faculty: In the event of high competition, all the institutions face the challenge of attracting and retaining faculty members. Aiming to be world-class institutions it is mandatory for the IITs to attract high-quality faculty members from all over the world. From the study, it was evident that the IITs have vacant positions but are unable to attract faculty members that meet their standards. Due to this the problem the faculty to student ratio gets even worse. As per a report by MHRD (AISHE, 2016), there is 39% vacancy in the IITs, and there is an acute shortage of the faculty members in these institutions. Incorporating positive practices in the institution will give an edge and would enable the institutions to attract as well as retain faculty members (Escobar, 2008; Heaphy & Dutton, 2008; Valentine et al., 2010). Thus, the positive organisational scholarship will provide a competitive edge to the institutions and attract high-quality faculty and staff.

The study also highlights the problems that affect the faculty members individually. One of the major issues that have not been given much importance in the Indian higher education system is the existence of stress and pressure amongst the faculty members. But there are hardly any studies that have addressed this concern. From the literature reviewed for performing this study, it was observed that academia isn't a minimal stress profession, as it was perceived to be since the emergence of business dynamics. Faculty members are under increased stress due to increased globalisation and competition making their roles more challenging than ever before. Since the education boom in India, a faculty member's role is not restricted to teaching alone, but towards management and institution building activities as well. Common stressors identified in the literature are work overload, lack of promotion

opportunities, inadequate recognition, inadequate salary, changing job role, reducing resources and funding, “publish or perish” policy, job insecurity in private institutes etc. (Gupta et al., 2015).

The role that job-stress plays in human well-being has been an important concept in the corporate but has seldom garnered much attention in the field of education. Historically the studies which do explore occupational stress in academia focus primarily on school teachers (Singh, 2014). However, in the past few years, some researchers have turned to study job stress among faculty engaged in higher education institutes, but the instances of such studies are sparse in engineering and medical domain.

Interestingly, although teaching, research, and service are the recognized areas of faculty responsibility, literature shows that a collection of stressful circumstances subdivides into five distinct areas not reflective of the traditional research, teaching, and service categories, namely, reward and recognition, time constraints, departmental influence, professional identity, and student interaction. Two of the five factors, time constraints and workplace influence, appear in studies of stress in other occupations. However, the other three factors—reward and recognition, professional identity, and student interaction are newly identified stressors appearing to be unique to academia. The major factor of rewards and recognition spans the three activities of teaching, research, and service. The strength of this factor suggests that a re-examination of the reward structure toward reduction of its ambiguity should help to reduce a considerable amount of the stress that faculty experience (Gmelch, Wilke, & Lovrich, 1986). One noted cause of job stress which features prominently in attrition studies was frustration due to excessive time demands (Clark, 1987; Gmelch et al., 1983; Moracco et al., 1983).

The other most prevalent reason for attrition was found to be a general lack of a community sense at the institution under study. A study (Barnes et al., 1998) performed

using data from a national survey of 3070 senior faculty members in the United States of America found that the stress created when work infringes upon the family time of the faculty members was predictive of intent to leave academia. Similar studies conducted in the western countries found that time pressure was the strongest explanative variable for faculty attrition. Time over-commitment, long working hours, constant pressure to multi-task was revealed to be major contributors to stress.

Studies exploring stress levels and their impact among faculty engaged in higher education institutes have been even rarer in the Indian context. The studies that are present in the literature are lacking in one form or another in providing a clear picture of the study aim. Most of the research exploring job stress in Indian higher education institutes study institutes in a specific geographical region (Jadhav et al., 2014; Kumar et al., 2015; Maheshwari, 2012; Reddy & Poornima, 2012; Sabherwal et al., 2015; Singh, 2014). Moreover, these studies base their findings on very small sample sizes as compared to research in developed countries, which might affect the reproducibility of results when a statistical model is developed.

Also, the research in Indian context reviewed for this study based their analysis and findings on data acquired from close-ended survey questionnaires, which might prove to be ineffectual in exploring all the facets of human perception towards problems/ issues faced by faculty on a day-to-day basis. Since the nature of human well-being and its enclosing attributes is highly subjective, it bodes well to view the problem structure and the consequential research through subjective methods.

On a similar note, our study highlights the presence of stress and pressure amongst the faculty members, the causes of these stress and the strategies or practices that are taken to combat the problem.

As seen in the below figure the causes of stress can be attributed to personal as well as institutional reasons and similarly there can be strategies at a personal level and institutional level to handle such problems. At the institutional level, one of the practices that are widely being adopted to reduce stress and pressure among the faculty members is the organisation of meditation and yoga camps. There are several studies that show a significant relationship between the effects of meditation and yoga in reducing stress and other health problems (Astin, 1997; Carmody & Baer, 2008; Chiesa & Serretti, 2009; Grossman, Niemann, Schmidt, & Walach, 2004; Klatt, Buckworth, & Malarkey, 2009; Ross & Thomas, 2010). Apart from this, there are hardly any initiatives taken by the institutes to address this problem that amplifies with time. Fig. 6-2 describes the causes of stress and coping strategies.

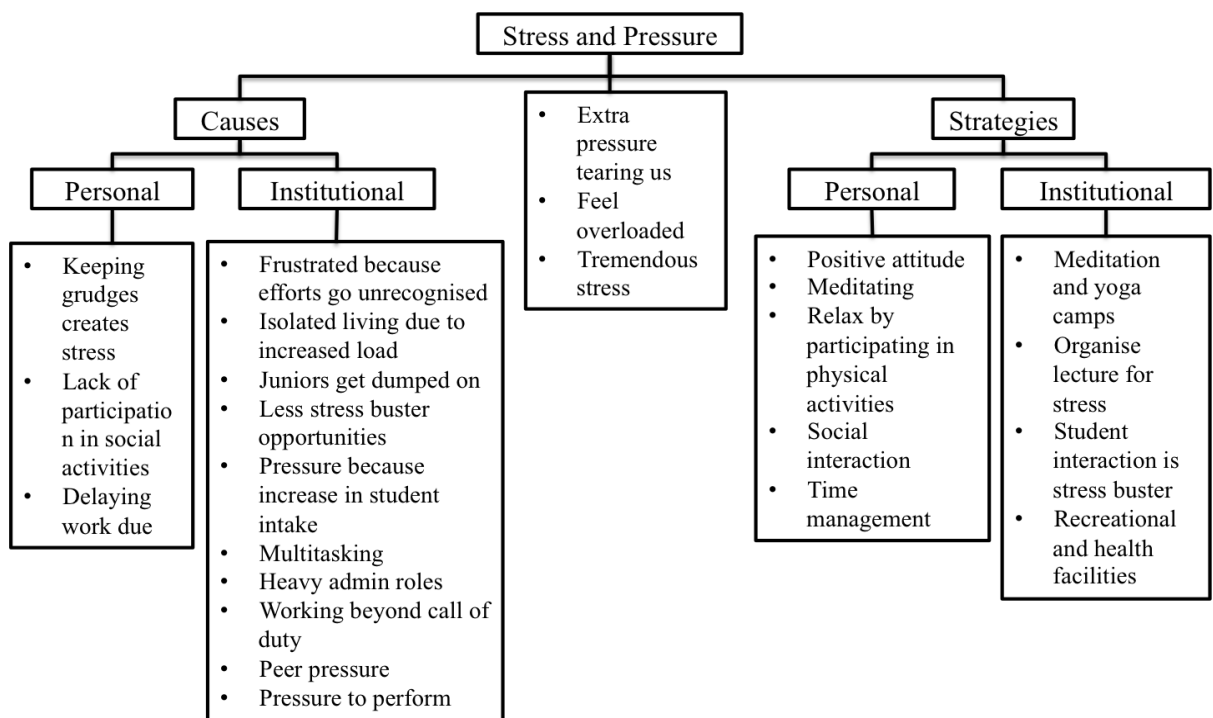


Fig. 6-2 Stress and Pressure: Causes and Strategies

6.4.1 Points of Concern

The study also highlights the suggestions that the faculty member's perception will increase their well-being in the institute. Such suggestions are highlighted in their respective

environments. In this section, we discuss some of the important suggestions that the faculty members have stressed upon. These suggestions are discussed below in detail.

Small class size: In the teaching environment one of the suggestions was to reduce the class size. As per the MHRD requirements, the intake of the students has increased manifold in recent times. But there is a shortage of faculty members. One reason for this could be the state of education itself in the HEI's. It has been observed that most of the HEI's in India are functioning without the necessary number of faculty members as sanctioned by UGC and other governing government bodies. Table 6.1 below shows the number of vacancies reported in different HEI's in 2015 alone.

Name	Faculty Strength (Sanctioned)	Faculty Strength (Current)	Vacancy %
Indian Institute of Technology	6653	4079	39%
Indian Institute of Information Technology	253	162	36%
Indian Institute of Management	766	577	25%
Indian Institute of Science Education and Research	861	746	13%
School of Planning and Architecture	672	618	8%
National Institute of Technology	6056	4292	29%
Central Universities	16328	10058	38%

Table 6.1 Vacancies in the Indian higher education institutes (MHRD 2015)

This shortage of faculty members has in-turn worsened the faculty-student ratio prevailing in Indian institutes (Table 6.2) Apart from IIT's; all the other recognised government-run institutes have a student-faculty ratio that is alarming.

Name	Total No	Student Strength	Faculty Strength (Current)	Student/Faculty Ratio
Indian Institute of Technology	16	66002	4079	0.667361
Indian Institute of Information Technology	4	4776	162	1.209028
Indian Institute of Management	13	3489	577	0.250694
Indian Institute of Science Education and Research	6	6997	746	0.375694
School of Planning and Architecture	4	7162	618	0.500694
National Institute of Technology	30	74810	4292	0.709028

Table 6.2 Student-faculty ratio in Indian higher education institutes (MHRD 2015)

The premier engineering institutes in India, IIT's, also suffer from grave faculty shortages (Table 6.3).

IIT	Faculty Shortage (%)
Bombay	38.66
Kharagpur	42.22
Roorkee	41.88
Delhi	33.11
Guwahati	26.50
BHU	53.39
Jodhpur	56.67
Patna	21.11
Indore	14.44
Hyderabad	20
Gandhinagar	10.18

IIT	Faculty Shortage (%)
Mandi	10

Table 6.3 Faculty vacancies in IITs

The faculty members in IITs have reported similar issues. This has reduced the faculty-student ratio and has resulted in reduced interaction between the faculty and students. In one of the studies, it was found that the large class size affects optimal learning and teaching effectiveness. Thus, it creates a limitation in the teaching experience of the faculty members and impacts the learning experience on the students (Henning, Krägeloh, & Wong-Toi, 2014).

Faculty members have greatly emphasised that it is important to deal with this problem to enhance the teaching experience of the faculty members in the institution. Few examples from the interview transcript are given below (Table 6.4).

P1: One of the difficulties of the aftermath of the, we have this sudden increase in the number of students because this quota that came in the right because of which we had to expand by 50% overnight so we implemented this over a 3 year phase and now we have 50% more students than compared to 2008-09. If you look at the number of faculty, its static and that has really hurt us so whatever complaints you've heard in terms of teaching you know that you have to teach so much so our teaching responsibilities or let us say almost become a burden now, because now we cannot recruit faculty at the same rate as we get students as I said theres no dearth of good students in the country, we have positions, vacancies we are not able to fill up so now what you have heard that teaching Is not recognised when it comes to actually promoting a faculty or giving his or her dues has got to do with the fact that a lot of people are feeling overburdened.

P2: The second thing is that, large class sizes. Have made it very, very difficult for both faculty and as well as the students, to have the positive interaction that, you know, we have that when we are students.

P3: The class size has really gone up you know, when I joined the institute a class size of 50-60 was considered to be a big class and now a big class is something like 250 so we are forced to teach students in bigger classes because you know you don't have enough faculty and therefore I think people are talking about

it much more you know if im putting.

Table 6.4 Excerpts from interview on student teacher ratio

The two-body problem: The two-body problem, an in-vivo code, holds special importance as this emerged as a new insight in the last stages of coding and also because of the scarcity of research in this domain. This issue might be relevant for institutions that are located in remote areas. But it hasn't been reported yet in any other study. This problem arises because of two reasons. One is the location of the institute in a remote area that reduces the employment opportunities of the spouse of faculty members. And the second is lack of initiative from the institute to provide engagement opportunity for spouses. This factor affects the family life of the faculty members and in turn, reduces their well-being. A study (Huffman, Casper, & Payne, 2014) conducted on the U.S. Army officers and the spouse career support provided. The study reveals that the spouse career support reduces the work-life interference and increases job satisfaction amongst the members, thus reducing the odds of a turnover.

Spouse support is a non-work variable and can be related to multiple work outcomes and work-life conflict (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). There are several studies that relate to work outcomes and spouse employment. But the issue addressed here is unique as points towards the qualification of spouse and unavailability of employment opportunity, given the constraint of the remote location. Though the institute is providing secondary employment opportunity to the spouse by engaging them into non-academic activities like wardenship of hostels, administrative duties, counselling of students etc., but as the faculty members reported the spouse is more qualified to perform such duties or might have a forte in other areas. This creates a sense of dissatisfaction amongst the spouse leading to work-life conflict in the faculty members. Few examples from the transcript are given below (Table 6.5).

P1: I think we should give attention particularly for IIT Kharagpur is the two body problem the problem is that the spouses of the faculty members most of them today are extremely qualified and because Kharagpur town does not offer any quality employment opportunities for people with their qualification it becomes orphans quote frustrating for the spouses sit at home. So that is something that we are trying to improve the social quality of the social status in the campus we're trying to figure out in what kind of alternative employment opportunities we can create to engage the spouses of our professors. By that I don't mean we are looking for very high paying employment but important thing is that they should be engaged in types of activities which are worth their qualification.

P2: The spouses are also want to work. Well, getting so much of work for the spouses is a difficult problem. it is an another issue. Because of which may be we are not getting good, very good faculty members.

P3: So we tried a few experiments for example we offer that campus ladies can become assistant wardens in some of the hostels because having a lady who is sensitive and also at the same time qualifying to look at some of the hardships the problems that the students are facing would be very good because you know students would also probably find such a person to be more approachable and will be able to discuss the problem. We have met with Limited success in that because of where yes reasons but we are all looking at other types of ways in which like there are some educational magazines which are going on. There the administrative fabric of the year in educational fronts are sometime handled by the campus ladies. So we're looking into these things but it is difficult but someday we have to grow.

Table 6.5 Excerpts of the interview on Two-body problem

Balancing different domain of life: This was a category derived during the coding process. This category is of special importance as it talks about all the roles a faculty member needs to perform and the need to create a balance within these roles. A faculty member is the backbone of an academic institution and can neither be productive and nor be healthy if the institution does not pay attention to create a work-life balance between the personal and professional front (Philipsen& Bostic 2010).

There are several studies on the organisations that thrive on creating work-life balance (Deerey, 2008; Hughes & Bozionelos, 2007; Land & Taylor, 2010; Parkes & Langford, 2008), but the literature is scant when it comes to the higher education sector. The findings

of our study reveal the importance of maintaining the work-life balance the strategies used to achieve this goal. The figure is described below.

The figure below (Fig. 6-3) depicts a clear picture of this scenario.

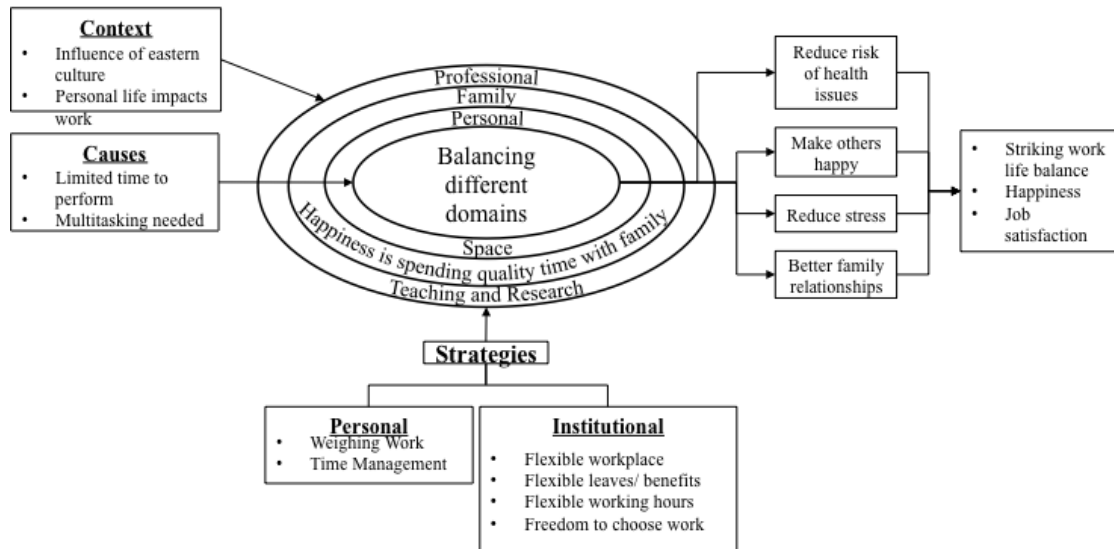


Fig. 6-3 Balancing domains of life

It can be seen in the above figure that achieving work-life balance helps in reducing health risks and increases a sense of satisfaction and happiness in faculty members. To achieve work-life balance, there are several strategies that need to be adopted at a personal level and practices of the institute that facilitate work-life balance. For example, the institution provides flexible workplace and time options. This is also consistent with the existing literature (Booth & Van Ours, 2008; Chiang, Birtch, & Kwan, 2010; Golden & Wiens-Tuere, 2006; Harter, Schmidt, & Keyes, 2003; Sheldon & Niemiec, 2006; Warren, 2004; Yerxa, 1998). Few examples from the transcript are given below.

P1: People do it when they are bothered about their all aspects of life. We have a professional life, we have a family life, we have a social life with community. We have spiritual life, concerned with virtues and good work. So, we have variety of life. When we are concerned with all difference domains of life, then it will happen. If you are bothered about one domain of life, they I will exceed, I will do more, I will do this thing,

that thing. Other aspects are going to be disturbed. It is just like a balance. The one side will be over weighted, other side will be balanced. It is happening and in understanding if you can change yourself understanding that. The way you are looking the things. You can change it it will be bring happiness.

P2:But I am over stretching myself here, working beyond call of my duty, then I go late, by that time my wife will be angry. So, therefore we have to make balance of all these things. Not that I become happy, in this process, how you make others happy is also important. Because in eastern society like, we never feel happy, if people surrounding us.

P3: some people can do a enormous amount of work and something is suffering. Something is suffering in the sense they are doing these things very nicely then their personal life is suffering. Then they are not at home, they are not spending time with your family because you only have 24 hours. Maybe they are not interested in doing x or y.. They make their choice. But something have to be given up. If they are cramming more into the day then either everything is getting less time or they are not are one thing is getting more emphasis and the other things is getting less Emphasis or something like that. Or if the faculty is able to do everything then he might be unwell.. You never know.. So there might be health problems.

Chapter 7. Conclusions, Limitations and Scope for Further Research

7.1 Conclusions

Positive organisational accentuates that the individuals and organisations perform at a surpassing level when the positive factors are focused instead of the negative factors (K. Cameron, 2017). However, it is argued that the focus on positive factors does not aim to substitute the emphasis given to the negative factors, rather complement it by shifting the focus on the positive factors, as the study of the later phenomena is perceived to be fundamentally essential (K. Cameron, 2017; Dadich et al., 2015).

The higher education sector in India has made considerable progress since independence, and the GER is expected to rise to 32% by 2021-22 followed by a manifold increase in the number of colleges and universities to cater the growing demand of higher education (*Rashtriya Uchchatar Shiksha Abhiyan, National Higher Education Mission, 2013*). In this dynamic environment, it becomes mandatory as well as challenging for the higher education institutions to take steps that maximise the well-being of all the shareholders. Introducing positive organisational practices in the Indian higher education institutions will play a dual role in this context.

One, by holistic development of students and preparing them for 21st-century challenges. Second, by building a vibrant and virtuous workplace culture leading to the well-being of faculty members and staff, and thus, fostering institutional well-being as a whole. Faculty members are the backbone of every educational institution. It is the responsibility of the institution to take proactive steps to nurture the well-being of the faculty members. This study aimed at exploring such practices in Indian engineering and technology institutes.

The aim was addressed using Grounded theory methodology, where the faculty members of premier Indian engineering and technology institutes were interviewed to explore the best practices followed by the institute leading to the well-being of the faculty members. The rationale behind opting this methodology arose from the scarcity of empirical work in this area. Moreover, the aim to develop a model explaining the practices in the institutes further instigated the adoption of a qualitative method over a quantitative method. An in-depth interviewing technique followed by a constant comparison of the instances maintained the richness of the data and accentuated on the exploration of the hidden phenomenon grounded in the data.

The theory discovered in this study unearths four important aspects of an educational institution that impact the well-being of the faculty members. One was the discovery of different environments that impact the experience of the faculty members in the institute. The second was an exploration of the positive and negative practices in these environments. The third was the outcome of the practices represented as the well-being or the ill-being. And fourth was the macro environment contextual factors that have an influence on the microenvironment of the institution.

Along with these, the data also revealed suggestions that can be incorporated to make the best institutes in the country even better. The final model incorporates all these findings and establishes a relationship amongst all these factors. These findings are explained in the section below.

7.2 Theoretical Contributions of the Study

A theoretical contribution is the result of a research endeavour. Though, what can be considered a theoretical question is a daunting question for the researchers. Corley & Gioia (2011) suggest two dimensions that provide ground for theoretical contributions. These two

dimensions are ‘*originality and utility*’. Similarly, Whetten, (1989) emphasising on three questions- ‘*what, why and how,*’ as the building blocks of theoretical development. Considering the above elements this section attempts to highlight the theoretical contributions of the research endeavour, which are described below.

- *Discovery and categorisation of different environments:* The originality of the results of the present study is the discovery of several environments, both internal and external, that impacts the functioning of an educational institution. Study of environments in an organisational setting is addressed in abundance; however, identification of environments specific to educational institutions is not addressed well in the literature. In one of the studies Oades et al., (2011) have done such classification and highlighted five different environments that impact the university as a whole, *viz.*, classroom and formal learning, social, local community and external organisation, faculty and administrative work, and residential. The present study adds on to the list of environments mentioned above and provides a distinct classification of external (location, government, competition, culture) as well as internal (formal, research, residential, administrative, social, local community, and family) environments.

One of the novel contributions is the identification of the family environment. Several studies have emphasised on the significance of striking work-family balance in employees’ performance as well as well-being (Kim, 2014; Peeters, Watez, Demerouti, & Regt, 2009). However, the facilitation of organisation for spouse engagement and its impact on employee well-being and performance demands special attention. This issue has evolved in our study and is named as “*the two-body problem.*” Few IITs chosen for our study is located in the remote area and thus, do not provide employment and engagement avenues for the spouses. The research reports that this factor creates unrest in the mind of the faculty members and impacts the work-life balance as well as their

well-being. This phenomenon has not been studied yet and paves the way for further research in this area.

- *Identification and categorisation of practices:* The research objective of the study aimed at identifying and exploring positive practices that lead to the well-being of faculty members in Indian engineering and technology institutes. Flexible research design and open-ended questions aided in achieving this objective. Not only the positive practices but also the negative practices were highlighted. The research generates an extensive list of such positive and negative practices and their well-being or ill-being outcomes. These practices have been separately studied in the previous literature. For example, Folch et al., (2015) highlight practices that the best-ranked universities maintain to promote research and provide research support. Likewise, the discussion chapter (chapter 6) briefs about scholarly articles that have studied such practices in different environments. However, none of the studies provides a comprehensive list of such practices. This gap is addressed in our research as the model derived from the data grounded in theory acts like an umbrella encompassing all these practices and adding on further practices that can impact the well-being of faculty members in higher education institutions.

These practices, positive and negative, lead to positive outcomes and negative outcomes respectively. In this study, the positive outcomes are denoted by well-being, and negative outcomes are denoted by ill-being. The previous literature highlights practices that improve the performance of the faculty members but do not link them with the well-being factor. The present study establishes a link between these practices and the elements of well-being described in the PERMA model (Seligman, 2011), thus, explicating the impact of positive practices on the mental well-being of faculty members. This linkage hasn't been explored hitherto.

Therefore, the model explores an exhaustive list of practices that are adopted by the educational institution for facilitating the experience of the faculty members in the institute. This finding contributes by adding perspective to the area of knowledge with a paucity of literature. Also, there were steps taken to check the quality of qualitative data. Several researchers have mentioned different approaches to ensure that the quality of data and the findings discovered from the data. Such measures were incorporated in this study to ensure the quality has been maintained and the data represents true theoretical insights.

7.3 Practical Implication

The theoretical framework representing practices in Indian engineering and technology institutes can serve as an important tool for the policymakers. The clear distinction of practices in several environmental contexts and their outcomes can serve as a basis for the policy makers to develop strategies relating to different facets of an educational institution. Since IITs are considered to be the best institutes in India, the outlining of the practices can serve as a benchmark to other institutions. These institutions can scrutinise their practices to figure out what are their strengths and deficits as compared to the best institution in the country and can frame strategies to develop faculty well-being in the institution. Thus the practices can be replicated, and the concern of faculty well-being can be extrapolated in different institutions located all over the country.

7.4 Limitations

One of the most important steps in conducting empirical research is to identify the limitations of the study. This awakens the researcher as well as the readers about the potential errors that might have affected the findings of the study. The reason for potential errors can be attributed to the data collection technique, the data analysis procedure, or the

relevance of the work for other substantive areas. Failure to acknowledge the limitations of scientific studies result in the extrapolation of findings that are flawed (Ioannidis, 2007). Given the interpretive nature of this study, it is essential to indicate the reflexivity in terms of research design, the data collection process and the application of the findings. Reflexivity is the process of critical self-reflection of the researcher's biases and theoretical predisposition (Urquhart, 2012). This study acknowledges the following limitations.

The first limitation can be attributed to the generalizability of the findings. The data was collected from the premier engineering and technology institutes of India that are mostly autonomous and supported by the Government. Thus these institutes might have enormous recourse support, which might be a barrier for the other institutes. The practices demonstrated in this institute might not be readily applicable to the other institutes. Another problem is that the conditions applicable to the engineering and technology institute might not be the same with institutes of another discipline. However, the findings of this study can be suggestive of the best practices leading to the well-being and institutes can strategise and customise these practices by their respective constraints. Also the data was collected only from the faculty members whereas the students and staff were not included in the process. The elimination was intentional as the students and staff might have a different set of needs and different practices to address them. The inclusion of the student and staff perspective could have increased the scope of study, but due to the limitation of time, this issue was not addressed. Thus, the practices from this study might not apply to the other stakeholders of an educational institution.

Secondly, the participants selected for this study are majorly faculty members who have spent a considerable amount of time in the institute and are highly experienced and thus might have become complacent about the practices that need to be further developed. There is a possibility that the faculty members who have joined recently might share a different or

new insight regarding this problem. But this selection was deliberate as the aim of this study was to explore the existing practices in the institute that lead to faculty well-being. Thus the experience of the participants in institute had to be one of the major criteria for theoretical sampling.

The third limitation can be attributed to the biases of the researcher. One of the requirements of the GTM is that the researcher should perform the literature review after the analysis part is done and the researcher must limit the interaction with the pre-existing literature to maintain the novelty of the data. But in this scenario, there was exposure to the literature beforehand. Thus this might have generated bias in the researcher while developing theory. However, the researcher bias was controlled by constant comparing the instances and maintaining theoretical sensitivity.

7.5 Scope for further research

This study can be further extended to other domains to increase its generalizability. The findings of the study can be taken as a hypothesis for deductive research, and the variables can be statistically tested. This would also provide method triangulation to the existing research. Triangulation is a technique through which the researchers ensure that the findings of the qualitative data are rich, comprehensive, robust and well developed. Patton (1999) provides four types of triangulation techniques. One is called the method triangulation where a different data collection method is applied to check the consistency of the findings. Using this technique can facilitate a deeper understanding of the findings of this study.

The facets of this study can be further explored to identify the positive practices relevant to the students and staff. Students are the largest stakeholders of an educational institution. Thus it is the responsibility of every institution to take proactive steps that foster well-being in the students. The statistics suggest that there is an increase in depression and suicidal

tendencies in the youth. Though steps are being taken to address this issue in the western countries in the Indian higher education this aspect remains ignored.

On the other hand, the non-academic staff is the part of the support system that influences the experience of both the students and faculty members. Thus it becomes important to address the issues the staffs are facing. The literature suggests the paucity of research in this domain as well. Incorporating the findings from these two aspects along with the findings of this study can give a holistic view of the positive practices that can lead to institutional well-being.

Another extension could be linked to the unique finding of the study about the two-body problem, the problem of lack of employment opportunity of a spouse. This problem, especially in the Indian education sector has neither been reported and nor been studied. Since the satisfaction of the spouse plays a significant role in work-life conflict, this problem needs special attention. A detailed qualitative study can be adopted to explore this problem in depth.

Appendix 1 – Memos

Memo 1: Adapting Foreign System

Till now three interviews have been coded and all the three participants mentioned ways in which the Indian Universities are trying to adapt the policies and practices of the Western Countries. Some of the policies that are currently there have also been adapted from the foreign countries. There is one possibility that since the top universities of the world belong to the western countries so probably that is why the Indian Universities also try to imitate them so that they can be more successful.

This justifies my decision to interview and collect data from the top colleges of India as the colleges in the lower tier try to adapt to the practices and policies of the colleges in the higher tier. Therefore the implementation of positive practices in the higher colleges will eventually spread in the lower tier colleges as they will adapt to it once they see the positive changes.

Memo 2: Administrative Staff

Very few people have talked in favour of the administrative staff. This participant (30IIT B) is one of them. Mostly people are not satisfied with the administrative support and staff in the institute. The positive things about the staff as mentioned is:

They function nicely

Active

Frank

Efficient

Hassle Free

Straight forward

Quick

Memo 3: Autonomy

The faculty in the premiere institutes are quite satisfied by the autonomy given to them.

The characteristics are:

Complete freedom

Quite flexible

Free to take decisions

Independent

Only when they are asked to add some modification, few of them talked about linking freedom to accountability. But again no concrete examples were given by participants to describe the reason for this thought process. So probably the current autonomy system is quite fine, so the link to the accountability is more like a forced answer or a subjective view with no facts or examples to be shared.

Memo 4: Feedback

The Feedback question

The feedback question seems to be redundant. I cant fit it well for deriving positive practices or cannot link to it. The purpose of selecting this question was that the positive feedbacks, which are not formal, tend to increase confidence and bring in resilience. But the answers that came in were all about the formal feedback system and its efficacy. So it got saturated pretty early. The other questions have to be framed such a way that the informal feedback perspective can be emerged.

Emphasis on teaching

The department of HSS usually takes the electives and not the core courses. Here the participant talks specifically about the HSS department. So as per the participant, people in HSS are more into teaching and less into research. But this cannot be generalised for all the faculty members. Since the courses are also elective probably they can arrange the teaching

style to be non traditional. But this liberty can not be given to core courses where the lab works are mandatory.

Memo 5: Interested students

The participant here talks about the students who are really interested in the classes. He also mentions that only 10-20% students are really interested. The characteristics of an interested student is that they are active and keep asking questions. Few students also ask such questions which are beyond the scope of the topic being taught and this catches the attention of the faculty members probably because it challenges their intellect and thus makes their job challenging.

Memo 6: Job Aspects

The participant gives two cues here. One is that the pressure and frustration is less when you are more engaged in your job. He also mentions that job engagement blocks you to see the other side of your job which is mainly negative and that might create frustration. The second cue is, he points out towards the senior faculty members. So does that mean that people with more frustration and pressure are usually the senior faculty members.! Or does it mean that the senior faculty members are less engaged in their job!!

I think I should figure out and try to analyse more about the faculty members who feel under pressure. For example, which age group do they fall in, which designation, gender, department and the reasons and anticipated solutions.

Memo 7: Leading Questions

I have asked lot of leading questions in the previous interviews. Like if i ask about the list of things creating pressure or stress would directly suggest that pressure and stress is already there and i want to figure out the reason. Instead i should ask questions which can first of all find out that whether these problems are there and then probably go for the reasons. So

instead of asking what you like about the institute i should ask generally about the institute environment. probably further bifurcating it to formal and informal and so on.

Memo 8: Major Change

The question in itself is difficult to answer because how a person perceives the change may be different from other person. For someone one particular change might be major but for another person that same change might be small to cite. And moreover major change is bit directive for them as they have to think in the direction of only "big" changes that have taken place, so other minor but important changes might be skipped out. This also constraints the thought process of the participants.

Memo 9: Missing Happiness

One of the constructs of subjective well-being is happiness. And somehow none of the nodes till now are named as "happy". Either the questions haven't been channelized in a way that people can recall the happy moments or talk about being happy at any point of time. This aspects needs to be probed more.

Memo 10: Number of Students

Number of students has been linked to students' as well as facultys' level of satisfaction. few people have mentioned it as 'classroom size' also. As per the faculty members the less number of students lead to:

Increased attention in class

Better interpersonal connection with students

More enjoyable for faculty

Increased attention

Thus it can be seen that both faculty members and students are being benefitted with less number of students in a class. As per the response the less number can be identified as less than 100 students in a class. But since the intake of students has increased it becomes

difficult to divide classes with less students as that will increase the number of teaching hours of the faculty.

Memo 11: Peer Mentoring

The iits already have a system where the senior students act as the mentors for the junior students. Few students feel that this system is effective and few mention shortcomings like the senior student is under pressure or even that the students dont feel free because of lack of anonymity. The students who have mentored the juniors believe this to be an effective system. The participant in this interview assumes that the senior student felt under pressure when he was asked to mentor the junior students. But the student might have felt pressurised because probably he was asked to read another subject apart from his study load and teach others. probably that student is not interested in teaching and therefore felt pressurised.

Thus formal mentoring is in place but apart from that if the relationship between the students and faculty members grown strong informally then this might really be beneficial to address such problems.

Memo 12: Research Funding

This creates confusion as earlier in the interview the participant mentioned that the research grant support is there. But here the participant wants more research grant. He also mentions about the mechanism that should be present for extra grant. Probably he is satisfied with the help that the institute is providing but somewhere gets stuck when it comes to grant from the external agencies. Now this points out towards the problem that the faculty members of other institutes also face.

The research support internal and external has to be bifurcated and then the examined. The positive and negative of both the sources to be considered.

Memo 13: Research Grant

The faculty members in IIT Bombay are pretty satisfied by the research grant support that they are getting from the institute. Even the new faculty members seem to be content. Although all IITs are government organizations and the rule for research grant is almost same, but the level of satisfaction is not same. The faculty members in IIT Bombay seem to be more content whereas the faculty in IIT Chennai faced lot of issues regarding the grants. One reason that I can figure out for this difference is the presence of bureaucracy. In IIT Bombay the organizational structure is more flat whereas there is more hierarchy in other institutes. So this aspect needs to be investigated further.

Memo 14: Support System

The participant has talked about the lack of support system. But I haven't followed up with the meaning of support system from the participant's perspective. So, here I assume that the support system is about the administration and the administrative staff.

Memo 15: System Structurisation

The respondent is more in favour of a structured system and then make exceptions to fit in the changing situations. The current system is loosely structured and thus can create a problem of accountability, as was pointed out by other respondents. But how much it should be structured and what are the cases that should be treated as exceptions is ambiguous.

Memo 16: The two-body problem

One of the interesting aspects that has appeared is the two body problem faced by faculty members at IIT Kharagpur. The two body problem is the problem of the lack of opportunity available for the spouse of the faculty members employed in the institute. The spouse are equally qualified but they do not have enough opportunities where they can work or even get engaged. This creates dissatisfaction in the family and thus can also impact the performance of the faculty members on campus.

Memo 17: The Complex Administrative Environment

The complex administrative environment in an educational institution is the one responsible for managing and supervising the activities of the other environments. Thus this has made the admin environment complex and important. The admin activities are related to the core areas of functioning of the institution like research and teaching and secondly, to the areas that support the core area and frame a system for operation. On the basis of this the admin environment can be divided into academic and non academic related activities. The academic section would consist of the practices that are linked to the research and teaching only and the non academic can incorporate other sub sections like compensation, recruitment, system and structure, communication, performance appraisal etc. These are the auxiliary practices that are important to support the functioning of an educational institution. Within these the sub sections can be further explained and the open codes can be grouped first in the sub section and then the sub section to form part of the higher environment. that is the administration.

Memo 18: The Salary Factor

In most of the institutes the faculty members feel that they are not being paid well as compared to the corporates or private institutes. They have facility for huge funding but there is a sense of dissatisfaction regarding the direct incentive linked to their performance. The participant also talks about trading off between the flexibility and salary factor. It is believed that the corporates pay huge amount of salary but they do not have much flexibility compared to the academic institutions. This dissatisfaction has been noticed specially in institutes that are located in tier 1 cities like Mumbai, Delhi or Chennai. Whereas, institutes like kharagpur and pilani did not have this comparison. In fact, participants from kharagpur were quite appreciative of the salary they receive. This sense of dissatisfaction can also be because of the huge expenditure factor being in a metro city, as the purchasing power parity

reduces, because the minimum standard of lifestyle increases. This factor is compromising the hygiene factor of motivation theory.

There is a need to attract and motivate the talented employees if not by salary then by other incentives so that they feel that their efforts is being rewarded in one way or the other. These forms of incentives have to be designed and devised.

Memo 19: Types of Motivation

The motivation for the faculty can be divided into intrinsic and extrinsic both. So as per the participant good teaching comes under intrinsic motivation. Which is a good point for aggregating the codes at a higher level. Similarly there can be factors that demotivate the teachers. Like the decline in student commitment can lower down motivation level for teachers.

The motivation that is provided by the institution can become external motivator or demotivation like recognition and reward of efforts.

Memo 20: UG and PG for Faculty Interaction

Almost all the faculty members have mentioned that see and treat the UG and PG (and above) students differently. The reasons are maturity level, number of students and also the time spent with them. Since the number of students in UG level is high therefore it becomes difficult for the faculty to interact with all the students in similar fashion and thus the interaction is cut down. Moreover, the faculty members get only 3 hours in a week to interact with them. These 3 hours are completely utilised to teach the technical stuff and thus the informal interaction is cut down.

Thus it is very important at least in the UG level to organize some informal meets so that the interaction hours can be increased and the distance can be removed. The better the communication with the faculty members the better the students can open up about their problems in life. And thus the faculty members can truly act as advisors.

Memo 21: Upside Down

Interview 35 IIT has almost turned all my results upside down. All the faculty and students have accepted that there is an increase in trend of depression and stress among the students more and also to some extent in faculty members. Even the reports published by various government agencies say so. But according to this participant the trend has in fact gone down and because of abundant opportunities available in market the case is other way round.

Now the question is how to reach a consensus. Since the response from this participant is completely different from other response and statistics should it be ignored and should it be given some more space for further investigation?

Appendix 2 - Disclosure Agreement

Interview Disclosure Agreement

Title of Study: Positive Organizational Practices in Indian Engineering and Technology Institute: A Model Building Approach

Introduction and Purpose

My name is Priyanka Bhattacharya. I am a research scholar in Department of Management, Birla Institute of Technology and Science, Pilani, working under the able guidance of Dr. Sarvesh Satija. I would like to invite you to take part in my research study, which concerns identifying and proposing positive organizational practices essential for the subjective well-being of faculty and staff in an engineering and technology institute.

Procedures

If you agree to participate in my research, I will conduct an interview with you at a time and location of your choice. The interview will involve questions related to the topic of my research. It should last about 45 minutes. With your permission, I will audiotape and take notes during the interview. The recording is to accurately record the information you provide, and will be used for transcription purposes only. If you choose not to be audiotaped, I will take notes instead. If you agree to being audiotaped but feel uncomfortable at any time during the interview, I can turn off the recorder at your request. Or if you don't wish to continue, you can stop the interview at any time.

I expect to conduct only one interview, however, follow-ups may be needed for added clarification. If so, I will contact you by mail/phone to request this.

Benefits

There is no direct benefit to you from taking part in this study. It is hoped that the research will provide path breaking guidelines and framework for policy formulation and its implementation subsequently at the higher technical level of education in India, which will highlight the organizational practices that lead to subjective well-being of employees and create an environment of excellence along with happiness and life satisfaction.

Confidentiality

Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used.

To minimize the risks to confidentiality, we will provide limited access to study records and also keep the data in a password secured form.

When the research is completed, I may save the tapes and notes for use in future research done by others or myself. I will retain these records even after the study is over. The same measures described above will be taken to protect confidentiality of this study data.

Rights

Participation in research is completely voluntary. You are free to decline to take part in the project. You can decline to answer any questions and are free to stop taking part in the project at any time. Whether or not you choose to participate in the research and whether or not you choose to answer a question or continue participating in the project, there will be no penalty to you or loss of benefits to which you are otherwise entitled.

Questions

If you have any questions about this research, please feel free to contact me. I can be reached at priyankab.bhattacharya@pilani.bits-pilani.ac.in or +91 8441000840.

I (the interviewer) agree to the above-mentioned terms and conditions of conducting the interview and take due responsibility of the data collected.

Interviewer's Signature

Date

Appendix 3 – Sample Characteristics

Sample Characteristics						
Gender	Age	Experience	Specialization	Position	Duration in current institute	Other roles
M	35	10 to 20 years	COMPUTER SCI	ASSISTANT PROFESSOR	less than 10 years	FACULTY
M	35	10 to 20 years	COMPUTER SCI	ASSISTANT PROFESSOR	10 to 20 years	FACULTY
M	35	10 to 20 years	ELECTRICAL	ASSISTANT PROFESSOR	less than 10 years	FACULTY
M	35	10 to 20 years	MANUFACTURING	ASSISTANT PROFESSOR	10 to 20 years	FACULTY
M	35	less than 10 years	MECHANICAL	ASSISTANT PROFESSOR	less than 10 years	FACULTY
M	35	10 to 20 years	MECHANICAL	ASSISTANT PROFESSOR	less than 10 years	FACULTY
F	25	less than 10 years	MGMT and HUMANITIES	ASSISTANT PROFESSOR	less than 10 years	HAPPINESS CENTER MEMBER
M	25	less than 10 years	MGMT and HUMANITIES	ASSISTANT PROFESSOR	less than 10 years	FACULTY
F	25	less than 10 years	MGMT and HUMANITIES	ASSISTANT PROFESSOR	less than 10 years	HAPPINESS CENTER MEMBER
F	35	10 to 20 years	MGMT and HUMANITIES	ASSISTANT PROFESSOR	less than 10 years	HAPPINESS CENTER MEMBER
M	45	10 to 20 years	OTHERS	ASSOCIATE PROFESSOR	10 to 20 years	DEAN OTHERS
F	35	10 to 20 years	CHEMICAL	ASSOCIATE PROFESSOR	10 to 20 years	FACULTY
M	45	20 to 30 years	CHEMICAL	ASSOCIATE PROFESSOR	10 to 20 years	FACULTY
M	35	10 to 20 years	CIVIL	ASSOCIATE PROFESSOR	10 to 20 years	FACULTY
M	45	10 to 20 years	CIVIL	ASSOCIATE PROFESSOR	10 to 20 years	FACULTY
M	45	10 to 20 years	COMPUTER SCI	ASSOCIATE PROFESSOR	10 to 20 years	FACULTY
F	35	20 to 30 years	MECHANICAL	ASSOCIATE PROFESSOR	10 to 20 years	ASSOCIATE DEAN
F	45	30 to 40 years	MGMT and HUMANITIES	ASSOCIATE PROFESSOR	10 to 20 years	FACULTY
F	45	10 to 20 years	MGMT AND HUMANITIES	ASSOCIATE PROFESSOR	less than 10 years	FACULTY
M	55	less than 10 years	OTHERS	ASSOCIATE PROFESSOR	less than 10 years	INDUSTRY EXPERT
M	45	10 to 20 years	OTHERS	ASSOCIATE PROFESSOR	10 to 20 years	ASSOCIATE DEAN
F	45	20 to 30 years	CHEMICAL	PROFESSOR	10 to 20 years	ASSOCIATE DEAN
M	55	30 to 40 years	CHEMICAL	PROFESSOR	30 to 40 years	DEAN FACULTY
M	55	20 to 30 years	CIVIL	PROFESSOR	20 to 30 years	HOD
F	55	20 to 30 years	CIVIL	PROFESSOR	20 to 30 years	DEAN OTHERS
M	35	10 to 20 years	COMPUTER SCI	PROFESSOR	10 to 20 years	DEAN OTHERS
M	35	10 to 20 years	COMPUTER SCI	PROFESSOR	10 to 20 years	DEAN FACULTY
M	45	10 to 20 years	COMPUTER SCI	PROFESSOR	10 to 20 years	DEAN OTHERS
F	35	20 to 30 years	COMPUTER SCI	PROFESSOR	10 to 20 years	HOD
M	45	20 to 30 years	COMPUTER SCI	PROFESSOR	20 to 30 years	DEAN FACULTY
F	45	30 to 40 years	COMPUTER SCI	PROFESSOR	10 to 20 years	DEAN OTHERS
M	55	20 to 30 years	ELECTRICAL	PROFESSOR	20 to 30 years	HOD
M	45	20 to 30 years	ELECTRONICS	PROFESSOR	20 to 30 years	HOD
M	55	20 to 30 years	ELECTRONICS	PROFESSOR	20 to 30 years	DEAN OTHERS
M	55	20 to 30 years	ELECTRONICS	PROFESSOR	20 to 30 years	DEAN OTHERS
M	45	20 to 30 years	MECHANICAL	PROFESSOR	10 to 20 years	ASSOCIATE DEAN
M	55	20 to 30 years	MECHANICAL	PROFESSOR	20 to 30 years	DEAN OTHERS
M	55	30 to 40 years	MGMT and HUMANITIES	PROFESSOR	20 to 30 years	DEAN OTHERS
M	55	20 to 30 years	MGMT AND HUMANITIES	PROFESSOR	10 to 20 years	ASSOCIATE DEAN
M	55	30 to 40 years	MGMT AND HUMANITIES	PROFESSOR	30 to 40 years	DEAN FACULTY
F	55	20 to 30 years	OTHERS	PROFESSOR	20 to 30 years	ASSOCIATE DEAN

Appendix 4 – The Big-Tent Criteria

Criteria for quality (end goal)	Various means, practices, and methods through which to achieve
Worthy topic	<p>The topic of research is</p> <ul style="list-style-type: none"> • Relevant • Timely • Significant • Interesting
Rich rigor	<p>The study uses sufficient, abundant, appropriate, and complex</p> <ul style="list-style-type: none"> • Theoretical constructs • Data and time in the field • Sample(s) • Context(s) • Data collection and analysis procedure
Sincerity	<p>The study is characterized by</p> <ul style="list-style-type: none"> • Self-reflexivity about subjective values, biases, and inclinations of the researcher • Transparency about the methods and challenges
Credibility	<p>The research is marked by</p> <ul style="list-style-type: none"> • Thick description of participants, concrete details, explication of non-textual knowledge, and showing rather than telling • Triangulation or crystallization • Multivocality • Member reflections
Resonance	<p>The research influences, affects, or moves particular readers or a variety of audiences through</p> <ul style="list-style-type: none"> • Aesthetic, evocative representation • Naturalistic generalizations • Transferable findings
Significant contribution	<p>The research provides a significant contribution</p> <ul style="list-style-type: none"> • Conceptually/theoretically • Practically • Morally • Methodologically • Heuristically
Ethical	<p>The research considers</p> <ul style="list-style-type: none"> • Procedural ethics (such as human subjects) • Situational and culturally specific ethics • Relational ethics • Exiting ethics (leaving the scene and sharing the research)
Meaningful coherence	<p>The study</p> <ul style="list-style-type: none"> • Achieves what it purports to be about • Uses methods and procedures that fits its stated goals • Meaningfully interconnects literature, research questions, findings, and interpretation with each other

Eight "Big-Tent" criteria for excellent qualitative research (Adapted from Tracy(2010))

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Publications

- Bhattacharya P., Satija S., & Gupta R. K. (2019), “*Towards Human Sustainability in Higher Education by Adopting a Positive Approach Adopting a Positive Approach*”, *Advanced, Science, Engineering and Medicine*, 11, 133-140.
- Satija S., Bhattacharya P. & Gupta R. K. (2016), “*Positive Organizational Practices in Indian Engineering & Technology Institute: An Exposition of Grounded Theory*”, *International Journal of Psychology*, 51 (S1).
- Bhattacharya P., Satija S., & Gupta R. K. (2018), “*Requisite for Positivity in 21st Century Work Contexts: A Literature Review*”, *Journal of Global Responsibility* (ABDC and Thomson Reuters indexed, *under review*).

Conferences

- Presented paper in Tenth AIMS International Conference on Management, IIM Bangalore (2012)- Study of Indian Education Rural Market: Problems and cost-effective Solutions.
- Presented poster in 2nd PAN IIM World Management Conference, IIM Khozikode (2014)- Leading towards Positive Organizational Practices in Indian Engineering and Technology Institutes: An Emerging Global Perspective.
- Presented poster in 3rd PAN IIM World Management Conference, IIM Indore (2015)- Envisioning India Towards Next Decade Through A Positive Lens.
- Presented paper in Fourth Indian Academy of Management Conference, IIM Lucknow, Noida Campus (2015)- Positive Organizational Practices and Processes in Indian Engineering and Technology Institute.
- Presented paper in The 31st International Congress of Psychology, Yokohama, Japan (2016)- Positive Organizational Practices in Indian Engineering & Technology Institute: An Exposition of Grounded Theory. (In person presented by co-author Dr. Sarvesh Satija)
- Presented paper in 2nd International Conference on Evidence Based Management (ICEBM) (2017)- Positive Organisational Practices: A Methodological Review.
- Paper presented in International Conference on Recent Trends in Environment Sustainable Development (RTESD) (2018)- Towards Human Sustainability in Higher Education by Adopting a Positive Approach.

Brief Bio-data of Thesis Supervisor

Dr. Sarvesh Satija had been Assistant Professor with Department of Management, Birla Institute of Technology and Science (BITS Pilani- Pilani Campus), Pilani, Rajasthan. In addition to this, he had been a nucleus member of Faculty Affairs Division, BITS Pilani, Pilani and Faculty Co-ordinator (MBA Placements) at BITS Pilani. He holds Bachelor's degree (Honours) in Physics from University of Delhi, Masters degree in Psychology (Organizational Behaviour), and Ph.D. in Psychology (Creativity- Cognitive Psychology) from Jamia Millia Islamia, Central University, Delhi. He has more than fifteen years of teaching (post-graduate and under- graduate level) and research experience. He teaches Organizational Behaviour and Human Resource Management to MBA students and Introductory Psychology, Human Resource Management, and Principles of Management to undergraduate engineering students at BITS, Pilani.

His research areas of interest are Positive Organizational Behaviour, Positive Psychology, Occupational Health Psychology, Innovation and Business Creativity, Indian Vedanta (Spirituality) and Management, and Indian Vedanta and Psychology. He has the privilege of having primary memberships to many professional bodies like American Psychological Association (APA), Association of Indian Management Scholars (AIMS- USA), Indian Science Congress Association, Indian Academy of Applied Psychology, Indian Society for Applied Behavioural Sciences (ISABS) and National Academy of Psychology (NAoP). He has contributed more than 25 research papers in various journals of international and national repute, and conference proceedings. He has 4 psychological rating scales developed to his credit. Apart from teaching and research, he keeps conducting Management training workshops and management development programmes. Adopting Vedantic concepts, he feels, makes a person more productive and successful.

Brief Bio-data of Thesis Co-supervisor

Prof. Gupta was a professor of Human Behaviour & Organization Development at the **Management Development Institute**, Gurgaon during 1997-2016. Before this he was a Professor at **I.I.M. Lucknow**. He also spent a year as a visiting professor at **Rotterdam School of Management, The Netherlands**. He is a **Professional Member** of the **Indian Society of Applied Behavioural Science (ISABS)**, and a **founding member of the National HRD Network**.

He has a first degree in electrical engineering from **I.I.T.Kanpur**. Later he did his doctorate in management from **I.I.M.Ahmedabad** under the guidance of Late Prof. Uday Pareek, who is considered to be the father of HRD in India. Prof Gupta's thesis was a piece of action research on the implementation of HRD in a large public sector bank. The thesis was later published as book entitled *Implementing HRD: Action Research into the Process* (Rawat Publications, Jaipur).

Before joining the doctoral programme in IIMA, he had worked as a probationary officer in SBI for over two years. After completing his doctorate he worked for over four years as the corporate **HRD Manager in Jyoti Ltd.**, an engineering company in Vadodara, after which he joined on the faculty of IIMLucknow.

Prof Gupta has consulted with Indo-Gulf Fertilisers, Power Trading Corporation, NEEPCO and other large organizations on organization design and development. He was also engaged in consulting on institution building with KIIT University's School of Management.

Academically he has a special interest in the linkage between Indian culture and management, and the need for doing useful and rigorous research. A collection of his papers on this theme has already been published. He has four books and over 100 scientific publications to his credit. His co-edited book on "Qualitative Research in Management" has been released by Sage in March 2015. He has been on the International Editorial Boards of a number of journals such as International Journal of Cross-Cultural Management (Sage,London),Journal of Research Practice (Online journal)and International Journal of Indian Culture and Business Management (Inderscience, Switzerland). During the last 18 years he has been very deeply involved in the doctoral programme at MDI. He has continuously taught doctoral courses and guided students. Over a dozen of them have completed their doctorate and a few are at different stages of their research. His current main passion is to help young scholars do exciting, creative and useful research.

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He recently completed his three-year term as an **Independent Director** on the **Board of Power Grid Corporation of India Ltd.** He is a member of the **Customer Service Committee** of **Bank of Baroda**. He is also a member of the **Steering Committee on HR** of the Board of **Punjab National Bank**. Earlier he was a member of the **Advisory Group on HR Issues of Public Sector Banks** set up by the **Ministry of Finance, Government of India**.

He has recently been appointed by **UGC** on the **Expert Committee to design the model curriculum for psychology in Higher Education**. He has been a member of the **Expert Group on Psychology** set up by the **Indian Council of Social Science Research (ICSSR)** for a survey of research in psychology apart from being on the Advisory Committee of a large research project funded by ICSSR. He has been the **Research Advisor** to the KIIT School of Management, Bhubneswar. He was **a member of the Academic Councils** of the KIIT University, Bhubneswar and Navrachna University, Baroda. He has been **a member of the faculty selection panels** of IIM Indore, IIM Kozokode, IIM Rohtak, IIM Kashipur, AmbedkarUniversity(Delhi)etc. In addition he is on the academic advisory bodies of some management institutes, and is often involved in doctoral thesis examination

Brief Bio-data of the Candidate

Priyanka Bhattacharya is a research scholar in Department of Management at Birla Institute of Technology and Science Pilani, Pilani campus, Rajasthan. She completed her Master of Business Administration with dual specialization in finance and human resource management from Chattisgarh Swami Vivekanand Technical University, Chattisgarh after acquiring a Bachelor of Commerce degree from Pt. Ravishankar Shukla University in Raipur, Chattisgarh. Her research interests are in the sector of positive psychology, organizational behaviour, human resource planning and management, organizational change and development, and strategic management.

She has presented her original research work in six international conferences in India and abroad. She has presented at and won business plan competitions in IIM Bangalore, XLRI Jamshedpur, NIT Raipur, SIMSREE Mumbai, TKM college of Engineering Kerala, IIM Calcutta, FMS-IIT BHU, and VNIT Nagpur. She was awarded with the prestigious title “Youth Icon of Chattisgarh” in the year 2012.