

CHANGE MANAGEMENT AT HIGHER EDUCATION LEVEL: A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR

By

Sehrish Kashan



**NATIONAL UNIVERSITY OF MODERN LANGUAGES,
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PRIVATE SECTOR**

By

Sehrish Kashan

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Thesis Titled: **CHANGE MANAGEMENT AT HIGHER EDUCATION LEVEL: A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR**

Submitted By: Sehrish Kashan
Name of Student

Registration #:784-PhD/Edu/F18

DOCTOR OF PHILOSOPHY
Degree Name in Full

EDUCATIONAL SCIENCES
Name of Discipline

Dr. Wajeaha Aurangzeb
Name of Research Supervisor

Signature of Research Supervisor

Prof. Dr. Khalid Sultan
Name of Dean (FSS)

Signature of Dean (FSS)

Maj Gen Muhammad Jaffar, HI (M) (Retd)
Name of Rector

Signature of Rector

Date

AUTHOR'S DECLARATION

I **Sehrish Kashan**
Daughter of **Zulfiqar Ahmed Kashan**
Registration # **784-PhD/Edu/F18**
Discipline **Education**

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ABSTRACT

Thesis Title: Change Management at Higher Education Level: A Comparative Study of Public and Private Sector

The current study was designed to conduct a comparative analysis of educational change management in public and private sector higher education institutions. Major objectives of the study were: to investigate level of change management in HEIs, to compare phases of Fullan's Educational Change Model among Public and Private HEIs, to explore the views of heads regarding change management in Public and Private HEIs. The population of the study consisted of 52 Deans, 315 Heads of departments and 2685 Faculty members of social sciences. The selection criteria of universities involve universities with technological changes and restructuring. Proportionate stratified random sampling was used to obtain sample from two strata (public and private). For obtaining quantitative sample, 20% of total faculty members were selected. The sample of the study was 536 faculty members which led to 315 public sector and 221 private sector faculty members. To meet the saturation point of the study, from each stratum 12 deans (6 public and 6 private) and 24 heads (14 public and 10 private) were selected as qualitative sample. Convergent parallel design of mixed methods was utilized for the study. The participants of the study were Deans, Heads and Faculty members of social sciences working in public and private sector HEIs of Punjab province. Harvey's (2001) standardized Checklist was used to obtain ratings from Deans. A self-developed questionnaire based on Fullan's (2016) educational change model was used to obtain level of agreement of faculty members. A semi-structured interview was used to obtain responses of Heads of departments. The pilot study was conducted from one Public and one Private university. The questionnaire was validated through face, content and construct validity processes. The interview was validated through face and content validity. Valid and reliable Harvey's (2001) Checklist for Change was adopted. However, test-retest and Cronbach's Alpha were applied to assess the reliability of the Checklist and questionnaire. Mean and S.D as descriptive statistics, independent t-test, and thematic analysis were used to assess the data. Findings revealed that higher education institutions are adequately coping with educational change and institutions place their focus on all three phases but mainly on first two phases of Fullan's model. Change management in higher education has addressed several reforms including new study programs, infrastructure, administrative processes, instructional processes, curriculum reforms, technological changes, organizational structure and learning environment etc. The study found that there existed a significant difference in teachers' perceptions of change management between private and public sector institutions. Private sector institutions possess higher capability for change management than public sector. The study recommended that university management may provide training on strategic planning and educational reforms. Universities may activate various change agents, such as change teams comprising students, management and organizational leadership to energize change dynamics. Creating an organizational structure with greater integration and differentiation may support the processes of educational reforms in Public sector HEIs. It is essential to enable horizontal coordination not only in departments but within faculties of Public sector HEIs. It is essential to enable linkage between bottom-up processes and institutional leadership while performing educational reforms. During the implementation process involving teachers in collaborative processes with the decision makers could be more meaningful strategy to implement educational reforms.

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LIST OF ABBREVIATIONS

Abbreviations	Terms
d.f	Degree of Freedom
EFA	Exploratory Factor Analysis
EFL	English Foreign Language
F	Value of Levene's test for Equality of Variances
H	Hypothesis
HEC	Higher Education Commission
HEIs	Higher Education Institutions
ICT	Information and Communication Technologies
Insig.	Insignificant
M	Mean
N/A	Not Applicable
N/n	Number
NACTE	National Accreditation Council for Teacher Education
ORIC	Office of Research Innovation & Commercialization
p	Level of Significance
PD	Professional Development
RQ	Research Question
S.D	Standard Deviation
Sig	Significance / Significant
SPSS	Statistical Package for Social Sciences
SS	Social Sciences
STEM	Science, Technology Engineering, and Mathematics
t	Independent t-test

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Sehrish Kashan

Dedication

*To
My Family*

*And
Teachers*

*Whose sincere prayers and
Guidance brought every success in my life.*

CHAPTER 1

INTRODUCTION

“The world hates change, yet it is the only thing that has brought progress.”

—Charles Kettering

The pace with which initiatives and reforms have been presented in the higher education system is a significant area of interest for scholars. However, the proper research to investigate the planning, implementation, and sustainability of changes is limited. As a result, educationists and administrators are moving toward research-oriented assessments of reforms proposed to assist higher education institutions in answering the key question: How do the administrators implement new initiatives effectively to place a significant effect on the instructional process?

The reforms and initiatives in higher education institutions (HEIs) often involve reforms, including new study programs, instructional processes, administrative processes, curriculum reforms, research initiatives, etc. (Hundley, 2019; Kells, 2021; McQuay, 2021). The purpose of implementing such reforms is to enhance the teaching-learning process and to make meaningful changes that would enable continued improvements. This study evaluated the faculty, heads’ and deans’ perceptions of change management and how the perceptions are in line with Fullan’s (2016) educational change framework.

Various earlier research studies have provided major organizational change management models (Edwin, 2008; Ellsworth, 2000; Fullan, 1991a; 1999; 2001a; Hargreaves, 2005a; 2005b). In the third decade of the twenty-first century, change theorists seek a more inclusive theory and more sophisticated tactics for change agents to employ as they meet more complicated cultures of change. Over the past several decades, management literature has shifted from rational theories that emphasize system alignment and efficiency to theories that strive to explain dynamic complexity (Senge, 1990).

Taylor (scientific management), Fayol (administration), and Weber (ideal bureaucracy) were the most influential organizational theorists of the 1920s, according to the management literature (Amwago, 2018; Arar, K., & Abramovitz, 2017; Brown, 2014; Hazelwood, 2016; Mira-Bohigas, 2021). Their views emphasized productivity, logic, security, impersonality, formal role connections, and a vertical hierarchy in which managers were the primary guardians of their employees. These conventional thinkers promoted hierarchical organizations and prescribed, in general, traditional management techniques for success. Not unexpectedly, competing ideas eventually undermined these traditional management and administration principles. Deming, who created the concept of comprehensive quality management in the 1950s, was among the detractors. The 1990s marked the beginning of an age in which organizations were compared to living systems that survive directly to their capacity to learn and adapt, rather than machines characterized by simplistic linear models from the early twentieth century. The scientific revolution of chaos and complexity theory altered the prevalent view of organizational transformation. However, transitional or bridge theories of learning organizations and systems thinking exist between rational theories and complexity theories (Tang, 2019).

Change theorists (Fullan, 1991a; 1999; 2001a; Goodlad, 1975; Horsley & Loucks-Horsley, 1998; Oakes *et al.*, 2000) assert that, to implement change, the Most of educational institutions have prioritized structural reforms designed at state level and implemented at the district level, rather than concern-based management at the local level. These researchers assert that government-introduced educational policy has, for the most part, continued to focus on one-size-fits-all change efforts, which Oakes *et al.* (2000) refer to as the reform-mill approach and Horsley & Loucks-Horsley (1998) describe as a structural approach to preparation and training that identifies benchmarks and announces a change effort, and then adopts a decision and commences preparation and training. Oakes *et al.* (2000) note that this

typical reform-oriented policy approach fails to capture the eccentricities of genuine transformation, which is dependent on local settings of "relationships, histories, and opportunities." Oakes *et al.* (2000) highlighted that by the time reform initiatives reach the local level for implementation, the school culture is typically so far removed from the motive that prompted the initial reform attempt that local educators are unable to provide much implementation assistance. Then, policymakers, the public, and educators, dissatisfied with the results of the previous reform, shift their focus to the subsequent reform, which will offer fresh funds and new leadership (Fullan, 2016; White, 2016).

The principles of trust, dedication, and skepticism have also played a crucial role in deciding the success of any change initiative. Rainey (2021) explores the link between trust, dedication, and skepticism. According to Rainey's research, as levels of trust improve, organizational cynicism diminishes, increasing organizational commitment. The time necessary to absorb and internalize new ideas, tactics, and methodologies is another obstacle to implementing and institutionalizing change. Motley (2021) also notes that "dedicated time will be required to handle the improvements in professional development and student learning ushered in by national standards." This time must be included "into the school day and the lives of teachers, and must involve a diversity of experiences across time, supportive learning environments, and time for reflection."

Change management has been considered a significant research area in educational settings for the last two decades. After the emergence of change management models, several studies are conducted using different models and frameworks of change in educational sector. Therefore, the constructs related to change management and change-related factors in management are also being studied to provide greater insight for educational administrators. Silva *et al.* (2019) conducted a study to measure impact of

educational changes at school level while focusing on the implementation of change in education and suggested that administrators may focus on implementation phase strictly while dealing with reforms, while it comprises behaviors and beliefs related to people and their perspectives and actions towards adopting change. The phases of change in the educational ground have to made interest among the researchers and theorists, especially recently in the awaken of high chances of responsibility and impact of educational reform programmers. In addition, Broadfoot *et al.* (2018) conducted a study on change management which includes standards and perspectives about values, objectives, and initiatives that need to combine them with one another to function evenly. Lozano, Ceulemans, & Seatter (2015) found that change is related to modification of every single person's perspective towards their characters and duties, including transformation of organization and practice.

Fullan (2018) mentioned that educational reforms are mainly simple but complex at social level. Fullan further indicated change as a learning experience that involved children and adults. This social complication alters and affects any perceptions and patterns of change. Therefore, post-modernists view educational institutions as open systems that conceptualize change as complex and unpredictable processes that cannot be directed by pre-planned procedures and processes. From this viewpoint, the implementation of instructional reforms cannot be a process of transmission instead, it needs to be considered as a transformation process due to the involvement of beliefs and behaviors of the people about what they perceive about change. Hence, change is about affecting organization, practices, individual's perceptions regarding commitments, purposes, values, and cultural bonding for harmonious processing of organization or institution. Consequently, sustainable and true change can only be secured through transformation of cultural beliefs, behaviors, and attitudes.

During last two decades, many developing and developed nations have presented reforms in their higher education systems. This has directed policymakers' concentration on teachers' professional development due to their vital role in the implementation of educational reforms. Therefore, the role of teachers and their professional development has been focused in recent research on educational settings. Theorists like Evans (2010) focused on the appropriateness of a top-to-down approach in deploying reforms in education system. Evans further highlighted the role of policymakers, the characteristics of top-down procedures in teachers' professional development, and the properties of such studies to inform the change agents about the prerequisites and products of the change process. Researches in these areas are significant to the Pakistani perspective due to the amplified expectations of policymakers for the faculty members to act as active and primary agents of change. It is also substantial that enhancing teachers' skills alone would not be sufficient for meaningful implementation and continuation of educational reforms. Therefore, it is important that universities offer an equipped climate and reasonable resources for teachers to work as efficient change agents.

Recently in the wake of increased expectations and impact and accountability of various educational reforms, the diversity in educational change management has produced interest among researchers and theorists (Gratz, 2018; Hassan, 2016; Fullan, 2016; Levin and Fullan, 2008; Lucas, 2018). Various individual and large-scale research project have formed the educational change, depending upon the time and place zones. It is also linked with fluctuation and harmony within social, cultural, and political paradigm. The growing and demanding research in educational change management has established it as an area of study in its own domain. At its stage of development, it is clear from existing literature that the area of educational change is Anglocentric and based on the research from western liberal countries. However, for a widespread awareness and maturity in this field, the span

of scholarly work is expanding to incorporate perceptions and perspectives from different socio-political and geographical locations. This research is mainly based on the trends of deploying and implementing educational change, and explores the perceptions and experiences of faculty and administrators regarding educational change management in Pakistan.

Rieg, Gatersleben, & Christie (2021) mentioned that a proficient change agent would comprehend and deploy according to the traditions and values of the institution for which the change is needed. Due to the variety of cultural perspectives in Pakistan, every higher education institution might have more diverse characteristics than others. In the top-down educational reforms, this may create a major contest for policymakers to formulate suitable implementation strategies for each institution. Hence, it enhances the significance of the intense involvement of the faculty members in preparing and deploying educational reforms. Faculty members being active members of the university, might be in a better place to comprehend the cultural diversity and make valuable judgments and suggestions. Hence, it must also be noted that institutional and organizational philosophy, values, and culture is dynamic entity, and it alters and deviates with time. It is, therefore, necessary to have a mechanism for assessing impact of initiative within society, within university, and among internal/external stakeholders. In the case of universities, parents and guardians could be the instances of stakeholders outside of the universities. In the context of Pakistan, the importance of external stakeholders increases due to social bonding within families. Teachers in this regard play a bridging role between external and internal stakeholders. Hence, active participation of teachers in the change process is meaningful.

Adjusting and regulating the cultural change in any organization is not the sole task of change agents. Often they may require a strategic change in the organizational or

institutional culture (Schmidt, 2017). However, a specific culture's attitude, behaviour, and common beliefs may be influenced through strategic and planned change. Understanding these types of planned interventions is a significant factor for teachers in higher education. Teachers must value and own the aims of these interventions. Furthermore, teachers must understand and possess knowledge about the diversity of various cultures within the institution. This can enable teachers to cope with pupils within the institution, who were from diversified cultures and possess different approaches towards fellows, teachers and institution (Taylor, 2019). For higher education teachers in Pakistan, perceptions of teachers and administrators toward educational change are important factor to be considered.

Over the past decade, there has been a growing interest in educational transformation, including its achievements and failures. Major emphasis has been on the difficulties of implementing durable changes, especially in higher education, which have historically been resistant to change due to organizational culture, bureaucratic involvedness, traditions, hierarchies, and specific settings (Fullan, 1999; 2001; Hargreaves, 2003). According to the literature on change management, understanding and examining the dimensions of change resistance is crucial for planning and implementing a successful change project. Fullan suggested that change must be viewed as a multifaceted process instead of one product or event (Fullan, 2016). He observes that we do not sufficiently comprehend what defines a positive change, how few reforms succeed while few go wrong, or when to fight rigorously suggested reform initiatives that may be detrimental. Since the release of his seminal work in 1991, Fullan has advocated for more information regarding the effects of educational reforms on our lives to avoid undesirable change and the cycle of non-change instances. According to Fullan (2016), a major difficulty in contemporary education is that individuals lacking a clear, cohesive understanding of the meaning of educational reform - neither what it is nor how it occurs. Even when the concept of change

is largely known, Fullan believes that the process of change, in general, is not. To achieve a deeper comprehension, we must know how the process and the elements that influence transformation operate. This is explained by Fullan's educational change theory. However, his idea is firmly rooted in primary and senior school settings. It has not been tested significantly in higher education or in Pakistan.

In many emerging nations, the educational systems has gone through significant revolutions over the past few eras. Pakistan, a developing nation with one of the oldest public education systems, has undergone extensive modifications to its higher education system. The newly enacted changes during the COVID-19 signified a noteworthy shift in the basic educational philosophy and practices that have deep cultural and historical origins in education systems around the globe. The goals of these changes were to boost the productivity and efficiency and professional liability of HEIs as a whole. The study investigate, evaluate, and reflect on the perspectives of faculty, instructors, and deans about educational transformation launched by their individual campuses in Pakistan's public and private higher education. In addition, the study investigated the implementation techniques of people participating in the process. Particular emphasis was placed on identifying any challenges of educational change management at higher education.

1.1 Rationale of the Study

Change management relates to handle as well as manage the change with the help of people and their interactions. When any educational organization has change in its structure, policies and technologies, organizations put effort through the employees to tackle the change and make strategies to handle the change and find the better outcomes. Technical, intellectual, socio-emotional, and socio-political are four formations of teaching which are connected with different settings of educational change initiatives. Many organizations

resist for concept of change, and their acceptance of change takes a very long time. For globalization and competing at local and national levels as well, organizations need to quickly respond to new technology and procedures. It is evident that change is not taking place at once, it takes time. In some organizations, there is a lack of leadership and a communication gap between management and faculty, and poor connection with humans resources are badly affected by the strategies and policies. So educational organizations need a strong vision and planning for managing the change (Shields, 2017; Visser, 2015; Wroblewski, 2019).

Meanwhile, the procedure of perceiving answers of future questions e.g., what, why, when, how, where, by whom, for how long, at what cost etc. contain fast decision-making in any situation and matter. The main objectives of a strategic organizational change contain purposes such as maintaining the integrity of an organization, making sure of sustainability, organization's progress and advancement, expanding effectiveness, output, levels of satisfaction and motivation. Moreover, objectives e.g., between the group members develop interactive sustenance and trust, change in future preparation, availability of solutions to arguments and issues, communication improvement, making sure the authority of competence-based instead on the base of position and creating effective cooperation (Thornton, Mueller-Hanson, & Rupp, 2017). There are many researchers who consider change profound or specious and described that it could be external or organizational, improved or absolute (Ramos *et al.*, 2015), or change of first and second order (Vähäsantanen, 2015). The constructions, position, and culture are not affected by the improvement or change of first order. Though the main focus of the absolute change of second order is on constructions, parts, goals, and transforming culture. According to Finnan & Levin (2000) actual and constant change never happens until change in main views and expectations occur. Change in education has distinctive consequences by the difference of

surface and appearance change from actual and profound change. In argument of Fullan & Levin (2009) they stated that the interpretation of foundations and objects is essential to get knowledge of change to occur in education and the facts, as the first order of educational change focuses on improvement in the present, in relevance with second order which focuses on change in fundamentals, yet this order could be a change itself.

Various research studies conducted in western countries provided considerable literature that presented many ways of implementing change initiatives for sustainable change in educational settings, and the literature review has constructed remarkable theories (Allaoui, A., & Benmoussa, 2020; Barrett, 2021, Davis, & Fifolt, 2018; Haden, 2021; Mira-Bohigas, 2021). But there exists a practice gap between the developed countries and developing countries. Developed countries often try and implement new theories and models, whereas in developing countries, people put their best efforts but often without following suitable models or theories. This particular study reviewed different models and research findings on educational change management. Applying any western theoretical framework of educational change to study educational reforms and initiatives in Pakistani HEIs, may lead to accurate findings on key research questions and suggest suitable measures and recommendations which may bring desired changes through educational reform and initiatives. Designing and implementing effective reforms in higher education in developing countries is an important area for research because many HEIs could benefit from significant programs and policies (Hassan, 2016; Shah, 2015, Silva, Avilucea, & Pleasant, 2019). The study also contributes to the existing literature by addressing challenges and barriers of implementing change initiatives faced by faculty and administrators in Pakistan's higher education system. The mixed method nature of this study involves directly asking faculty members, heads, and deans about their perceptions of implementing educational reforms. The study will provide important evidences to those who are indirectly or directly working in the change management process in higher

education institutions in Pakistan.

This research aimed to use Fullan's (2016) educational change model to assess the existing state of educational change management in HEIs of Pakistan. The study investigates the perceptions of faculty members and deans. Moreover, it highlights heads' views about the challenges of change implementation and management. The concept of reforms in higher education has widely been focused by educationists, scholars, and researchers around the world. The existing research in educational change has provided vast knowledge about educational reforms in higher education. This has also contributed to the challenges associated with reform in education. However, even in the modern era, all academic reforms have not produced the expected results (Miller, 2019; McLaughlin, 2020; Pantazis, 2017). Therefore, investigating the teachers' and administrators' perceptions about the elements that affect the educational reform process in Pakistan, could provide more insight on the challenges of change management.

The study measured Fullan's (2016) phases of change management at the higher education level, which has been given comparatively less significance by the research studies conducted in Pakistan. Many organizations resist the concept of change, and their acceptance of change takes a very long time. Organizations need to respond quickly to new technology and procedures for globalization and competing at local and national levels.

Recently few studies have been conducted to assess educational management in the Pakistani context and identified different factors related to educational change management (Hassan, 2016; Razzaq, 2012; Shah, 2015; Shaukat, 2013). The literature review indicated that the scenario of educational change management in Pakistan is relatively different from other countries. Stakeholders are restricted from following the hierarchy of management and authority while reforms in the 21st century are shifting from local to the global outlook. Despite serious challenges, reforms were gradual, and strongly challenged; reforms were

not aligned with the existing educational practices. This study explored this gap to broaden the knowledge of educational change management in higher education.

Studies indicated that educational organizations mainly differ in terms of leadership, management, and communication, and connection with human resources that affect the strategies and policies within institutions. The technological change in COVID-19 proved that the HEIs in Pakistan have relatively different approaches and strategies to deal with technological change (Aurangzeb, Nudrat, & Zamir, 2020; Shahzad, & Aurangzeb, 2021). The rationale for comparing public and private institutions is to provide more insight into change management of HEIs because public and private sectors institutions differ in terms of infrastructure, exposure, ranking, international linkages, and monetary incentives. Which provide recommendations for educational organizations for authentic vision and planning for managing the change.

1.2 Statement of the Problem

Change management is considered as significant research area in educational settings since last two decades. After the emergence of change management models, several studies are conducted using different models and framework of change in educational sector. Therefore, the constructs related to change management and change related factors in management are also being studied to provide greater insight for educational administrators. HEC vision 2025 also seeks to align with the sustainable development goals. More importantly with the commitments to progress in quality education. SDGs status report 2021 indicates that Pakistan that completion rate of upper secondary education is slightly improved 23% (2019-20) as compare to the baseline 21% (2014-15). This surely can affect the enrollment and sustainability in higher education to ensure steps towards quality education. Recently, more attention has been paid to educational change management and its effect on the teaching-learning. This has led to a shift from a focus on teaching and

learning to in-depth knowledge of reform processes in the education system. The problem under study is to assess the views of deans, heads and faculty members on change management in HEIs in the backdrop of Fullan's (2016) model and Harvey's (2001) Checklist for educational change. It also compares change management in public and private HEIs and investigates any concerns about the challenges of change management in HEIs. Hence, this study's problem statement is change management at the higher education level.

A comparative study on change management in public and private sector higher education institutions aims to investigate and compare the approaches, strategies, and effectiveness of change management in these two types of institutions. The problem being addressed in such a study is the need to understand how change is managed in higher education institutions, and to identify any differences or similarities in the way that change is approached in the public and private sectors. This can provide valuable insights into the challenges and best practices of change management in higher education, and study may also propose any potential model for public and private sector HEIs.

1.3 Theoretical Base

This study is based on the Kurt Lewin theory, which has described three change phases, and these phases also shows harmony with Kotter's eight stages of change management and ADKAR model, and after that all steps merge with the Fullan's educational change management phases. Kurt Lewin was a psychologist of the early 20th century, studied and examined the respondents' actions and feelings that are assessed while working in groups collaboratively. This study assessed the communication patterns and group actions (Gold, 1999; Lewin, 1947; Schein, 1996). Lewin (1947) later presented a change model consisting three stages. These stages are related to the dynamic structure of an organization which depicts its transition from the current to desired state, which was later

indicated as change: Unfreeze (In this phase, determine the need for change and prepare people for accepting change). – Change (Transition towards desired changes with the help of change leaders and Refreeze (Set the new settings and approaches for new structures).

Several researchers later widely used the model of Lewin (1947). After this influential model, John Kotter presented a comprehensive eight-step model based on Lewin's model (Kotter, 1996). This framework was a more detailed and enhanced form related to the foundation of change that ultimately resulted in organizational success. Kotter's (1996) eight stages were widely appreciated and utilized in numerous researches to develop a framework or any inventory used to assess an organization's change factors. Another model was later presented by the ADKAR model by Prosci (2006). Further studies were conducted to present a comparative view of Kotter and ADKAR model (Ford, 2018; Meade, 2013).

To deploy the changes to acquire the expected institutional outcomes, the implementation process must be considered because it holds the effects of internal and external factors that influence the organization's performance and outcomes. Therefore, using a model that effectively depicts the educational change is necessary. For this purpose, later Fullan (2003) presented a change management model. Several studies were conducted while using this educational change model, which was the best effort of Michael Fullan to assess and examine change management. Later on, Fullan (2008), in his book *The Six Secrets of Change*, mentioned that a good change management theory must hold effective strategic plans to place its greater effect on any organization. This change management model was more comprehensive than previously presented models and more practical in nature. This framework was based on change management theory and considered more effective than simply using a strategic plan. Therefore, higher educational practitioners and

specially administrators can effectively use this model to assess and examine change. Fullan (2016) identified that *initiation, implementation, and continuation* are three major phases of a change management process.

1.4 Theoretical and Conceptual Frameworks of the Study

Change management is an elusive idea in and of itself, and much debate has taken place over what exactly it is. The concept also focuses on episodic events in which the change was infrequent, discontinuous, and intentional. Transitions in higher education in the past 25 years have led to investigations of the changing culture of higher education. The growing competition in higher education has generated a fight for students, staff, and financial resources that has created a marketization mind-set, which is reflected in an alignment with business models, an increase in the use of market terminology, and a more aggressive play in marketing practices along with a changing role for students and their satisfaction.

Education has been in a state of change for decades, and educational institutions at any level are no different. Effective implementation of educational reforms that produce the expected outcomes, institutional administrators should comprehend suitable processes when initiating any reform at internal and external levels. Therefore, the study adopted Fullan's (2016) educational change framework to view the current scenario of educational change management. Fullan, no doubt, is an authority on organizational change and change management. Fullan's framework of educational change is more practical and conceptual. The reason for utilizing this model was that educational change theory is more reliable than a strategic planning while moving through a research process in educational settings. Fullan's (2016) three phases of change processes involve initiation, implementation, and continuation.

This study initiated to investigate the views and insights of teachers and deans on

change management. The study precisely focused on the *three phases* of Fullan's (2016) change process model. Therefore, the theoretical framework is based on the assessment of Fullan's (2016) educational change model. It also compares the three phases of Fullan (2016) in public and private HEIs. This framework is more comprehensive in assessing change processes in educational settings.

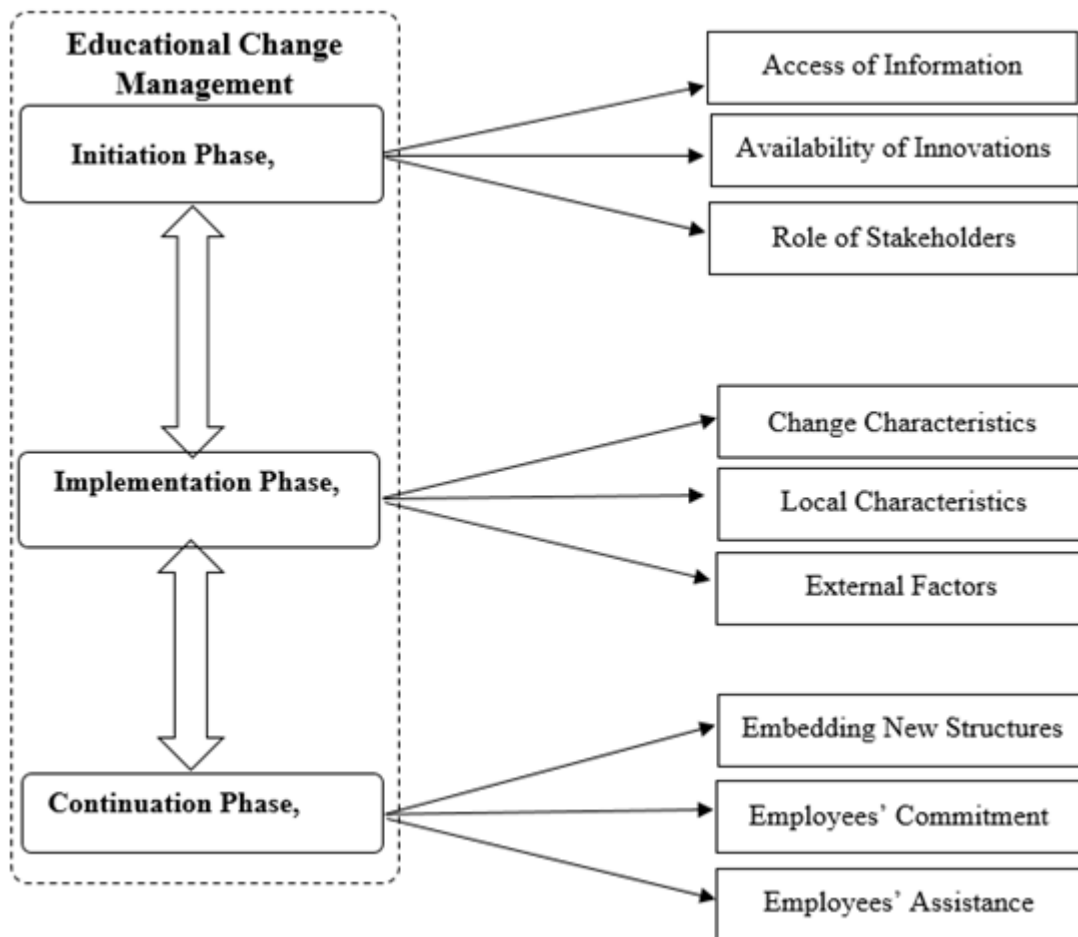


Figure 1: Theoretical Framework (Fullan, 2016)

Fullan's traditional change model (2016) consists of initiation, implementation, and continuation. The initial phase of Fullan's (2016) model i.e., the *Initiation Phase* indicates the start of change process, when administrators or external agency initiates or start a particular program. Secondly, the *Implementation Phase* this phase suggests the deployment of change procedures, and employees are encouraged to use selected practices.

And in the third phase, i.e. the *Continuation Phase*, new practices are continued for the passage of time. Outcomes are also evaluated in this phase which provide the view of the effectiveness of change initiatives.

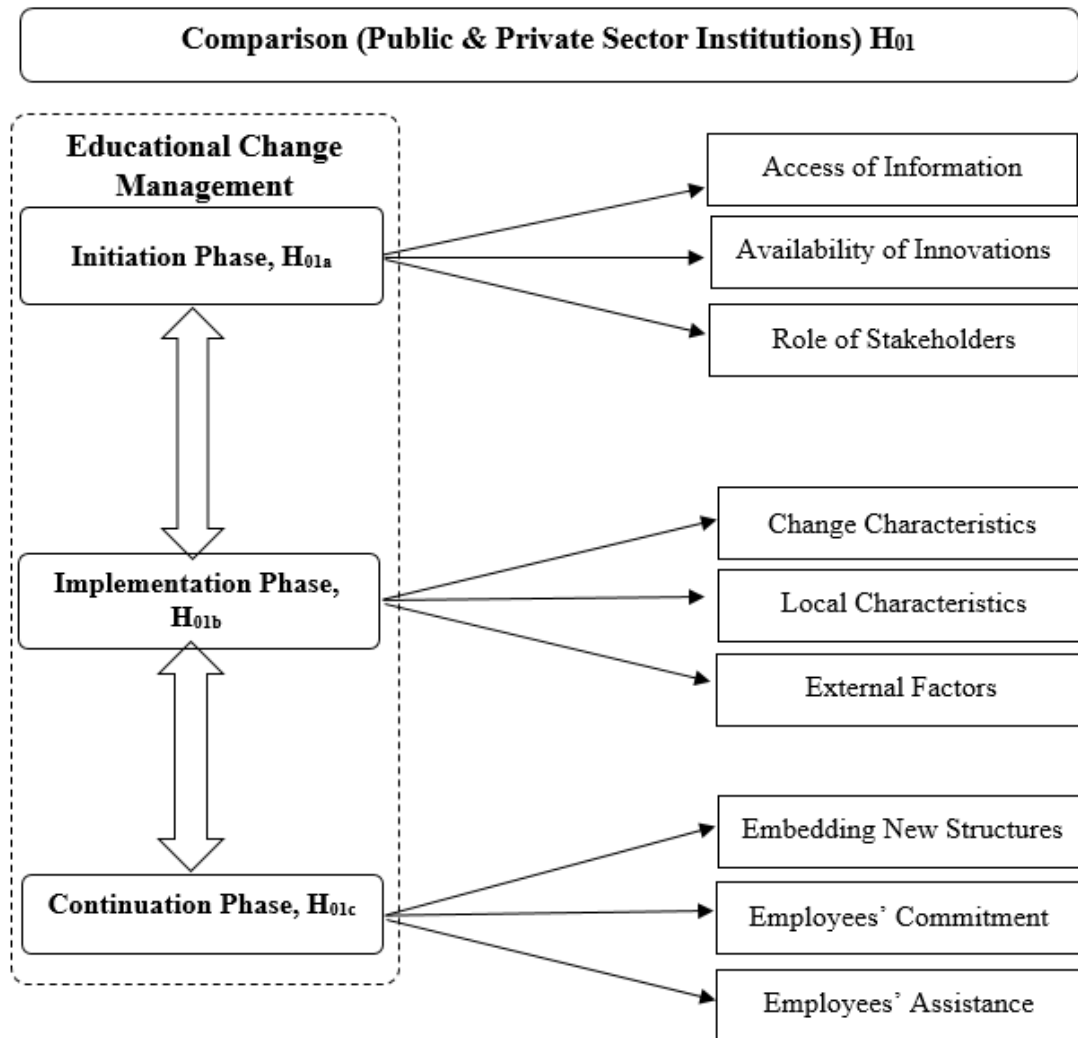


Figure 1a: Conceptual Framework

Conceptual framework is based on assessment of the most recent Fullan's (2016) Model, it compared the levels of Fullan (2016) in context of the process of change management at public and private sectors HEIs.

1.5 Objectives of the Study

1. To investigate level of change management in the light of Fullan's Educational Change Model.
2. To compare phases of Fullan's Educational Change Model among Public and Private Sector Universities.
 - a. To compare *change initiation* processes of public and private sector universities.
 - b. To compare *change implementation* processes of public and private universities.
 - c. To compare *change continuation* processes of public and private universities.
3. To explore the views of heads regarding change management in Public and Private HEIs.
4. To propose a model for change management in Pakistani HEIs, based on gaps identified through research.

1.6 Research Questions

1. What is the level of change management in higher education?
2. Is there any difference between change management of public and private sector HEIs, in the light of faculty opinion?
3. What are the views of heads regarding change management in public and private sector HEIs?

1.7 Null Hypotheses

H₀₁ There are no differences regarding change management processes within public and private sector universities.

H_{01a} There are no statistical differences regarding Change Initiation processes

used in Public and Private Sector Universities.

H_{01a(i)} There are no statistical differences regarding Availability of Innovations in Public and Private Sector Universities.

H_{01a(ii)} There are no statistical differences regarding Access of Information in Public and Private Sector Universities.

H_{01a(iii)} There are no statistical differences regarding Role of Stakeholders in Public and Private Sector Universities.

H_{01b} There are no statistical differences regarding Change Implementation processes used in Public and Private Sector Universities.

H_{01b(i)} There are no statistical differences regarding Change Characteristics in Public and Private Sector Universities.

H_{01b(ii)} There are no statistical differences regarding Local Factors in Public and Private Sector Universities.

H_{01b(iii)} There are no statistical differences regarding External Factors in Public and Private Sector Universities.

H_{01c} There are no statistical differences regarding Continuation processes used in Public and Private Sector Universities.

H_{01c(i)} There are no statistical differences regarding Embedding New Structures in Public and Private Sector Universities.

H_{01c(ii)} There are no statistical differences regarding Employees' Commitment in Public and Private Sector Universities.

H_{01c(iii)} There are no statistical differences regarding Employees' Assistance in Public and Private Sector Universities

1.8 Significance of the Study

Change management prepares an act at a specific worker level. “Change Managers” mentions not only the associates who are related to the project or experts of this management but also involves leaders of the organization, officials, managers, front-line supervisors/leaders, and workers; they all allow every single staff member to bring change in their own present stage to the latest stage of future, inside the organization. The center of attention of culture and organizational structure is these perspectives and attitudes. Every institute has its unique characteristics of making it an organization by having its staff establish culture specifically, then there is a need to adapt the image of this culture by supply constructions. Change is not accepted rapidly in any educational system. It takes several years to maintain and sustain the reform process. It takes strategic planning to initiate and adopt change. The progress of developing the contextualized model regarding the educational change in the educational institutes, which is arranged with the help of peoples’ experiences and views who have the responsibility to implement change process educational settings, and they will contribution to the change management process of Pakistani educational context. The process of change or creation of change is the main issue; it is a dominant issue of this study as well. It is appropriate to locate the educational change notion with the help of planning theories with the idea of change generally, and mainly the educational change; it can be done with the help of scholars and researchers connected with this field. In description of implicating the initialization and organization of change in educational organizations, these theoretic viewpoints are used as a framework of change; furthermore, the problems which are related to change implementation and several change related factors are assessed in literature. While taking into account of different constructs of Fullan’s (2016) framework, a study can be conducted to determine change management processes in higher education in Pakistan and to indicate strategies to bring change in

education with diverse descriptions. When change occurs from the top management, it starts to be handled with the help of administrators, heads, faculty, and domestic staff. It will be the collective result for students' learning outcomes, the most important beneficiaries of this study.

This study will assist teachers in gaining a deeper understanding of educational change management on the practical, theoretical, and methodological levels. First, this investigation sought insight into change processes from an implementation-level viewpoint so that professionals might enhance their techniques and make institutional reforms more substantive. This research may enable administrators participating in the start and implementation of planned educational changes to classify realistic and acceptable strategies and expectations for building acceptance in a world of constant change. Second, the research contributed to the current literature on educational change in higher education sector. For future research, this study hoped to provide light on some of the systemic difficulties and determinants related with educational transformation. Since change remains complicated and multidimensional, problems must be investigated within this complexity framework (Motley, 2021; Phelps, 2018). And since the change has been deemed challenging and requires further context-based research, the study of a change project would be beneficial (Sacks, 2017).

Thirdly, by employing a mixed method approach, this investigation adopted a new strategy to analyze educational change and departed from the positivist paradigms currently dominating academic literature in the field. The study also reveals the research location. By developing an understanding of what works and what does not, educational planners will not only be in a better position to avoid the mistakes of the past, but they will also be better prepared to comprehend how things will indeed operate in the future (Sherman, 2021). Change being unavoidable, it follows that methods for evaluating difficulties and obstacles

will be of great benefit. Based on the lessons learned, additional efforts requiring transformation can be constructed (Thacker, 2020).

Teachers' and administrators' perceptions have been recognised as an important aspect for the research in educational settings. Therefore, there have been various research studies concerning teachers' and administrators' perceptions of reforms in the education system. However, there are few research evidences of educational change management in the context of Pakistan (Hassan, 2016; Razzaq, 2012; Shah, 2015; Shaukat, 2013). In educational change management, there has not been any research on teachers' and administrator perceptions about educational change management, comparison of public and private sector institutions, and the barriers or challenges administrators may face while implementing any change initiatives. However, on account of limited studies on this significant area, a vast research gap has been found in this context. Therefore, the study was carried out to contribute to the existing research in the zone of educational change management in the higher education.

The findings of the research will assist the policymakers in knowing the potential barriers in the implementation of reforms in HEIs. Furthermore, the research will benefit change agents and administrators to make the reform process more effective for higher education. Moreover, Deans, Heads, and faculty will be able to know the barriers that can affect the change management process in universities, and administrators can use the proposed model to cope with the challenges of implementing any reform initiatives. The findings of the study will add knowledge to existing research on educational change management, and the recommendations of the study might prove productive for initiating reforms and changes in higher education. The study may guide administrators, educators, and other change agents as they cope with educational change management within the Pakistani context.

Change management is the process of planning, implementing, and managing change in an organized way, with the goal of minimizing disruption and maximizing the benefits of the change. The current study can help stakeholders such as students, faculty, staff, and administrators navigate and adapt to changes in the institution. Some ways that change management can benefit stakeholders in higher education include: (i) Enhancing communication: Change management can help ensure that all stakeholders are kept informed about the change and have an opportunity to provide input and feedback. This can help build trust and support for the change. (ii) Minimizing disruption: By planning and implementing changes in a structured way, change management can help minimize disruptions to the institution and its operations. This can help ensure that students and faculty can continue to focus on learning and teaching. (iii) Increasing efficiency: Change management can help identify and eliminate unnecessary processes and procedures, streamlining operations and increasing efficiency. (iv) Improving outcomes: By carefully planning and implementing changes, institutions can improve outcomes such as student retention and satisfaction, faculty productivity and satisfaction, and institutional performance. Overall, this study can help higher education stakeholders adapt to and embrace changes in their institution, leading to a more positive and effective learning environment.

1.9 Delimitations

The specified delimitations of this research were as under:

- The research was geographically delimited to Public and Private sector HEIs of Punjab.
- Departments under the Faculty of Social Sciences.
- Regular faculty members, Heads and Deans of SS departments.

- Three Phases of Fullan's Educational Change Model (2016).
- Harvey's Checklist for Educational Change (2001).

1.10 Ethical Consideration

To protect the safety of the participants, this research was also address ethical guidelines. Ethical aspects of the research, are essential not just for this research but may also be helpful in other studies from a measurement process. Ethical planning is vital. A researcher is responsible for protecting study participants by adhering to the principles for protecting human beings. Considering the participants include teachers and students, data was gathered from them via online and personal visits by the researcher and approval from the relevant authorities were necessary. Throughout the course of the research method, informed consent, fraud prevention, and confidentiality were considered.

1.11 Operational Definitions

i. Change Management

Change management is a logical approach to achieving the desired results. Administrators of organizations deal with the internal and external processes that contribute to change management.

ii. Change Initiatives

The newly introduced idea or practice is being practiced to transform the existing practice or process to achieve change.

iii. Continuous Improvement

This term is most widely used in business models that representing a rapid improvement. In relation to educational settings, this phrase can be linked to Michael Fullan's idea of "Learning while working."

iv. Educational Change Model

Fullan (2016) identified that *initiation, implementation, and continuation* are three major phases of a change management process.

v. Initiation Phase

This phase shows the start of the change process. When a particular program initiates or starts, the administrators or external agency also contribute in Availability of Innovations, Access of information and Role of Stakeholders.

a. Availability of Innovations

Change agents may consider the various options to accommodate the innovations that will later lead to the change in the institution; like policy standards, monitoring and assessing, professional development seminars and intervention and specific assistance are included in these change innovations.

b. Access of information

Communication indicates the access of valid and comprehensive information for every individual of the institution like administration spending time with employees, partnerships, and collaborations of professional networks, encouraged by administrators, communication infrastructure to create central administration, access to innovations and resources capacity to effectively operate.

c. Role of Stakeholders

Administrators, faculty members, and community advocates must actively participate in the change process. Like Central administrators (Top level Management) are considered the locus of decision-making. Administrators are capable of maintaining focus on innovative directions.

Heads and coordinators lead the change and act as a critical sources of

initiation. Faculty are considered a preferred source of ideas for other colleagues. Community partnerships are encouraged where necessary.

vi. Implementation Phase

This phase indicates the deployment of change practices. And employees are encouraged to use selected practices by Change, local and external factors.

a. Change Characteristics

Change characteristics hold factors such as the need for change, clarity of change process, the difficulties in change process, and the quality of reform process changes or innovations are attempted according to perceived priority needs. Like administrators are clear about goals and means (resources) before implementing innovation. Initiation of the new educational programs is strictly based on needs. Administrators make critical inquiry into current practices before suggesting innovation. Administrators provide formal recognition, and faculty member effectively deal with innovations and change directions.

b. Local Characteristics

Local characteristics involve district of the institution, community, heads, and faculty members. Adoption decisions for change are made with adequate follow-through considering subjective realities. Like track record of change process is viewed before taking next initiative. Heads are effectively performing instructional or change leadership roles. Teachers are always sharing thoughts and positive feelings about the educational settings they are working in. Teachers along with management of institutions plan, design, evaluate and prepare instructional resources together and Community seems cooperative and supports change-related decisions of administrators.

c. External Factors

External factors involve government and other agencies that are change contributors. New initiatives often arise from market demands, community concern and recent trends in educational systems. Universities and institutions often do an adequate job in promoting career-oriented services and providing a highly interactive infrastructure of support. Government agencies are aware of problems and process of change implementation. HEC and university administrators provide high-quality teaching and training materials. Policymakers prefer university practitioners to identify change-related gaps.

vii. Continuation Phase

This is also called institutionalization phase. New practices are continued with the passage of time. Outcomes are also evaluated in this phase which provides a view of the effectiveness of change initiatives with the new structures, employees' commitment, and assistance.

a. Embedding New Structures

Integrating new structures after the implementation of change process. Like administration provides moral support in continuation of initiated reforms. Effective implementation of innovative projects is main focus of administrators. HEC and administrators invest great interest and funding to sustain the innovative projects. Administrators provide professional support for teachers for newly implemented programs. Heads are performing their role as key to both implementation and continuation of innovations. Coordinators provide explicit support for innovative project methods or materials.

b. Employees' Commitment

Employee commitment indicates the employees' acceptance of change and

working on new processes initiated by the institution. Administrators often focus on educational innovations and support. The administration in educational institutions also establish procedures for continuing support. Researchers are putting great effort into finding gaps to propose new initiatives. Administrators introduce alternate initiatives for reforms framework those not seem suitable for any reform process. Heads effectively implement the chosen reform designs (for quality learning and student outcomes).

c. Employees' Assistance

Employee assistance indicates the support for the employees after the implementation of the change processes. Change factors effectively build into the structure (with the help of time frames, finances and policies etc.). Administrators within institutions eventually guide and cope to implement desired reforms, following any appropriate model. Administrators organize seminars and workshops for the professional developments of the teachers regarding new reforms. Heads and coordinators provide desired leadership for faculty, focusing on instruction and learning. Teachers frequently receive assistance and support for any new program or reform/initiative. To deal with staff turnover, administrators normally plan for the job support for faculty who join after the initiation of a new program.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This study explored change management in higher education institutions. This chapter aims to put this dissertation into its scholarly context. The literature review synthesized the past research, models, and concepts related to change management. Therefore, this chapter also provides a theoretical picture of change management and empirical evidence on change management.

2.1 Change

Everyone has to deal with change, especially in the face of a worldwide epidemic, where it is both essential and expected (Lyson, 2020). Under the direction of Fullan's change theories and theoretical frameworks, Escobar-Arcay, (2009) explored the experiences instructors have when confronted with impediments when employing digital tools in the classroom. These change theories assist the researcher in sifting through subject experiences and identifying emergent themes, which leads to the development of a model for instructors to follow and, consequently, change in the face of obstacles. Change, along with knowledge and education, is considered the essential aspect of human growth. Knowledge and interest in the surroundings and conditions of humans, such as social, physical, and cultural environments, brought about a significant transformation. Change plays a crucial role in human progress, with knowledge and education at its core (Wroblewski, 2019).

Humans' physical surroundings, social climate, and cultural contexts have all changed dramatically due to advances in human understanding and interest. To that end, it generates a shift that necessitates an increase in the number of obstacles and opportunities to learn and grow one's skills. Since then, education has taken on the responsibility of tasks related to knowledge generation and transfer in society, and this has occurred at multiple

stages with varying degrees of awareness of the surrounding chronological and geographical context, the effort to control the cyclical and composite implication of change (Winkler, 2013).

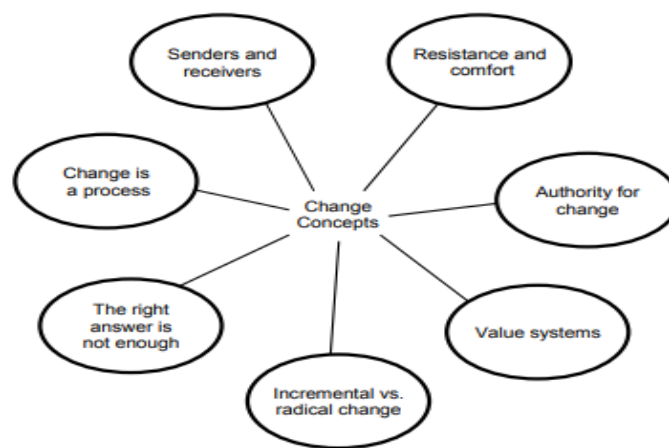


Figure 2: Change Concepts (Jeffrey & Timothy, 2012)

In human evolution, change plays a fundamental role, with education and knowledge as its key components. Change in human conditions has been brought about by people's knowledge and interests, including physical surroundings, social atmosphere, and cultural contexts. As a result of this process, there is an increased need for challenges and opportunities to learn, as well as a need to cultivate curiosity. Education has also taken on responsibility for tasks related to knowledge generation and transfer in society, actually at multiple stages with varying degrees of awareness of chronological and geographical surroundings. The effort to control the circular and composite connotation of change and development has been ongoing for some time (Shah *et al.*, 2020).

2.1.1 Change Process

According to Jeffrey & Timothy (2012), Change, along with knowledge and education, is regarded as the most significant feature of human progress. Knowledge and interest in human surroundings and conditions, such as social, physical, and cultural ones, sparked a fundamental shift in people's lives. In terms of human growth, change plays a

crucial role, with education and knowledge as its essential components. In the meantime, the educational system has started generating and disseminating knowledge in society. It has attempted to manage the cyclical and composite meaning between change and its recurrence. In human evolution, change plays a fundamental role, with education and knowledge as its key components. While the educational system has taken on the job of generating and disseminating information in society, it has also been working to manage the cyclical and composite connotation between change and progress. Change is seen as the most critical component of human progress, along with knowledge and education. Knowledge and interest in human surroundings and situations, such as social, physical, and cultural circumstances, brought about a significant transformation. Change is a critical factor in human progress, with knowledge and education at its core.

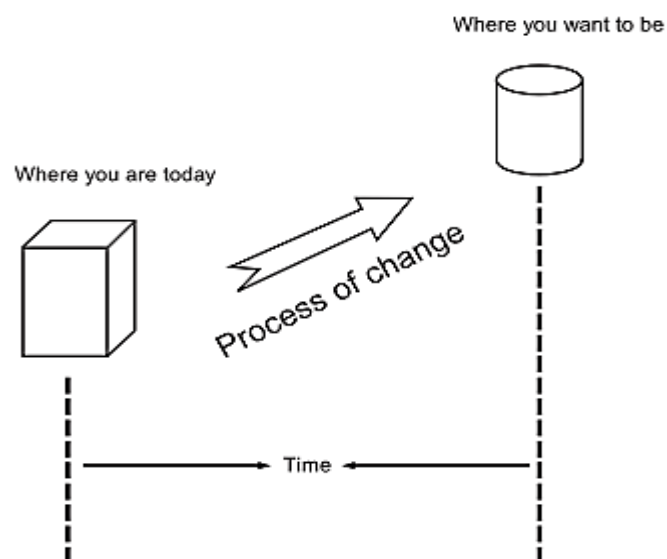


Figure 3: Process of Change (Jeffrey & Timothy, 2012)

In the meantime, the educational system has taken on the responsibility of generating and disseminating knowledge in society, it has attempted to manage the cyclical and composite meaning between change and its recurrence. In human evolution, change plays a

fundamental role, with education and knowledge as its key components. While the educational system has taken on the job of generating and disseminating information in society, it has also been working to manage the cyclical and composite connotation between change and progress.

2.2 Change Factors

Government interventions, the push for accountability, shifting population demographics, evolving curriculum delivery systems, entrepreneurialism, and the relationship between leadership and institutional governance are among the change factors influencing the higher education environment and university governance. Each of these modifications can separately and jointly affect higher education institutions and the governance process (Visser, 2015).

According to Venezia (2015), political demands for efficiency and effectiveness of higher education institutions, as well as technical changes in the external climate of institutions, are critical factors of educational change. These external dynamics are amplified by internal aspects of institutions that contribute to the reforms in learning patterns, innovations in teaching, or reforms in learner needs. The identities of location, time, the academic community, and the student community in higher education are being challenged in the twenty-first century.

According to Arar & Abramovitz (2017), the task-oriented environment requires more emphasis on assessing the requirements for institutional change. The planned change also requires proper communication of change-related tasks. It needs the active involvement of the managers to implement the person-oriented change. Both concepts are necessary for the successful implementation of educational reforms. The administrators of person-oriented climate conduct may motivate and mobilize their team members more successfully. Managers with a task-oriented climate can assist the stakeholders and workforce more

dynamically and have more significant impact on the educational reforms and processes in any organization (Moreno, 2012).

Although Kotter's eight phases are an essential beginning point for managers implementing organizational change, and their application can raise the success rate, it should not be considered a strategy that ensures success. Implementing Kotter's intended framework with other prominent change models might be advantageous. Emerging topics such as choice and contingency models and theories in the field of change management might be recognized throughout this procedure (Kotter, 1996).

In addition to the model that will be utilized for the planned execution of the change procedure, top managers must consider the following criteria before designing the process. These characteristics pertain to each phase of change management models, beginning with creating change management standards, lowering opposition, and mentioning the requirements for reforms. The subsequent component is the communication and planning for the vision of desired change. Then, the project is enhanced and the level of commitment is raised. Finally, the assistance provided by informal systems and the structural shift is noted (Appelbaum *et al.*, 2012).

Factors of change process	Questions implementing change
Developing a guiding coalition	Who are responsible for change?
Reducing resistance	How the resistances can be reduced? What culture should be developed?
Identifying a need for change	What are the problems?
Communicating the vision	Is the vision of change valuable for participants?
Planning the process	Are people committed? Who are responsible for each objective?
Making improvements	Is there a process of problem solving?
Enhancing commitment	Is there a formal process of communication?
Support by informal system	To what extent does the informal support the change?
Changing structures	What structures reflect changes?

Figure 4: Factors of Change Process (Kitsios & Kamariotou, 2017)

For the strategic development of the change processes, several factors were

mentioned and authenticated to assess their significance. These factors can or may affect the change processes in any organization and educational change processes.

2.3 Change Theories

In the 1950s and 1960s, academics promoted a heightened knowledge of organizational growth (Bryant, 2020). There were six significant beliefs of early organizational development: researching concepts such as applied behavioral science, long-term orientation, external consultants that focus on process, action research emphasis, top-down change efforts, the facilitator versus observer role of the researcher, and facilitative and collaborative changes (Geraghty, 2019).

Long-term orientation aimed to provide all stakeholders within a change a voice by incorporating the whole system in a participatory endeavor. Early researchers frequently juxtaposed a leader's sociology, behavioral science, and psychology knowledge with their explanations of organizational growth. Leaders were aware of both the significance of efficient communication and the person's significance to the company. An organization's demand for external change agents was predicated on the notion that external resources focus on change and are significantly less likely to be bothered with or interested in politics within the company. These organizations also conducted change initiatives that were driven from the top of the organization and possessed the commitment of the senior leadership. The emphasis on action research meant that organizational researchers did not undertake organizational analysis while unaffiliated with the organization under study. This extended to the researcher's role as a facilitator, not just that of a disentangled observer. This would lead to the expected collaborative and facilitative changes (Motley, 2021).

According to Cahya (2021), beginning in the 1980s, three primary schools of change theory emerged. Among these were cultural excellence, postmodernism, and the process-oriented approach. In order to encourage creativity and entrepreneurship, the ideology of

cultural excellence emphasized cultural adaptability. The postmodern approach to organizational reform centered on the significant role of politics. This property of the process approach acknowledged the volatility and persistence of change and tried to incorporate it into an organization's process systems.

During the 1990s, Sheridan (2012) identified many organizational transition concerns. These concerns encompassed content, procedure, standards, and context. Content concerns centered on modifications that were occurring concurrently. Concerns regarding criteria centered on the outcomes examined as part of a transformation program. Process concerns examined the actions that occurred throughout the implementation of a change. Lastly, contextual concerns centered on internal and external environmental elements.

In the 1990s, qualitative research methodologies were increasingly utilized in organizational transformation studies. Early organizational change theories evolved due to the broader availability of organizational change reference materials and a higher acceptance of qualitative research by journal editors. Taylor (2015) observed that increasing access to organizational information has led to the debunking of several organizational transformation theories produced during this decade. According to Fawbush (2019), a growing knowledge of corporate culture, which includes a pattern of notions about how people ought to feel and behave, contributed to the debunking of a number of these early theories. The change theory paradigm, according to Lewin (1947), consists of three stages: unfreezing, changing, and freezing. This three-step strategy necessitates replacing past knowledge with a new way of thinking. This change theory model's primary objective, whether applied at the individual or group level, was to demonstrate that "human change was a profound psychological dynamic process that involved painful unlearning without loss of ego identity and difficult relearning as one cognitively attempted to restructure one's thoughts, perceptions, feelings, and attitudes."

Change can be challenging, but this model clarifies how to implement new procedures. Organizations must be committed to supporting all process phases, no matter how challenging or demanding, for change to be effective (Youngblood, 2020). The unfreezing stage of Lewin's three-step process can be subdivided into sub-processes that demonstrate preparedness and motivation for change (Lewin, 1947). The initial subset step in the defrosting phase is denial. Individuals or groups might face disconfirmation if they do not adapt; they may fail to attain the goals they have set for themselves. The second group is guilt induction or survival anxiety. This means that we permit ourselves to acknowledge that something needs to be altered or is faulty. Individuals may lose their self-esteem, identity, or efficacy during this time (Seyfried & Ansmann, 2018). Taking chances and being open to failure throughout the learning process might be difficult for specific individuals. Cognitive redefinition is the third subset. Cognitive reframing occurs when a person or group is driven to change and is receptive to acquiring new information (Vlachopoulos, 2021). This receptivity permits folks to perceive and hear alternative viewpoints. When these subsets are combined, the defrosting phase may be characterized as "changing the existing patterns that maintain existing work-related ethics. This procedure must consider the potential complications that change brings to individuals and the desire to motivate those affected to achieve balance by accepting change (Seyfried & Ansmann, 2018).

The transformation step entails "creating new reactions based on fresh knowledge." This phase must be done rapidly. The longer the transformation process takes, the more likely individuals will revert to their previous behaviors. Refreezing entails "stabilizing the change by incorporating the new reactions into the personality of individuals involved." The learned behavior must be compatible with the individual's personality to prevent reversion to previous behaviors. In many respects, change is an enigmatic concept in and of itself, and

a considerable dispute has surrounded its definition. Once upon a time, researchers concentrated mainly on episodic occurrences in which change was sporadic, discontinuous, and deliberate. Most academics and theorists now view change as a more continuous, developing, and accumulating process punctuated by episodic and dramatic periods of change (Costello, 2000). Some even challenge the terminology employed to characterize the phenomena, stating that the discourse should move from organizational transformation to organizational becoming, which implies a more continuing process (Noumair & Shani, 2018).

Sharp (2018) refines the terminology used to define change by distinguishing several forms of change, including but not limited to adaptation, isomorphism, and innovation. Because leaders implement different forms of change at different periods, and research indicates that persons are more likely to adopt some types of change than others, this difference may be essential for understanding change and its impacts. When evaluating and arguing the nature of change, it is essential to bear in mind the theoretical foundations of the discussion. The scientific management school of thought, which is frequently used as an umbrella term for numerous related models and theories of change, is one of the ideas most closely linked to organizational growth. In contrast, evolutionary theories of transformation emphasize the organization's external environment. According to Le Tourneau (2012), the underlying assumption of the theories comprising this school of thought is that change results from environmental factors, circumstantial variables, and social systems (such as organizations) evolve due to their diversity, interdependence, and complexity.

Due to the dominance of predictability in evolution, humans have a minimal effect on the changing process. In this approach, most of the change is reactive. However researchers such as Lee (2012) have proposed that adaptation may also be proactive and predictive. This school of thinking was influenced by and derived images from biological

research like environmental openness, homeostasis, and evolution. It is essential to recognize that, according to this concept, the internal and exterior environments are linked; hence, changes in one environment result in changes in the other. Evolutionary theories of transformation have a significant flaw in that they minimize the importance of leadership and the leader's function. Typically, a political theory of change is applied to explain the phenomena when change is viewed as the outcome of a confrontation between people, cultures, or ideologies. Political theories of change arose from the ideas of Hegel and Marx, who viewed change as the outcome of conflicting values, ideals, or norms. When a specific value, ideal, belief, or standard is prevalent in a society, its opponent must also be present, according to political theories of change. These opposites are also present in organizations, according to these theories (Barrett, 2013, MacGregor, 2019).

The dialectical interplay of opposites, essentially the fight between conflicting concepts, leads to a condition of synthesis and reconciliation as the primary agents of change, negotiation, awareness-building, powers, influences and persuasions are highlighted (Bolman & Deal, 2017). Change agents are crucial, but they must establish a power base to guarantee the change is implemented. The most important contribution of this theory to the understanding of change is that it proposes a radical break from a concentration on rationality and linearity (Galkin, 2015). Concurrently, opposition to change may be misinterpreted as conflict or opposing interests, leading to a misunderstanding of the processes.

Finally, institutional and neo-institutional theories of transformation emphasize organizations as social institutions, notably colleges and universities. This school of thinking is predicated on the premise that each institution grows in its unique way and, thus, cannot be compared to others in this respect. It, therefore, considers both organizational and external variables. A focus is put on external standards and influences; hence, the

transformation process is subjected to intense normative and mimetic pressure (Cantu-Lee, 2020). Wroblewski (2019) indicated that change agents are also affected by broader social variables, such as the nation-state, market dynamics, and the industry in which the organization operates.

2.3.1 Scholar's Views on Theory of Change in HEIs

The theory of change in higher education refers to the underlying assumptions and beliefs about how change in higher education is expected to occur. It is a framework for understanding and guiding the process of change in higher education, and it often includes both short-term and long-term goals and objectives.

One key aspect of the theory of change in higher education is the idea that change is most effective when it is driven by a clear and shared vision. This involves building a shared understanding among all stakeholders, including faculty, students, and administrators, of the goals and purpose of the change. A clear and shared vision can help to ensure that all stakeholders are aligned and working towards the same goals.

Another important aspect of the theory of change in higher education is the need for strong leadership at all levels of the education system. This includes the development of leadership capacity among faculty and administrators, as well as the identification and support of effective leaders at the institutional and departmental levels. Effective leadership in higher education requires the ability to inspire and motivate others, as well as the ability to effectively communicate and collaborate with diverse stakeholders.

The theory of change in higher education also emphasizes the importance of building capacity and fostering collaboration within the education system. This includes providing ongoing professional development and support for faculty and administrators, as well as encouraging the sharing of best practices and the development of collaborative partnerships.

Overall, the theory of change in higher education is a comprehensive and holistic

approach to educational change that addresses both the individual and system-level factors that can impact the success of reform efforts.

2.3.2 Scholar's Stance on Current Study

A researcher working on the theory of change in higher education might take a number of different stances depending on their goals and perspective. Some possible stances a researcher might take include: advocacy, neutrality, critique and problem solving. The stance a researcher takes, depends on the goals and perspective, as well as the specific research question or topic they are exploring.

In this study scholar tool composite of neutrality and problem solving stances. The neutrality stance of a researcher working on change in higher education refers to the researcher's decision to remain neutral or unbiased in their approach to the topic. This means that the researcher is not taking a position on whether specific changes in higher education are necessary or desirable, but rather is simply seeking to understand and document the process of change. However, it is important to note that complete neutrality is often difficult to achieve in practice.

The problem-solving stance of a researcher working on change in higher education refers to the researcher's focus on identifying and addressing specific challenges or problems in higher education. This approach involves actively seeking out solutions or strategies for addressing identified challenges, and may involve making recommendations for change based on the research findings.

The current study was focused on gathering and analyzing data in order to identify specific challenges or problems in higher education, and may work to develop recommendations or strategies for addressing those challenges. This approach can be useful for identifying and addressing specific issues that are impacting the effectiveness or efficiency of the higher education system.

The neutrality stance helped researcher to understand and document the process of change. The problem-solving stance helped researcher to be transparent about their goals and assumptions, and to clearly communicate the limitations and implications of their research. This helped to ensure that recommendations are well-informed and grounded in evidence.

2.4 Phases of change Management

Prosci (2006) conducted meaningful research on several organizations to assess the change management within the organizations. Jeffrey & Timothy (2012) identified that change management often involves three major phases

Phase 1 - Preparing for change

Phase 2 - Managing change

Phase 3 - Reinforcing change

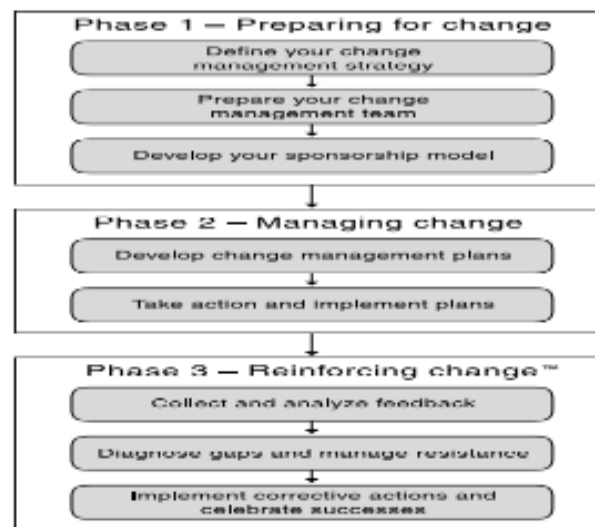


Figure 5: Phases of Change (Jeffrey & Timothy, 2012)

Phase One- This phase is related to getting things ready for the initial period of the change process. This also involves making strategies for the overall change management. The preparation for this phase involves tasks to prepare the individuals for dealing with change initiatives. The managers in this phase assist the reforms for effective change

management.

Phase Two-This phase manages the change, and the process involves developing the plans and taking necessary measures to implement the reform initiated. The actual implementation takes place in this phase.

Phase Three- This phase focuses on collecting and analyzing the feedback. It requires assessing the results of reforms and change tasks. It also required deploying the necessary actions for any remedy. This phase also transfers the ownership of the reforms to the individuals working in the organization.

2.5 Educational Change

Fullan's work offers a theoretical foundation for this investigation. The steps of this process may be analyzed using Fullan's Theory of Educational Change as a lens. The four separate phases identified by Fullan are commencement, implementation, continuance, and conclusion (Fullan, 1999). Fullan (1999) notes that one must recognize the complexity of the educational transformation process. Managing this level of complexity is not an issue of controlling change but instead of leading it.

The change management process requires managers to take corrective actions to overcome misconceptions about the process. The primary purpose of change management is to reduce the diversity in the processes, which can only be achieved through following the appropriate theories. Organizations need stability during the process of change management. Hence, stable processes are necessary for the teaching and learning environment.

Keep in mind that there is no unique answer. By becoming a "critical consumer" of change, organizations should shape and develop their ideas and practices (Fullan, 1999). This idea emphasizes the person's role in the transformation process as an organization progresses through its four phases (Fullan, 1999).

Opposition is inherent to all changes, regardless of their importance. This applies to all transformation initiatives, not just educational institutions. Resistance to change "is deeply ingrained in the human mind." Humans see change as a fundamental aspect of life, but they are also quite used to constancy. This is because humans desire their identity to stay consistent across time. Individuality loss seems to lie at the heart of why change is perceived as dangerous. Unfortunately, change is nearly usually overcome by fear.

Kubek (2012) suggests that in order to implement change successfully, leaders must remind stakeholders of what will not change. Kindness, compassion, and concern must characterize the entire procedure. Respect and justice must prevail. A leader may prepare a group for the transition process and reduce the danger of change by proactively planning for change. Establishing a foundation may reinforce the personal and professional significance of each individual to the organization.

This planning cannot ensure a successful implementation, but it significantly raises the probability of success. Leaders must keep in mind that resistance to change is still inevitable. According to Liddell (2018), change management does not elicit resistance. It therefore, represents effective and meaningful change processes. At this time, leaders must instill a feeling of security and self-worth in the organization's members. They must remind employees inside the organization of their importance and importance to the organization's mission advancement (Aziz, 2018). One of the numerous things educational institutions have been guilty of is initiative weariness, as defined by Evans (2018). This involves continually introducing new programs and activities to organizations without eliminating existing ones. Before new changes may be introduced, some programs or projects must conclude for meaningful organizational transformation (Steinberg, 2018). Leaders must realize that highlighting the efficacy of these strategies is the key. One must constantly be conscious that cultural opposition will seek to sabotage the reform process. Leaders must

continually maintain effective practices in the foreground by highlighting in public how these practices contribute to the organization's success (Médica-Strother, 2021).

Leaders must encourage their followers via words and deeds that change is necessary as a method of aid and support for the instructors and, ultimately, to improve student learning. Too often, leaders equate change with external pressures like legislative requirements, new policies, and coerced district initiatives. Providing a compelling argument that emotionally engages the school personnel will encourage them to do their best for the pupil (Taylor, 2019). When leaders appeal to the fundamental reasons why teachers do what they do, meaningful change may occur and be sustained throughout the effort.

2.6 Effects of Educational Change

There are fewer studies on the impacts of change than on the other prominent issues in the literature on organizational transformation. However, the findings of previous studies are equally applicable to the present study since they indicate that the consequences of change on campus vary depending on the number of changes (Hundley, 2019). On campus, a rapid rate of change may cause unease. Research revealed that frequent changes decreased the security of the institution's personnel. Constant alterations and alterations that appear unrelated to the institution's objective might lead the workforce to become unstable. On the other hand, gradual change has fewer adverse effects than abrupt change. According to Tukker *et al.* (2008), institutions would be better served "if [they] implemented a system of continuing modifications or continuous improvement that could adapt to new individuals on campuses and to environmental changes" This study of institution's implementation of radical change contributed to the notion that the change is transient, an attitude that harmed the change's long-term viability. Due to the paucity of empirical studies on the consequences of change, the proposed research aims to help address this gap in the literature.

2.7 Association of Change with Instructional Process

Educators have a minimal argument on the relationship between reading and comprehension and student achievement at all educational levels. However, there is an ongoing debate over the optimal technique for effective literacy training (Razzaq, 2012). Even specialists in reading and reading comprehension disagree on the "best" method for teaching reading effectively. Standard techniques include phonics, guided reading, independent reading, official and informal reading evaluations, and direct and explicit instruction of various comprehension skills. When it comes to delivering leadership in the field of literacy, educational leaders face three fundamental obstacles. First, there must be uniformity in reading training across the whole company. When consistent reading teaching is delivered to every grade, all children have an equal opportunity to achieve (McAndrew, 2018). Second, it is the role of the school administrator to describe "excellent instruction" in reading in clear and explicit terms.

Barrett (2021) encourages the utilization of a grading guide or rubric to direct this procedure. For each factor connected to reading education, this rubric can move from novice to proficient to expert. The Reading Comprehension Model of Learning-Focused Schools contains rubrics for this specific purpose. These grading rubrics go beyond conventional score instructions. They demonstrate the application of successful reading teaching approaches with particular criteria about the various performance levels. Novogrodsky (2012) notes that excellent reading education in different settings will enhance other training areas. Third, to give instructors and students clarity of purpose, leaders must exert extra effort to set classroom expectations for the required aspects and their performance. If leaders feel that effective reading education is a top priority, their actions must reflect this belief. Daily personal involvement is required to identify, comprehend, and watch this process.

Teachers and leaders must collaborate to provide kids with the basics of reading

teaching. Kizilbash (2016) reminds educators and administrators that "Good teaching, successful teaching is not limited to utilizing what research shows "usually" works best. Finding suitable approaches for individual learners and the whole classroom is necessary for the initiation phase of change management. This important reminder addresses the very essence of effective instruction: the achievement of all students. Teachers and school administrators can fulfill the different needs of children and deliver successful instruction in reading and comprehension methods through collaboration.

2.8 Change Management

The extant literature on change management may be reviewed in several ways. Change is essential to organization and management literature; change "is seldom an objective entity," and hence, it is defined variously but with similar meanings of "making something different in a certain way" (Wolf, 2015). According to Allaoui and Benmoussa (2020), the first and most evident definition of change management is the process of managing change via people, processes, and culture. Accordingly, Hiatt and Creasey (2003) consider change management to be the management of people in a changing environment such that organizational changes are successful and intended goals are realized. Managing change is executing changes in a planned, controlled, or systematic manner (Cox, 2018). The objective is to execute new processes and systems inside an organization more efficiently. The organization supervises and regulates the internal changes. However, environmental occurrences may induce these internal alterations. Externally, companies adapt to developments over which they have little or no influence (e.g., legislation, social and political pressure, rival activities, and altering economic tides and currents) (Bayousef, 2019). "Change management is a planned strategy for the transition of individuals, groups, and organizations from their current condition to their desired future one," explains Hazelwood (2016). Amwago (2018) argues further that the role of managing change

includes controlling its effects on individuals. This component of managing change is typically challenging for many managers since it requires assisting individuals in adjusting to the shocks of change. Similarly, Casiello (2019) defines change management as the planning, initiating, controlling, and stabilizing business and individual change processes. The capacity to manage and successfully execute change is a problem for organizations in modern society. Change is frequently received with ambivalence by some, dread by others, and "a glimmer of hope" by others. Companies go through a process to accomplish their objectives (Kotter, 2012); this process involves both structures and people. Casiello (2019) argues that we should study context, substance, process, and results to determine the qualities associated with organizational change processes and implementation. These four concepts serve as the foundation for thinking about organizational transformation in the context of management. The next part outlines what change management comprises by concentrating on the conceptualization techniques and the change process.

2.8.1 Conceptualizing Change and the Change Process

Change theorists and practitioners concur that external pressure due to changes in the environment (political, sociological, economic, and technological) is the primary driver of organizational change (Kendrick, 2019). However, change has been conceptualized differently in the vast body of literature on organizational change (Kelly, 2019).

Change type is defined by Bianco (2020) as "the key elements that describe the sort and shape of change and the attributes that make change what it is." Although the sort of change is crucial, some theories have advocated a greater focus on its size. Change theorists classify change according to the typology seen as change's content. Regarding the scale of change from a business perspective, Bautista (2020) states that "knowing where your company is today and what processes it needs to improve, adapt, or transform is the first step in implementing change process discipline." The two dimensions need consideration of

the classification of change kinds. Different change theorists and practitioners classify change in a variety of ways.

Blakeley (2020) describes planned organizational change and compares the types and variations of organizational change in various aspects that play significant roles in the organizational change processes. The types involve local option versus total system, operational and strategic, transactional and transformational, continuous and episodic, evolutionary and revolutionary. However, this study focuses on transformational change, which entails the transformation of tertiary educational institutions from one form to another in response to internal and external pressures. According to Rainey (2021), planned revolutionary change is "a fundamental reorganization of the organization resulting in a modified or altogether new mission, a shift in strategy, leadership, and culture."

Due to the fragmented character of the literature on organizational change, it is essential to create valid links about a topic of interest, transformational change in this case. Haden, 2021, presents four prominent approaches to conceptualizing change as current perspectives and classic ideas that appear to capture "indicative and constructive means of introducing change based on foci and modes of change, speed and scale of change, metaphors of change, and complexity of change" Theorists and practitioners commence conceptualizing the change process after diagnosing the type of change required by answering the aforementioned questions. Changes occur at several levels, including the organizational structure, identity, and individuals. Depending on how individuals view their company, Conroy & Peterson (2013) assert that organizational metaphors illustrate the transition process. Only four of the eight frequently employed metaphors were chosen as the subject of this study. The change process's approaches influence change agents' ability to manage change initiatives. If companies are perceived as machines, organizational structures, job design, and process reengineering become the focal points of change. Others

view organizations to be political entities, which to them consist of "secret agendas, competing factions, and political maneuvering" and are the intrigues of the transformation process. Consideration of organizations as organisms necessitates using existing research to inform the change endeavor, as opposed to the organization as flux and transformation, which bases change on general patterns. This emphasizes the need to know the theoretical underpinnings of organizational change management.

2.8.2 Theoretical Foundations of Organizational Change Management

Davis & Fifolt (2018) explain that organizational transformation theories are greatly influenced by history. Certainly, organizational change predates organizations; this phenomenon, which has been studied from both theoretical and practical viewpoints, has existed for centuries. Theoretical conceptualization of organizational change has focused mainly on the process, but situational enactments have tended to emphasize the substance of organizational change. Existing change management theories derive from several fields and traditions because "change management lacks clear, unambiguous limits, and tracing its origins and concepts is an arduous endeavor."

Rieg *et al.* (2021) stated that the research on organizational transformation is "fragmented and requires scholars and practitioners to develop links." To comprehend and explain organizational change management, it is necessary to comprehend how organizations function and how they may effectively address their current and future difficulties (Shoham & Perry, 2009) by establishing evocative linkages.

Practitioners of change acknowledge the necessity to execute organizational change successfully, but concerns regarding the type and degree of change and the management of change remain largely unaddressed. This part studied the foundations of change management theory to support the frequently used organizational transformation models.

Depending on the size of the change, change agents are required to manage individuals, groups, or the entire company to ensure a successful conclusion. Change implementation success requires appropriate management at every level. Numerous change management strategies are based on three primary ideas, which are explained in the following section: the individual, group dynamics, and the open or complete systems approach (Summey, 2020).

Since the beginning of the fifth century BCE, when the ancient Greek philosopher Heraclitus noticed that one could never tread the same river twice, researchers have endeavored to comprehend how and why things, including institutions, change. To comprehend how institutions of higher education develop and may be reformed, it is necessary to analyze broader concepts about transformation. Six prominent theories are often highlighted in the organizational change process. The theories involve institutional, cultural, political, social, scientific management and evolutionary change. In many aspects, change is an enigmatic concept in and of itself, and considerable criticism has surrounded its definition. Once upon a time, researchers concentrated mainly on episodic occurrences in which change was sporadic, discontinuous, and deliberate. Most academics and theorists now view change as a more continuous, developing, and accumulating process punctuated by episodic and dramatic periods of change (Reese, 2016).

According to Reese (2016), the underlying assumption of the theories comprising this school of thought is that change in the climate, situational aspects and current circumstances and that social system (such as organizations) evolve due to their diversity, interdependence, and complexity. Due to the predominance of determinism in evolution, humans have a minimal effect on the changing process. The focus of social cognition theories is cognition. As change is comprehended and implemented by individuals and their mental processes, the stress extends from sense-making to organizational learning. Learning

and growth play the most critical role in change because when individuals comprehend a change, they are more likely to accept it. In contrast, resistance is more frequently the product of misunderstanding than disagreement. For change to occur, pre-existing worldviews must be questioned and transformed. Thus, change is a response to cognitive dissonance rather than environmental need, evolving challenges, an administrator's vision, or ideology. This school of thinking gives a more operational approach to implementing change, but at the expense of other elements, it emphasizes the person over other influences (Wroblewski, 2019).

Cultural theories connect change to the constantly shifting human environment in terms of culture. Because they include altering an organization's ideals, beliefs, myths, and rituals, these procedures are laborious and lengthy. Change agents are essential, but they must establish a power base to guarantee that change is effectively implemented. This theory's most significant addition to our understanding of change is that it recommends a significant shift from a concentration on rationality and linearity (Wroblewski, 2019). In addition, opposition to change might be confused with conflict or opposing interests, leading to a misunderstanding of the processes. Change is unavoidable and everyone must deal with it, even during a worldwide epidemic, when change is demanded and essential (McLaughlin, 2020).

Using the change theories and theoretical frameworks of Fullan (1993, 2016), Goodson (1993), and Rogers (1995), conducted a study to investigate the practices of teachers who encounter hurdles when implementing digital technology in the classroom (2003). These change theories assist the researcher in sifting through subject experiences and identifying emergent themes, which leads to the development of a model for instructors to follow and, consequently, change in the face of obstacles.

2.8.2.1 Change Management Theory at the Individual Level

Until Lewin's 1946 contribution to organizational development, the early study on change was based on psychology and sociology. Lewin's concentration was on improving human situations through the resolution of social disputes. The origin of the study on the procedural implementation of change may be attributed to Lewin's approach to modifying human behavior. Individual change theory is applicable when contemplating "an overarching direction for organization development." Because change is a new behavior, "individual-level modifications are created and implemented to assist the organization advance in a new direction" Similarly, Kotter and Cohen (2012) claim that successful transformational change extends beyond altering the structures and procedures of an organization; rather, it focuses on altering the behavior of individuals.

Individual change management with origins in psychology necessitates examining methods for individual transformation (Brown, 2014). At the individual level, the underlying theory of change highlights behavioral, cognitive, psychodynamic, humanistic, and gestalt approaches to transformation. First, the behavioral approach to individual transformation may be traced back to Mir-(1921) Bohigas's assertion that expected results influence human behavior. Thus, the incentive for performance coupled with reward and punishment tactics applied by change management agents reduces resistance (Brown, 2014) to promote an inner shift in individuals' thinking. The cognitive approach to individual transformation evolved in response to "frustration with the behaviorist approach." While the former relied on observation, the latter aimed to understand "brain processes" that determine observed behavior. Inferentially, people's actions result from their ability to apply reason to evaluate stimuli. Using the cognitive method to create organizational change requires "a positive mental attitude and some stretching goals, supported by a careful examination of what limiting beliefs cause self-defeating behavior." Nonetheless, "the cognitive method

expands on the behaviorist approach by placing behavior within the framework of ideas and focusing more intently on results" The humanistic approach stresses the whole individual's needs in the context of transformation. The gestalt method aims to develop experiential self-awareness to enhance behavior to adapt to organizational change (LeTourneau, 2012). Even though change leaders manage people, they address them in groups Most of the time while managing change efforts.

2.8.2.2 Change Management Theory at the Group Level

The word team or group, alternatively used in the literature on change management, relates to the same item in this study. The distinction between the two terms, as described by Mienczakowski (2013), is that "a group is a collection of individuals who draw a boundary around themselves and a team with its common purpose is generally tighter and clearer about what it is and its raison d'être," fits well with the case study design for analyzing transformational change. Group dynamics-inclined change management theorists claim that change occurs most effectively at the group level because groups have the potential to convince individuals to comply. Change management theory and practice have been significantly affected by the group dynamics viewpoint on change (Dos Santos, 2013). This school of thinking asserts that organizational reform should focus on group behavior, as individuals tend to operate in teams. Consequently, an individual's conduct must reflect the group dynamics and the organization's stated culture. Numerous forms of teams are described in the literature on organizational change. However, the organizational change team is particularly important to the current study since it is generally regarded in management and many companies view themselves as teams rather than as individuals. For greater insight, it is essential to focus on change management theory at the organizational level.

2.8.2.3 Change Management Theory at the Organization Level

At the organizational level, the objective of change management is to establish an environment conducive to the implementation (Shah, 2015) of strategies designed to shift beliefs, values, attitudes, and the entire structure for competitive adaptation to new systems, markets, and eventual difficulties. Changes to the overall organizational system impact the structure and culture that shape the future outlook. People tend to oppose organization-wide change. In the corporate world, the scope of transformational change is expansive to the degree that exploring new enterprises causes instability and uncertainty. Uncertainty inside an organization, known to diminish productivity, becomes a difficulty during a period of change (Youngblood, 2020). However, agents of change management must constantly keep an eye on both macro and microenvironmental difficulties, depending on the available reasons for change. Frequently, organizational transformation is predicated on "planned vs. unplanned and revolutionary versus evolutionary changes." Before implementing transformational change, it is essential to view the institution as "a whole, composed of interdependent parts or components." The intricacy of such organizational change, which aims to "transform the company in the opposite direction," necessitates subsystems management (Cantu-Lee, 2020). Although individuals and groups are a vital element of the organizational change process, "orders of change, stages of big system change, and change focus" must be considered to transform a large company. Some management theorists were motivated by these change features to create the open systems view on organizational transformation. At this level, "the purpose for change is systemic, conforming to the organization's culture." Advocates of the open systems perspective are hostile to individuals and groups, but believe in the organization as a whole (Sassone, 2020).

2.9 Change in Higher Education

Scholars have emphasized the necessity for change and even reform in higher education.

The above-described need for reforms in shared governance is part of the greater demand for change at colleges and universities. Kamensky (2019) devoted a whole edited book to investigate the necessity and possibility for innovation in higher education. Numerous and well-documented variables exert change pressures on institutions of higher education. Bates (2018) emphasized the significance of the expanding relationship between higher education and the global economy, as well as the expanding role of technology, as elements that are driving change. Adaptation is also required when university environments grow increasingly corporatized (Barrett, 2013). It has been studied how colleges and universities are impacted by increasingly diverse student populations that connect with campuses in various ways.

Pantazis, (2017) has pondered how new knowledge about how people learn will drive innovation in higher education, while Pantazis has examined the effects of a greater public investment in higher education and the resulting forced accountability of institutions, as well as the continued internationalization of campuses, as motivating factors driving change agents. All of these things led to calls for the conventional institution to be "re-engineered." The initiative to transform higher education is not without hurdles. According to Capece & Campisi (2011), although American higher education is hailed internationally as a success story, it is not without problems. They contend that colleges and universities can and should be improved but that educational innovation faces several challenges. They note that little data support the idea that there is little innovation in higher education but acknowledge that there are certain hurdles to innovation. Possible obstacles to change include federal and state financing processes, government restrictions, accreditation concerns, faculty governance, and rigid faculty contracts. Kezar (2018) believes that change is feasible but that new organizational models for higher education must be implemented. Although these theoretical models may be helpful to researchers and academic leaders in their conceptualizations of change, the challenge may be how partial and productive change might be implemented. Kezar (2018) offers a more specific way of seeking change, which

she refers to as the “change marco framework..”

Below Figure is based on the one Kezar provides to illustrate the framework for understanding change in education:

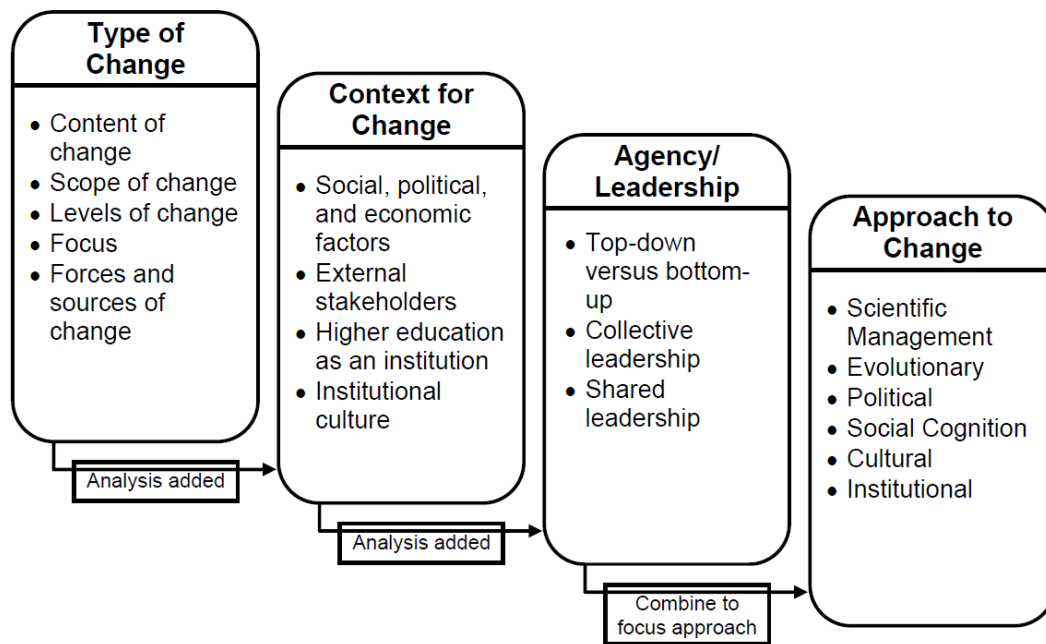


Figure 6: Change Marco Framework (Kezar, 2018, p. 66)

As seen in the preceding figure, Kezar suggested that to initiate the reform process in any organization, the stakeholders and agents must examine the change required. They must evaluate the nature, extent, and magnitude of the changes. They must consider the emphasis of the change, i.e., the phenomena that will be impacted, as well as the factors and sources of origin. Through analysis, the change agents now analyze the social, political, and economic aspects that impact the transformation, as well as external stakeholders. In addition to these considerations, the nature of higher education as an institution and the school's particular institutional culture should be considered. The agent engages in more analysis, which initiates an assessment of agency and leadership. They must decide if the choice will be taken from the top down or the bottom up and whether collaborative leadership or shared leadership will be utilized. These three factors determine whether the change model will be implemented at institutional, cultural, social, and political levels,

which may bring evolutionary change and scientific progress. The approach for transformation proposed by Kezar appears to be effective and generally applicable. This dissertation, however, goes beyond asking what changes can be done and how they may be accomplished to investigate who can make such changes. After reviewing all of this material, the question of who has the authority to be a change agent and implement change remained. To address this question, an examination of what power becomes necessary.

This type of profound transformation, according to Loor (2021), necessitates a leadership structure and leaders who are cognizant of institutional history, defining a vision for the future while navigating the challenging process of letting go of the past.

2.9.1 Guided Pathways as Organizational Reform

Organizational change is a concept that most people grasp intuitively, but few can explain precisely. The notion has been vaguely described thus far in the literature review as disruptive, radical, systemic, transformational, deep structural, or second-order change. For a comprehensive understanding of the complexity and wholeness of guided pathways implementation as organizational transformation, the following case study extract is provided. After demonstrating the reform mandate and examining important change ideas, the next part investigates how change occurs and provides organizational and change leadership models (Muema, 2020).

2.10 The Processes of Change

Four theoretical models characterize major approaches to the change process; each model is defined by the factors driving the change and the procedures involved in its actualization (Johnson, 2018). Life-cycle theories claim that change results from a sequential and unchangeable natural developmental process. Teleological theories are defined by their emphasis on an ultimate goal or aim as the motivator for change. Change, according to dialectical theories, is the consequence of a struggle between opposing forces.

Evolutionary theories characterize the change as the result of a continual struggle for survival of the fittest. While Shaukat (2013) suggested that every change might be viewed via one or more of these lenses, the process approach to change in this study is informed by teleology.

2.10.1 Teleology

The most excellent description of teleological transformation is "purposeful collaboration" (El Dallal, 2020). It represents a goal-oriented change constructed cooperatively by the members of a group, unit, or organization. As a second-order change, teleological change frequently leads to a rupture with historical traditions and ways of thinking about a particular topic. Any divergence from an intended outcome or objective might initiate the change process. Teleological change procedures entail data-driven, well-informed judgments, the selection of the optimal solution or plan, and the supply of sufficient resources and support to implement the required change. Teleological transformation is deliberate and deliberate.

2.10.2 Planned Change

Lewin's (1947) three-step model of planned change offers a straightforward framework for comprehending the process of purposeful change. He claimed that the first phase in the change process is to give evidence that change is significant to challenge current behavior and implicit assumptions regarding the quality and performance of a unit or organization. This need may exist in higher education if enrolment, retention, or graduation rates continue to drop. During this phase, the purpose is to inspire collaborative action. The next step is to modify the unit or organization's policies and practices to attain the desired end state. The goal is to accomplish this transition. The third phase is refreezing new behavior and beliefs to prevent relapse into previous, less productive pursuits. Lewin (1947) defined four ideal types of planned change, including commanding, a coercive and directive

approach for achieving radical change immediately; engineering, a more collaborative approach focused on process reengineering in a relatively short period; teaching, a longer-term intervention that seeks to uncover and transform implicit attitudes that undermine change; and socializing, an incremental approach that focuses on cultivating improved relationships a step at a time. Leaders of change must know the limitations that time and content impose on change initiatives and can operate fluidly within each of these categories.

2.10.3 Organizations and Leaders

To comprehend the dynamics of change, it is necessary to comprehend how companies operate and how leaders impact their operating procedures. Several integrative organizational models provide distinct views. Taylor (2019) highlighted the connection between organizational structure (formal system) and organizational culture (informal system) as essential to comprehending and enhancing organizational success. He conceived of the function of change leaders as monitoring organizational factors and ensuring alignment between objectives, structure, rewards, change processes, relationships, and leadership. Each also recognized the significance of leadership at different organizational levels.

2.10.4 Leadership for Change

Change leadership has been examined from several angles. The impact of leader attributes and situational factors on change success has been examined (Sukhwa, 2017). Additionally, the interaction of leadership and teamwork, identity, and power and influence have been investigated. Transformational leadership, on the other hand, is frequently recognized as essential for bringing about organizational transformation. Additionally, the research supports collaborative types of leadership, remarkably adaptable, shared, or dispersed leadership. Next, collaborative techniques are discussed in the spirit of intentional cooperation.

2.10.5 Adaptive Leadership

Adaptive leadership supports ingenious ways to unsolvable organizational challenges. Sherman (2021) described adaptive challenges as those that necessitate novel methods of thinking and learning in contrast to conventional technical difficulties. Adaptive challenges in higher education are frequently those that challenge implicit assumptions, attitudes, and conventions and need altering the institution's fundamental structure. According to Sherman, adaptive transformation is transformative. Therefore, the adaptive leadership model is a good framework for higher education change leaders.

2.10.6 Distributed and Shared Leadership

There are parallels between the philosophies of dispersed leadership and shared leadership. Neither describes leadership as the result of the efforts of a single individual, but rather as the result of an interactive process among a group of individuals. Distributed leadership emphasizes relationships between leaders, followers, and their particular situations (McQuay, 2021).

2.11 Transition in Higher education

Hassan, (2016) characterized the conventional view of higher education as "lifetime employment, collaborative decision making, individual accountability, infrequent promotion, and implicit informal evaluation." Nonetheless, schools and universities adhere to a consumerist philosophy and are encouraged to create more revenue for research and academic endeavors. Due to the difficulty of balancing financial gaps, universities now operate more like firms. In relation to their function, this has had the most significant influence on middle managers in institutions.

2.12 Innovation in Higher Education Institutes

Lee, (2012) has conducted a study on college resilience in small institutions. Lee concurs with Miller, (2019) argument that an innovative mindset is even more critical than

talents. Miller described this as an enterprising character. According to Lee, (2012), Most creative possibilities arise from the following areas: process requirements, unexpected events, incongruities, market and industry changes, perception shifts, new information, and demographic shifts.

2.13 Strategies for Leading Change in Higher Education

Sensemaking, creating the correct goals, supporting shared responsibility for student achievement, and campus-wide leadership distribution are four specific tactics for facilitating cultural change at loosely organized colleges and universities.

2.13.1 Increasing the Assets in Organization

Transitioning from tying leadership to specific individuals enables organizations to utilize all their assets more effectively when studying and designing solutions to their challenges. Given the complex issues most businesses confront today, Steinberg (2018) defines a great leader as someone whose response to the question "What should we do now?" begins with the remark, "We have no choice."

The effectiveness with which sense-making processes and leadership motivate situational awareness,

- (1) animate action
- (2) sharpen attention to change,
- (3) foster respect, trust, and self-respect amongst direction-seeking participants

Smulowitz (2014) states, "It is these four (sense-making) acts that make it simpler or more difficult for individuals to make sense of their situation and cope with it collectively." University leadership may use sense-making activities to raise their understanding of the continuously altering environment of higher education, foster respect and trust among academics, staff, and administrators, and motivate collective and coordinated action to improve student achievement.

2.13.2 Shared Responsibility for Student Success

University administrators must cultivate on their campuses a common educational philosophy and a sense of combined accountability for student involvement and learning to foster change that supports student success. Student success theorists have discovered that a university's norms and culture influence retention and student achievement at least as much as the specific programs and regulations it administers (Johnson, 2017).

2.13.3 Distributive Leadership

Creating a culture marked by audacious objectives and shared accountability for student achievement necessitates extensive structural reform at Most colleges. Distributive and team-based leadership theorists contend that encouraging change in complex organizations necessitates the agency, empowerment, and coordinated action of numerous actors within the institution. Leadership should be "spread over" several people and derived from their interactions (McQuay, 2021).

2.14 Change Management Models

2.14.1 Lewin's Three Phases of Change

An elementary description of change was presented by Lewin (1947). It is merged with many consultants of an organization and upcoming models of managers who comprehend and guide the procedure of systematic change. Lewin's viewpoints explain three fundamental steps, which are an integral part of the change process. In the first step, it contains the current level of behavior to be released, for example, it can be a sequence of management training sessions where change's need is exposed. The second step is termed movement; it is about taking the initiative towards change from its actual behavioral level or operation to a new level in the social system of an organization. In the end, the third step which is termed refreezing, contains the initialization of a procedure that guarantees the

latest behavioral levels would be secured as compared to reversion to previous operational modes.

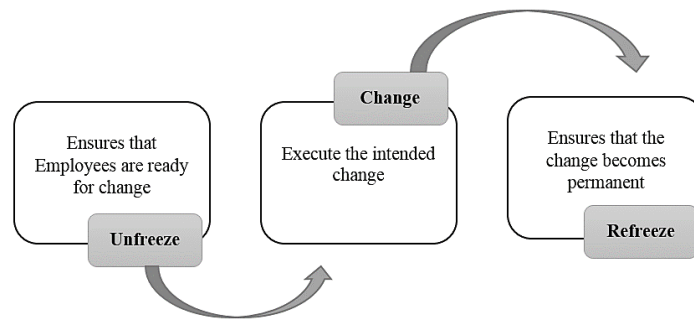


Figure 7: Lewin's Three-Stage Change Process (Lewin, 1947)

2.14.2 Kotter's Eight-Stage Change Management

Kotter proposed this model in 1996 for managing the change. The Kotter model consists of Eight Processes to change management. It is prominent and considered an appropriate model of Change Management. The first stage is to create a sense of urgency; it is the knowledge of the reform requirements within the organizations. This may require situational analysis and planned assessment for the required reforms. The second level comprises developing a group that is empowered to lead change. The third stage discusses a vision that is helpful for everyone to understand why they are asked to do something. Communicating the change vision is known as the fourth stage of Kotter. At the fifth level of this procedure it includes the elimination of difficulties towards change, systems or structural changes that challenge and encourage advanced ideas. Kotter knows that short-term achievements need to be evident and strictly linked to the track of reforms. Kotter claims that the cause of the catastrophe in several change processes is the early announcement of achievements when the actual change continues. Lastly, to make any change, it must be kept by the organization and be at its core.

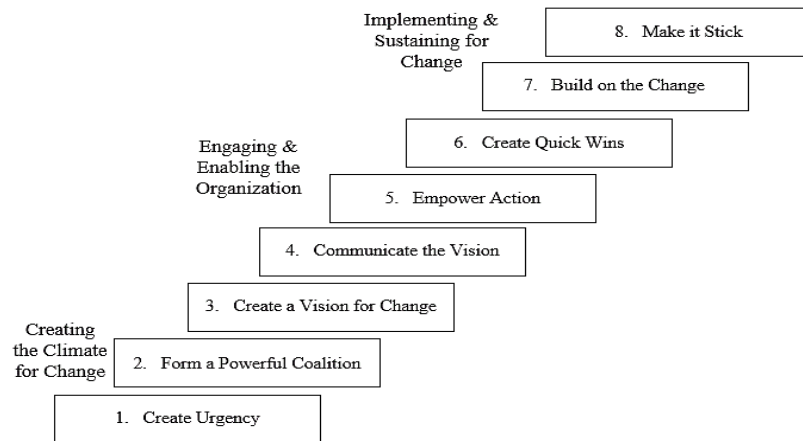


Figure 8: Kotter's Eight Steps Change Model (Kotter, 1996)

2.14.3 ADKAR Model of Change Management

Every time innovative ideas, new paradigms, new strategies, and new tools are required to manage change on individual and organizational levels and to implement it smoothly for the required change. To lead a broad range of changes efficiently, the ADKAR Model provided the necessary framework for organizational leaders, managers of change and project managers (Hiatt, 2006; Prosci, 2006). The ADKAR Model is an acronym that is combined with five words that brought change successfully. These letters are defined by awareness, desire, knowledge, ability and reinforcement. Jeff Hiatt 2003 established this model. Later, Prosci in 2006, presented it as a tool for practice, a well-known change management consulting and learning complex. This model is proposed to be a coach and a tool of change management that will help assist workers with the procedure of change in the organizations, primarily (Hiatt, 2006; Prosci, 2006).

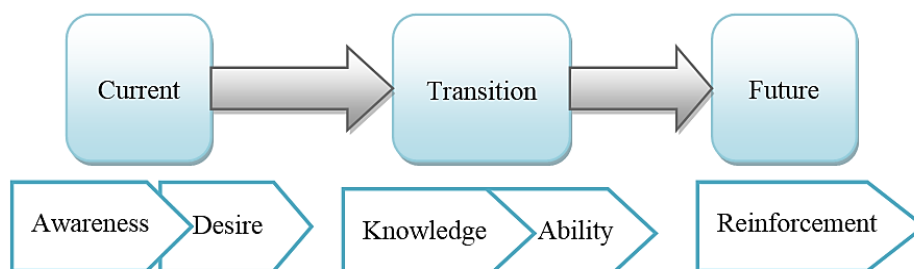


Figure 9: ADKAR Change Model (Hiatt, 2006; Proci, 2006)

2.14.4 The Checklist for Change

Harvey (2001), proposed a checklist for change, and he described that change as a highly complex process that must be tackled or managed simply (p.53). Thomas Harvey also wrote that change is handled successfully by teamwork compared to individuals (p.53). Harvey's checklist has three categories analysis, planning and implementation. The analysis phase is related to the need for change, and after that, in the planning phase, it is all about taking some steps to manage the change and in. Last, there is the third category which is all about the change results implementations.

Harvey's Checklist for Change		
Analysis	Planning	Implementation and evaluation
1. Description	9. Planning	16. Advocates
2. Need	10. Change strategy	17. Time Frame
3. Potential actors	11. Resistance strategy	18. Monitoring
4. Payoff	12. Participation	19. Action plans
5. Unfreezing	13. Excitement	20. Risk analysis
6. Resistance	14. Change environment	
7. Investment	15. Scope	
8. Culture		

Figure 10: Checklist for Change (Harvey, 2001; Balch, 2014)

2.14.5 Fullan's Model of Educational Change Management

Initiation, implementation, and continuation are three change management phases which are proposed by Fullan (2016), known as Fullan's traditional model of change (2016). The latest Fullan's (2016) model of the change management process includes three phases, **Initiation Phase**. This phase indicates the start of the change process. When administrators or external agency initiates or starts a particular program. Secondly, the **Implementation Phase** this phase indicates the deployment of change practices. Moreover, employees are encouraged to use selected practices. And in the third phase **Continuation Phase**. This is also called the evaluation phase. New practices are continued with the passage of time.

Outcomes are also evaluated in this phase which provides a view of the effectiveness of change initiatives.

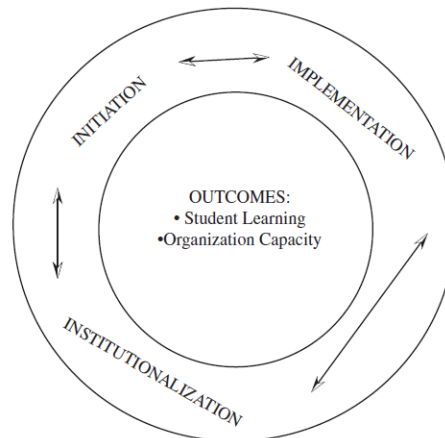


Figure 11: Educational Change Model (Fullan, 2016)

2.15 Fullan and Educational Change

Fullan (2016), an authority in educational change management, has presented valuable concepts with more significant contributions in the field. Fullan is involved in teaching, advising, and analyzing educational transformation programs worldwide. Many consider him an authority on effective change processes, and he has used his experiences and insights to build the ingredients of successful transformation in today's schools.

There are ten fundamental concepts, according to him, for directing our efforts to attain higher educational success on a big scale.

1. Defining the reform gaps to achieve the desired goals.
2. Target the three basics of the learning environment i.e., literacy, numeracy and well-being.
3. Taking care of the self-respect and dignity of the individuals.
4. Engaging people have greater potential.
5. Depending less on elaborate planning and focusing on action-oriented change. This mainly focuses on effective and socially acceptable strategies.
6. Detect the problems and shortcomings in advance and keep working on the detected

- problem throughout the process.
7. Keep track of good leadership for appropriate directions to keep the processes in line.
 8. Link the internal evaluations with the external evaluations of the processes to stabilize the reforms
 9. Establish connections for the assessment of workload
 10. Utilize the above strategies to stabilize the overall process (Fullan, 2016).

To bridge the accomplishment gap, Fullan (2007, 2016) recommends focusing on the three fundamentals. Although instructors may be working on other difficulties, we must master the three fundamentals by age 12. The three fundamentals are reading numeracy and the student's well-being (secure institutions, character building, emotional stability and social responsibility etc.). One way we can respond to the three fundamentals is by ensuring that our teachers receive the necessary professional development to promote student accomplishment. Achievement is the system's duty as a whole, but each component of a school or district must do its share. Consider how closely classroom management or behaviors, instructional tactics, material, and evaluation for learning correspond to Fullan's three fundamentals. Implementing a systemic change requires a keen knowledge of people's reactions to change. Utilizing people's dignity and respect is one way to ensure that everyone is motivated to work toward the same objective. "Some pupils and teachers do not deserve respect, but I emphasize this objective since it is the key to people's emotions and hence their drive" (Fullan, 2016). Fullan continues, "This is about respect and dignity as a source of drive." Teachers and students who are not appreciated lack the motivation to study. Respect is a highly effective motivator. Respect is also included in Knight's partnership concept; one approach to demonstrate respect is to view the coach-teacher relationship as one of equality and reciprocity. Improving collaborative ties amongst stakeholders is a

crucial method for effectual transformation. Fullan (2016) asserts that to attain success, we must acknowledge that all effective techniques are socially grounded. Furthermore, he asserts, "All effective change programs foster collaboration where none existed previously." When connections grow, trust and other indicators of social capital and social cohesiveness improve (Fullan, 2016). Utilizing leadership is not always the most obvious method for fostering continuous development. When considering change, many administrators and educational leaders lose sight of assuring the leadership development of those inside the company (Fullan, 2016). Fullan has referred to this concept in other works as the "long lever of leadership." According to him, "the primary measure of a principal after his or her term is not simply the influence on student progress, but also the number of strong teachers the administrator leaves behind who can go even farther" (Fullan, 2016, p. 59).

Integrating internal and external accountability is also crucial to the success of school reform. Internal accountability involves non-neutral instruments like metrics, measures, evaluation processes, institutional performance, measurements, student results and yearly reports. Fullan (2016) also recommends that leaders implement the preceding nine confidence-building methods. When public confidence increases, the organization is succeeding. Fullan concludes his explanation of his approach to school reform by stating, "In successful circumstances, there is a significant shift from "mine" to "we." Individual instructors in the school no longer consider "my classroom" but rather "our school." These change processes approach new meaning to reform processes (Fullan, 2016). Most researchers, including Fullan, see the change process in three stages.

Phase I – Often indicated as initiation, the focus is on creating the conditions necessary for change. This involves building relationships, establishing a sense of urgency, and providing access to information and resources. The phase involves major factors such as access of information (communication, partnerships and

collaborations), availability of innovations (to assess the existence and quality of innovations the institutions can draw data-based conclusions about the availability of innovations) and role of stakeholders (teachers, students, central administration, change agents, community, government and bureaucracy) (Fullan, 2016, p. 70; Griffo, 2021).

Phase II- In the implementation phase, the focus is on putting the change into action. This involves developing and implementing new structures and processes, adapting to local contexts, and managing external factors that can impact the change. Fullan identifies four key elements that are necessary for successful implementation: change characteristics, local characteristics, external factors, and embedding new structures (Fullan, 2016, p. 87; Sansosti & Noltemeyer, 2008).

Phase III- In the continuation phase, the focus is on sustaining the change over the long term. This involves building commitment and ownership among stakeholders, providing ongoing support and assistance, and creating a culture of continuous improvement. The phase involves factors such as embedding new structures, employee commitment and employee support (Fullan, 2016, p. 101; Rainey, 2021).

This general overview does not consider the complexity of the change process, such as the myriad variables that impact each of these phases. People and the breadth of the change significantly impact the change process. For instance, in the implementation phase alone, necessity, clarity, complexity, quality, and practicability all influence the change process's success (Fullan, 2016). Lastly, because the change process is rarely linear, district leadership needs to comprehend the fundamental variables that often affect change to understand how the change process may unfold in their district. A successful system-wide transformation requires the support of key stakeholders. There must be a champion, a change agent, and individuals who are knowledgeable about and supportive of the change

(Fullan, 2016; Kotter, 1996; Rogers, 2003). Teachers, principals, parents, community members, district officials, support workers, and students are all stakeholders in an educational organization. As fundamental and complex as that, educational transformation rests on what teachers do and think (Fullan, 2016, p. 129). When considering a change, it is essential to identify your stakeholders and their locations. Both the instructor and principal are essential for a change to be successful. "Policymakers began to embrace the role of school leaders in guiding change programs as evidence accumulated about the principal's effect on reform results, for better or for worse" (Fullan, 2016).

2.15.1 Significance of Fullan's Model in Educational Change

Michael Fullan is a leading researcher and consultant on educational change and reform. Fullan's (2016) model of educational change is based on the idea that effective change in education requires a focus on both the individual and the system. This is in contrast to other models of educational change, which may focus more on one aspect or the other (Harvey, 2001; Hiatt, 2006; Kotter, 1996; Lewin, 1947).

Fullan (2016) model proposed the idea that change must be driven by a shared vision and a clear understanding of the desired outcomes. This involves building a shared understanding among all stakeholders, including teachers, administrators, students, and parents, of the goals and purpose of the change.

Another important aspect of Fullan's (2016) model is the need for strong leadership at all levels of the education system. This includes the development of leadership capacity among teachers, as well as the identification and support of effective leaders at the district and school levels.

Fullan (2016) also emphasizes the importance of building capacity and fostering collaboration within the education system. This includes providing ongoing professional development and support for teachers, as well as encouraging the sharing of best practices

and the development of collaborative partnerships.

Fullan's initiation, implementation, and continuation (IIC) model is a framework for understanding and guiding educational change. It is based on the idea that change in education involves three distinct phases: initiation, implementation, and continuation.

One key aspect of Fullan's IIC model is its emphasis on the importance of understanding and addressing the different needs and challenges that arise at each stage of the change process. This is in contrast to other models of educational change, which may focus more on a single phase or aspect of the change process.

Overall, Fullan's IIC model is seen as a useful framework for understanding and guiding educational change, as it helps to identify and address the different needs and challenges that arise at each stage of the process.

2.16 Changing Role of Faculty at HEIs

Due to the present financial and enrollment difficulties of higher education institutions, teachers and staff are under significant pressure to assume greater responsibility for campus issues (Griffith, 2021). In a recent remark, an enrollment manager at a university called for a more collaborative approach to problem-solving and for staff to have a broader view of their position within the business. Historically, full-time academics have been indoctrinated to execute the discrete duties of teaching, research, and service and to emphasize tenure achievement over institution service. However, new market dynamics are altering faculty expectations. Faculty are increasingly expected to engage in non-traditional tasks like recruiting students, securing grant money, forming business collaborations, generating spin-off firms, and engaging in community outreach on behalf of their schools. While some faculty members are competent in these positions, for the majority, these responsibilities are foreign and unpleasant; they reflect labor for which they were not prepared in the academy. For instance, in enrollment management, "it is unusual for Most

teachers to view continuing marketing and recruiting of new students as part of their job responsibilities." These goals are not linked with the Ph.D. training, early career socialization, and incentive structure of the faculty. In addition, it is uncertain if teachers participate in these activities out of dedication to their university or development.

Most of the academic leaders are either past or present faculty members, and are similarly unprepared for their new responsibilities. Leaders have a crucial role in the hiring, training, socialization, and motivation of academics, although they have historically been undertrained for even the most fundamental obligations of their jobs (Bates, 2018). This difficulty multiplies when applied to the management of creative or entrepreneurial faculty activity. In addition, various institutional and philosophical obstacles prevent the faculty from developing a shared problem-solving approach. Leaders lack the flexibility and discretionary resources necessary to offer faculty incentives. In addition, they function under a rigorous tenure and promotion system that significantly impacts faculty conduct and tends to prioritize individual achievement above institutional service. Lastly, leaders must also battle with philosophical obstacles, such as the inclination of faculty members to regard themselves as independent contractors and to identify with their academic area rather than their home school. Therefore, both executives and faculty face several difficulties when attempting to build an institutional investment and collective responsibility mentality (Youngblood, 2020).

2.17 Changing Role of Deans and Administrators at HEIs

While the existing literature on organizational change and change management in higher education emphasizes the role of executive leaders in leading transformational change, it is widely acknowledged that middle managers, particularly academic deans, play a crucial role in implementing and sustaining change in colleges and universities. It has been stated that the academic dean's position is complicated, unclear, and frequently

misinterpreted. This ambiguity frequently contributes to disparities in the perceived efficacy of academic deans. However, deans with good interpersonal skills and the capacity to navigate effectively among various and divergent agendas may establish a favorable working environment and garner the required collective support to achieve institutional projects. (Rentsch, 2018).

What do academic deans do? Throughout history and across institutional kinds, the post of academic dean has been defined differently. Rentsch (2018) emphasized the deans' interaction with faculty and their role in fostering an environment conducive to faculty teaching excellence. Noting the increasingly administrative character of the academic dean's office, Rentsch (2018) emphasized the importance of their leadership and change implementation responsibilities. Examining the balance between leadership and management in the dean's role, essential responsibilities have been outlined, including promoting diversity and openness to multiple perspectives, understanding legal issues, promoting technology integration, developing and managing resources, and maintaining institutional integrity. Interestingly, according to Rentsch (2018), many of these responsibilities are among the most significant obstacles community university deans face. It has become more apparent that academic deans may influence not just the implementation but also the development of change initiatives. Academic deans have crucial tasks that include crafting a vision, promoting cooperation, mentoring professors and staff, managing change, settling conflicts, and responding to student concerns.

In certain universities, the dean has the position of the chief academic officer. In many baccalaureate schools, an academic dean is an academic discipline specialist who offers leadership. Most academic deans in community colleges have managerial responsibilities for numerous programs and disciplines that employ faculty members as subject matter experts. Associate dean or director can also be used to indicate academic

middle management. An academic dean has been designated for this assessment as a specialized or generalist middle manager who reports to a senior executive leader such as a provost, vice president, or chief academic officer. This individual is responsible for directing and managing numerous academic programs and disciplines, as well as the corresponding professors, staff, and students.

Academic deans in the middle. Numerous persons in academic middle management are characterized by "large responsibilities and limited authority." Academic deans must balance the diverse demands of faculty members with a positive working relationship with executive executives. Indicative of the middle nature of the role are the following responsibilities: representing faculty needs, interests, and desires to administrators; managing conflicts among faculty members while maintaining a positive working environment; ensuring effective communications across various departments, and cultivating positive relationships with external stakeholders. Rentsch (2018) compared deans' roles to a dance in which the dean concurrently manages connections with executive leaders, faculty members, colleagues from different divisions, and students.

Role conflict, role ambiguity, and stress. Given the breadth and complexity of their tasks and responsibilities, academic deans labor in an atmosphere rife with role conflict and ambiguity, according to the study. Circumstances that necessitate deans to participate in discordant tasks, such as providing advocacy and support for faculty members while evaluating their success, generate role conflict. Role ambiguity is also caused by academic deans' lack of access to sufficient or up-to-date information for making informed choices or taking necessary action. Multiple studies have highlighted stressors related to academic middle management roles. These included sentiments of being overburdened by obligations or feeling lonely in the role, as well as the stress of juggling several goals, resolving economic exigencies, and balancing the needs of different stakeholders.

Determining deans' effectiveness. In a study analyzing the evaluation of academic deans and directors, researchers determined how the social context—interpersonal contacts with faculty members and other social behaviors—influenced faculty opinions of efficacy. In addition to accomplishing significant quantitative outcomes, such as procuring resources, these social interactions contributed to a dean's success in garnering buy-in and support for attaining organizational objectives. Similarly, Gratz (2018) evaluated the behavioral characteristics that faculty members at chosen research and liberal arts schools deemed to be characteristic of successful academic administrators. These characteristics were frequent and effective communication, appreciating faculty involvement and ideas, establishing a vision, offering input, and exhibiting excellent management abilities. Rather than only articulating faculty expectations, this study indicated that academic deans must be aware of the expectations of several stakeholders in order to carry out a variety of duties properly. Collectively, these studies demonstrated the productive potential of the academic dean's position in securing faculty and staff support for organizational vision and goals and successfully implementing organizational change.

Academic deans as agents of change Researchers have examined the roles of middle managers in promoting a positive workplace atmosphere and culture and aiding strategic transformation efforts (Rentsch, 2018). The ability to "affect how individuals feel about their job and include them in determining the institution's future" has been cited as one of the many crucial roles deans must manage. Placing a deliberate focus on inclusion and respect for diverse viewpoints and then implementing policies and practices that reflect these principles fosters the openness and commitment that are essential precursors to transformation. Academic deans perform a vital connecting function as they concurrently undergo personal change, interpret change for peers and direct subordinates, and coordinate efforts to achieve strategic organizational objectives. Academic deans must rely on their

interpersonal skills to relate to and listen to various constituencies and to arbitrate and reach a mutually agreeable middle ground with a variety of actors in order to carry out these responsibilities effectively.

2.18 Challenges of Change Management at HEIs

Change is a dynamic process, according to a widely held proverb. Extensive research has been conducted on change theories, change tactics in business and higher education, change leadership, and variables impacting the effectiveness of organizational change. Numerous methods for increasing quality and performance and reengineering business processes in higher education have been proposed by thought leaders in management and the social sciences. Nonetheless, realizing and maintaining significant organizational reform in colleges and universities remain challenging (Lamb, 2021). This section examines central change ideas, theories, and the change process. The deployment of guided paths is a current example of profound organizational transformation in higher education.

2.18.1 Organizations as Open Systems

Burdick (2021) explored the biological notion of open-systems theory to describe the organizational transformation and emphasized the symbiotic interaction between systems (or organizations) and their surroundings. He endorsed organizational approaches to change because adjustments to a single unit affect the operations of other units and the system. Khan (2021) cautioned that the distribution of power and authority in complex systems might decrease the overall impact of change attempts; hence, he advocated for efficient and effective energy utilization across the system.

2.18.2 Evolutionary or Revolutionary Change

Researchers have investigated the scope, depth, and speed of organizational change. Most of change ideas and techniques may be categorized as either evolutionary or revolutionary. Evolutionary change is progressive and developing and may be seen as a

process of ongoing improvement. Evolutionary transformation is shown by adopting lean concepts for decreasing waste and enhancing process efficiency. A revolutionary transformation can be characterized as a system shock. The idea of punctuated equilibrium provides a framework for analyzing dramatic or revolutionary systemic change. Following the description of the requirement for profound change, punctuated equilibrium is studied (Kells, 2021).

2.18.3 Punctuated Equilibrium Paradigm

This paradigm holds that "systems evolve by alternating between times of equilibrium, in which persistent underlying structures enable only gradual change, and periods of revolution, in which these underlying structures are profoundly transformed."

Theorists of punctuated equilibrium claim:

- a. Systems do not evolve gradually and necessarily from a lower to a higher stage;
- b. The *deep structure* of a system consists of an implicit set of assumptions about how people within the organization operate together and is mainly immutable;
- c. Systems make choices that preserve deep structure during periods of equilibrium or inertia;
- d. Revolutionary periods are typically transitory and intense phases during which deep structure is dismantled and rebuilt (Sansosti & Noltemeyer, 2008).

It seems to reason that a significant disturbance in structure might have both positive and negative effects on a system.

Lynch (2021) stated that a single shock could not cause a rapid, complete organizational change and that good communication tactics would assure system-wide transformation. Lynch (2021) emphasized that radical change procedures may do more harm than good and that thoroughly deconstructing a shared governance system — a surrogate for deep structure — might immobilize an organization. These findings imply that

revolutionary change may not be sustained, but they also give a starting point for analyzing why and how organizations resist change.

2.18.4 Resistance to Change

Prior to 2015, Kremmyda criticized the Massachusetts community colleges for failing to fulfill their responsibilities as economic and workforce development drivers. These statements contribute to negative opinions of public higher education. Even though colleges and universities may be perceived as open systems, evidence suggests their functional purpose is more conservative; that is, they strive to "alter solely to be able to remain unchanged" (Dodd, 2013). Several ideas and contextual elements, such as the influence of implicit theories of change and the interrelationships among campus leadership, as well as the aim, history, and process of change, were uncovered via research on change resistance.

2.18.5 Implicit Theories of Change

Individuals' experiences and interpretations of events and situations shape their implicit theories of change, including their implicit ideas about how change occurs. According to Dodd (2013) is unaware of these ideas and rarely engages in a careful evaluation of their validity. The deliberate uncovering and investigation of these ideas can help to the effectiveness of change initiatives. Keng (2013) created a framework to assist change teams in addressing implicit attitudes, defining targeted changes, and developing strategies for implementing transformation.

2.18.6 Campus Leadership and Purpose, History, Process

A crucial responsibility of change leadership is to motivate and inspire followers toward a shared objective by assisting them in comprehending the context and the call to action. The process through which a leader explains and interprets conditions and events for constituents is sense making. As the focal point of campus leadership, presidents perform a

vital duty in assisting the campus community to comprehend and implement change. Venezia (2015) emphasized the significance of contextual factors such as experience with promises kept and the trustworthiness of the change agent; the efficacy and inclusiveness of communications; the effect of potential distortions of change concepts and goals; and the impact of perceived uncertainty or inconsistency by the change agent. Shmul-Cohen, (2016) established interrelationships between the type of change (content), the level of confidence in management and prior experience with change (context), and the degree of collective engagement a change agent seeks (process). Other investigations have highlighted the influence of trust on businesses during innovation or transformation periods (Johnston, 2013).

2.19 Recent Empirical Evidences on Educational Change Management (National & International)

To analyze chosen studies on change management at educational institutes, a table of evidence was created, with an example of the table displayed below:

Table 2.1
Empirical Evidence of Educational Change Management

Author	Method	Findings
Razzaq (2012)	Mixed Method	This study was conducted on Pakistani educational institutions to assess educational change management. Razzaq found that administrators and teachers were aware of the purpose and needed for the change. They also think it is suitable for student engagement and learning but also face challenges related to poor resourcing and a top-down approach to educational change. Administrators and administrators demanded well-equipped institutions, involvement in the process of reforms and capacity building for change implementers.

Author	Method	Findings
Shaukat (2013)	Multiple Case Study	Shaukat found several dimensions of respondents' compliance with respect to reforms in the 21 st century when the higher education system in Pakistan was shifting from a local to the global outlook. Shaukat further mentioned that despite serious challenges, reforms were gradual and most strongly challenged reforms were not even aligned with the existing educational practices. Shaukat mentioned that reform is a complicated process, and the reason for this complexity is derived from internal and external factors such as personal, emotional, structural and political etc.
Shah (2015)	Exploratory Study	Despite teachers' positive approach towards the educational reforms and belief in the importance of higher education for national progress, there was limited acceptance of the communicative curriculum in the semester system. Shah found that teachers' beliefs integrated with external factors such as the absence of training, lack of support and resources, educational culture and student engagement could clarify the planned and deployed curriculum.
Hassan (2016)	Mixed Method	Faculty members were aware of the reforms, such as enhanced autonomy of teachers in educational practices—improvement of research culture, ranging the Bachelor's program from 2 to 4 years through implementation of a Semester system. Hassan observed the positive attitude of faculty members towards educational reforms. Hassan further mentioned that faculty members were more concerned about the operational effectiveness of educational reforms for enriching teaching and learning in Pakistani higher education institutions.

Author	Method	Findings
Shoham & Perry (2009)	Model Development	Shoham & Perry conducted a study considering knowledge management as means for organizational and technological change management. They found that there existed a mechanism for change management at Israeli higher education institutions, but the process is not rational. They found a lack of evidence related to pre-service training and using traditional methods to deal with innovations. Shoham & Perry proposed a new model to deal with the challenge of transforming institutions from “Knowledge-Based” to “Learning Based.”
Sansosti & Noltemeyer (2008)	Survey	Sansosti & Noltemeyer used Fullan’s theoretical framework of educational change to assess the response to intervention. They found that despite the potential of administrators and faculty to bring positive change in system and student outcomes, additional planning is required to prepare individuals and the system for proper implementation. Research has proved that the first year of implementing a reform initiative predicts overall implementation success. Study suggested that it is essential to devote proper resources and time to plan initiatives at all three phases of the change process.
Novogrodsky (2012)	Meta-Analysis & Observation	Novogrodsky (2012) conducted a study on educational change by finding the relationship between teachers’ instructional strategies and students’ learning styles. Novogrodsky followed the notion of Marzano (2003), which stated that regardless of any other confounding variable, the instruction process is the significant factor in the change process that teachers have control over. Study found that teachers’ instructional strategies cope with various student learning styles. Therefore the null hypothesis that teachers’ teaching styles are not coping with various students’ learning styles was rejected.

Author	Method	Findings
Dodd (2013)	Interviews	Dodd conducted a study to propose a theoretical model of change resistance and decision-making for virtual learning course designers. The study focused on the diffusion of innovations in online course design. It was found that detailed decision-making processes and rigidity of course designers regarding change initiatives are more likely moderate the diffusion of innovations. Dodd found that course designers were diverse in experience and training for designing online curricula and decision-making. The styles of course designers rarely contribute to their change resistance.
Durbin (2013)	Survey	Durbin studied IT managers working in public and private sector institutions regarding managing innovations in project management. Durbin found significant evidence of best practices related to project management. Levene's test was conducted to find the difference in variances between certified and non-certified sector IT managers. Durbin found that certified IT managers reported a higher perceived importance of project management than non-certified IT managers.
Brown (2014)	Case Study	Brown found common themes while comparing the institutions such as interconnectivity of the university system, production of alternatives, resistance from non-stakeholders, planning requirements, dependency failure as well as staff turnover. Brown concluded that cultural change (e.g., public and private) reinforces effective innovations and cultural change is different from technical innovations.
Quardokus (2014)	Mixed Method	Quardokus (2014) explored the change strategies of STEM stakeholders. Research studies suggested that change strategies may focus on changing the higher

Author	Method	Findings
		<p>education environment. In contrast, Quardokus used Complexity Leadership Theory and Kotter's eight-stage process to focus on change strategies for individual instructors. Quardokus suggested involving the head of departments in decision-making and change implementation and forming faculty learning communities (FLCs) to promote change vision.</p>
Taylor (2015)	Survey	<p>Taylor (2015) conducted a study on leading change in private sector higher education institutions situated in Midwest US. Taylor noted that administrators led the successful change through their vision rather than leading change using a theoretical framework. Taylor found that university presidents establish a vision and goals and procedures for organizational change. President overcame the hindrances of the status quo and produced effective organizational change which resulted in a sparkling campus climate.</p>
Venezia (2015)	Interviews	<p>Venezia conducted a study on faculty response to change and factors those affect change efforts. Venezia investigated the change in curriculum to understand the significance of the educational change. Venezia worked with four participants who were involved in curriculum reforms. In two months, participants were asked to share their experiences with change implementation. Venezia found themes involving relationship, guidance, empowerment, resistance, guidance, standards and beliefs. Venezia mentioned that the main element that is critical for educational change is leadership.</p>
Millen (2015)	Interviews	<p>Millen investigated innovative pedagogies supported by instructional technologies. Millen informed that education could exploit the advantages of technological</p>

Author	Method	Findings
		<p>innovations to help make education more personalized for educators. Millen found that change being sought in the 21st century contributes to more intense effects on individualized learning. While in its early adoption stage, innovations may face resistance from faculty and administrators.</p>
Channon (2018)	Mixed Method	<p>Channon conducted a study to evaluate the outcomes of curriculum initiatives as a part of the British Council's strategy of establishing teacher training programs in Myanmar. Channon found that curriculum initiatives and the development of professional groups enabled teachers to decide on new pedagogy, learning strategies and assessment procedures. This deliberate change process provided opportunities for teachers to enhance their professional development in relation to critical aspects of the curriculum.</p>
Evans (2018)	Mixed Method	<p>Evans (2018) utilized Resource Dependency Theory to assess the institutional changes after the initiation of the Merit Aid Program for public sector universities in the US. Evans investigated whether universities altered the expenditures and faculty recruitment patterns as universities became more resource dependent on student dues. Evans found that after the initiation of the merit aid program institutions started spending more finances on scholarships, support and hiring visiting faculty compared to universities that did not adopt merit aid programs.</p>
Phelps (2018)	Model Development	<p>Phelps (2018) conducted a study using a grounded theory approach to assess change in higher education. Phelps investigated how leaders and administrators can effectively implement innovation in higher education.</p>

Author	Method	Findings
		<p>Phelps obtained various themes from qualitative data including business processes, change management, technology acceleration, change aversion etc. From the themes that emerged from the study, Phelps successfully proposed a model for organizational change and named it as Barycentric Leadership theory. Phelps's model clarified how to lead organizational change while maintaining its focus on the core values, vision and mission of the institution.</p>
Kendrick (2019)	Survey	<p>A study by Kendrick (2019) on institutional efforts to meet the emerging innovations supports the study's findings. Kendrick used Schwandt's (1994, 1997) theory of the Organizational Learning Model. Kendrick used American Virtual Universities as the research site for the study. Kendrick found that the culture of virtual universities was found to be a culture suitable and adaptive for learning. The collaboration of virtual universities enables collective action and reflection. The ability of virtual universities to operate as ambidextrous institutions enables ongoing knowledge adjustments.</p>
Miller (2019)	Mixed Method	<p>Miller (2019) conducted a study based on the Disruptive Innovation Theory to explore the experiences of teachers adapting to online technologies. Miller identified four themes which involved continued practices and professional development can reduce resistance, administrators may develop a project-based focus on innovations to reduce implementation time and effort, teachers can proceed forward with innovation even if they are frustrated and teachers are not resistant to technological changes.</p>

Author	Method	Findings
Silva, Avilucea, & Pleasant (2019)	Interviews	Silva, Avilucea, & Pleasant found that faculty members supported the transition to a new initiative, i.e., data-driven instruction. Faculty members mentioned that the leadership team effectively communicated change initiatives. The authors presented the linkage of findings with Fullan's (2016) model of educational change. They also found that the leaders took time to establish trust with the faculty, which help to provide a climate that fosters change. Maintaining trust is a common denominator in many educational change models.
Taylor (2019)	Narrative Study	Taylor used change ambivalence theory to examine the involvements of four leaders as they led technology-related change initiatives. Taylor found that change initiatives were deliberately planned and implemented, including clear aims, stakeholders' capabilities, professional expertise, procedures for assessing change success and reflections. Change leaders also faced ambivalence and resistance while implementing the initiatives. Ultimately change leaders apply different strategies to overcome change resistance.
Kamensky (2019)	Interviews	Kamensky conducted a study based on the organizational performance and change models (Burke & Litwin, 1992). Kamensky found that preliminary aspects significantly affect transactional change procedures within HEIs. Organizational factors such as climate, management practices, policy standards and structures create a climate that enables transactional change. Kamensky mentioned that regional climate favorable to innovations, organizational structure and university autonomy are the crucial factors that play a significant role in the transactional change processes with HEIs.

Author	Method	Findings
El Dallal (2020)	Mixed Method	El Dallal found no significant difference in change management strategies used to manage technological changes across different HEIs. While using explanatory sequential mixed-method, El Dallal also found that IT leaders tend to involve all stakeholders in the reform process. IT leaders consider contextual settings and information about their decisions through a systematic data-driven process, which results in meaningful change implementation.
Thacker (2020)	Mixed Method	Thacker revealed that faculty-led reforms and leadership often address the contemporary challenges in higher education while increasing faculty satisfaction and commitment. Thacker used the Negentropy theory (organizational commitment, innovation and leadership) to address change management and investigated how administrators can sustain a faculty who effectively participate in change and innovations in the universities through new initiatives, ideas and programs.
Loor (2021)	Case study	Loor conducted a comparative case study to explore the technology adaptation during a time of change in a global pandemic. Loor informed that the COVID-19 pandemic had compelled institutions worldwide to pivot to online learning quickly. This drastic change required a sudden shift in traditional instruction and teaching pedagogy. Loor aimed to conduct an investigation through the lens of critical educational stakeholders (for instance, administrators and teachers). Loor concluded that teachers are the key agents of change. Administrators must provide a supportive climate for teachers to be able to grow, progress and learn with emerging technologies. In this era where technology is evolving rapidly, creating a system develops teachers' growth with technology.

Author	Method	Findings
Sherman (2021)	Qualitative study	<p>Sherman sought to explore the change in institutional structures due to the COVID-19 pandemic. Sherman also explored the leadership styles present during the drastic and unexpected change caused by the pandemic.</p> <p>Sherman formed a framework while combining Change Theory and Crisis Theory. Sherman found different themes in the qualitative analysis including, opportunities for collaboration and trust, leadership support, the flexibility of pedagogy, comprehensive and transparent communication, etc.</p>
Mira- Bohigas (2021)	Survey	<p>Mira-Bohigas used Kotter's 8-Step model to investigate the perspectives of university administrators regarding their change management. Mira-Bohigas mentioned that change comes in many forms in the year 2020. Afterward, universities may be able to innovate, adapt and be resilient to local and external challenges to utilize the opportunities. Mira-Bohigas found consistencies among administrators in their capabilities of leading change initiatives, problem-solving, supporting, inspiring and being visionary.</p>
Harvey (2021)	Survey	<p>Harvey conducted a study on innovations in higher education. Harvey informed that historically, change within higher education was based on cyclical patterns that resulted in minimal reforms. Harvey found that the leadership of administrators is a significant cultural key and it is essential to foster innovations and new programs within institutions. Harvey informed that institutions with budget constraints, shortsighted vision and weak leadership often resist innovative practices.</p>

Author	Method	Findings
Motley (2021)	Action Research	Motley (2021) conducted action research using immunity to change theory. Motley revealed three key findings including administrators' beliefs are translated into actions, specify effective policies and structures, teachers are engaged in understanding student success, enabling a student-centered climate, and differentiating problems related to equity required analysis of information.
Rainey (2021)	Interviews	Rainey used Fullan's notion of educational change and assessed the teachers' perception of factors influencing the effectiveness, leadership, quality, and sustainability of educational reforms. Rainey found that both public and private sector administrators intentionally planned to adopt the reforms. Rainey suggested that learning may be appropriately programmed to achieve specific goals, and knowledge of professionals may be involved to ensure the process of shared learning.
Médica-Strother (2021)	Mixed Method	Médica-Strother conducted a study on change leaders working in private sector higher education institutions. Médica-Strother found that mentoring the new generation in critical, and institutional identities supports leaders in building affinity. Researchers suggested that educational administrators need change management competencies to impact student outcomes. Médica-Strother mentioned that successful leaders are knowledgeable about internal and external factors that can impact an institution's culture.
Griffo (2021)	Mixed Method	Griffo used Fullan's Change theory and assessed the curriculum change process of physical education within two public and private sector institutions. Griffo found the positive results of integrating literature into physical education. Griffo indicated that student involvement and

Author	Method	Findings
		<p>engagement have been increased through the process. The study found various themes related to students such as home environment, learning perceived by students and student engagement. Themes related to teachers included motivation and course resources.</p>

CHAPTER 3

RESEARCH METHODOLOGY

The study investigated the deans, heads, and faculty views of implementing change initiatives in higher education using Fullan's (2016) educational change framework. The second primary concern of the study was to compare the head, teacher, and administrator views of implementing change initiatives at public and private sector universities. This chapter of the research presented a detailed review of the research methodology which involved detail of study design, research population, targeted sample, instrumentation in the form of the Checklist, online survey, and a semi-structured interview protocol addressing change management. This section also provided results of the pilot study of the instruments, validity and reliability, methods of data collection, and analysis in correspond to research questions and objectives. Complete detail of statistical analysis was also presented in this section.

3.1 Research Approach

The study used mixed method approach to understand the research problem through the qualitative and quantitative processes in parallel to gain in-depth information on the research problem (Creswell & Creswell, 2017).

Mixed method research can provide a more comprehensive and robust understanding of the research question, and can help to increase the validity and reliability of research findings. Mixed method research can increase the validity and reliability of findings by allowing researchers to use multiple sources of evidence to support their conclusions. Different research methods have different strengths and limitations, and mixed method research allows researchers to take advantage of the strengths of multiple methods while minimizing the limitations of any one method (Leedy, & Ormrod, 2013; Yin, 2015).

3.2 Research Design

In mixed method research, researchers can either generate their own mixed method design or select a pre-existing design (Creswell & Creswell, 2017).

Generating a mixed method design involves Developing a Unique Approach to combining different research methods in order to address the research question. Researchers who generate their own mixed method design have the flexibility to tailor the design to the specific needs and goals of their study (Creswell & Plano Clark, 2007). However, generating a mixed method design can also be more time-consuming and may require more advanced research skills (Johnson, Onwuegbuzie, & Turner, 2007).

Alternatively, researchers can select a pre-existing mixed method design that has been used in previous research. This can be a faster and easier option, as it allows researchers to build on the work of others and use a design that has already been tested and refined (Johnson *et al.*, 2007). Pre-existing designs can provide a tried-and-tested approach to combining different research methods, and can be particularly useful for researchers who are new to mixed method research (Creswell & Plano Clark, 2007).

Overall, whether to generate or select a mixed method design will depend on the specific needs and goals of the study, as well as the resources and expertise available to the researcher.

A convergent parallel design was utilized for the study. The design prompts the researcher to collect and analyze qualitative and quantitative data at the same time frame. The second phase required a comparison of results which then proceeded to the overall analysis and interpretation of the results (Creswell & Creswell, 2017). The purpose of this particular design is to strengthen the findings of one phase such as qualitative and to reduce the shortcomings of the parallel phase i.e. quantitative and vice versa, which ultimately reveals in-depth knowledge of the phenomenon under study. Mixed method research allows

researchers to take advantage of the strengths of multiple methods while minimizing the limitations of any one method (Creswell & Creswell, 2017).

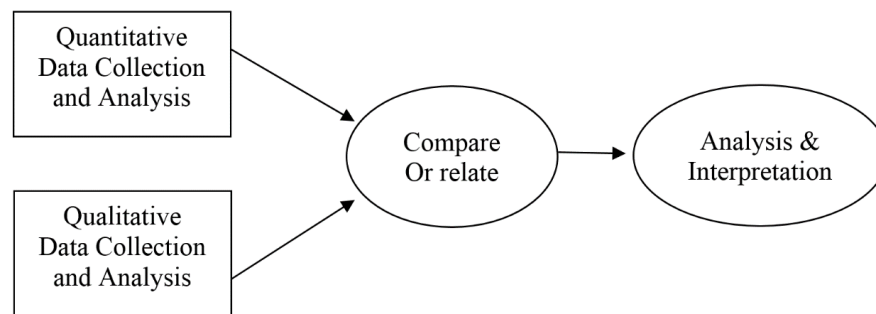


Figure 12: Convergent Parallel (Creswell & Creswell, 2017)

3.2.1 Research Paradigm Emphasis

Convergent parallel design is a mixed methods research approach in which both qualitative and quantitative data are collected and analyzed separately, and then combined to provide a more complete understanding of the research problem. This design is often used when the researcher wants to triangulate data in order to strengthen the validity of the findings. There are several advantages to using convergent parallel design in mixed methods research, including:

1. It allows for the collection of data from multiple sources, which can help to reduce the risk of bias and increase the reliability of the findings (Creswell, 2012).
2. It allows the researcher to compare and contrast the results from the qualitative and quantitative data, which can provide a more comprehensive understanding of the research problem (Creswell, 2012).
3. It allows the researcher to integrate the results from both the qualitative and quantitative data, which can lead to more robust and generalizable findings (Tashakkori, & Teddlie, 2010).

3.3 Population

Population refers to the entire group of individuals or objects that share some common characteristics and are of interest to the researcher (Creswell, 2018). The population is the group that the researcher wants to make inferences about, and it should be clearly defined and accurately described in the research study (Saldaña, 2021). The population of the study was comprised of university Deans, Heads and Teachers of Punjab, Pakistan. There were 79 private and public sector higher education institutions in Punjab (HEC, 2021). These institutions included subject disciplines of natural sciences, languages, medical sciences, engineering and social sciences. The study was delimited to social science departments.

Researcher has selected 52 higher education institutions in Punjab and the targeted population consisted of 2685 teachers (regular), 315 heads and 52 Deans of social sciences working in 52 private and public sector institutions in Punjab (HEC, 2021).

3.4 Inclusion Criteria

The study used the following inclusion criteria while selecting the HEIs for the study:

- Universities with technological changes and restructuring.
- Faculty of Social Sciences.

From the total of 79 HEIs in Punjab, the administrators, heads and faculty of 52 universities (based on inclusion criteria) formed the population for research. Hence, administrators, HoDs and faculty of 22 public sectors and 30 private sectors HEIs comprised the overall population of the study.

The current study's population was determined by the inclusion criteria of selecting the institutions (universities with technological changes and restructuring). Deans and Faculty members were selected as quantitative participants whereas heads were indicated as qualitative respondents (Selected universities and detailed population can be viewed in Appendix-F).

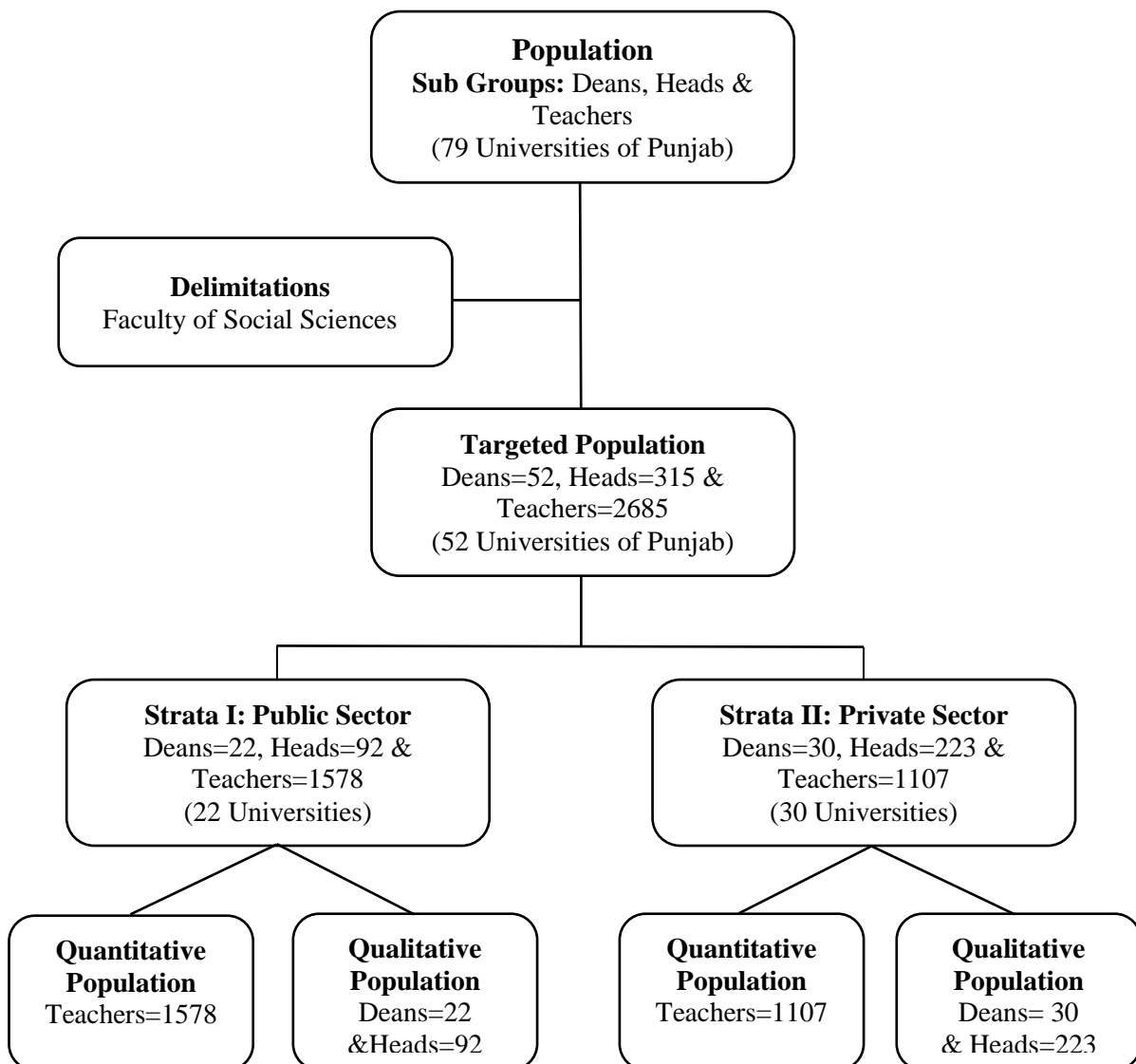


Figure 13: Population of the Study

Two major strata were devised to split the population into two halves i.e. private and public sector institutions. From fifty-two universities in the province, twenty-two were associated with the public sector while thirty were associated with the province's private sector (Appendix-F). The population consisted of 1578 public and 1107 private sector teachers, while 92 public sector and 223 private sector heads, as well as 22 public sectors and 30 private sector deans, were appointed in 52 HEIs of Punjab Province in the year 2021. The number of private sector teachers was lower than that of teachers in public sector. To specify the suitable quantitative sample for each stratum, 20% of teachers from each stratum were selected as a quantitative sample of the study.

3.5 Sampling Techniques and Sample

There are several sampling techniques that can be used in mixed methods research, including: Random sampling, Stratified sampling, purposive sampling, convenience sampling etc. However, the sampling strategy should be appropriate for the research question and data collection methods. Data for the study was collected in the year 2021.

The sample size in mixed methods research should be large enough to provide sufficient data for both the qualitative and quantitative components of the study, but not so large that it becomes impractical or cost-prohibitive to collect and analyze the data. The appropriate sample size will depend on the research question, data collection methods, and sampling strategy being used (Creswell, 2012, Tashakkori, & Teddlie, 2010).

3.5.1 Sampling Technique (Quantitative)

The sampling technique refers to selecting a particular group that the researcher is interested in collecting data. The systematic process enables researcher to evaluate and generalize the characteristics of the whole population. The process allows the researcher to indicate the sample subset that depicts the actual representation of the

population (Prudon, 2015).

Stratified random sampling is suitable for the population, which can be divided into subgroups or subpopulations. In statistical sampling, where subgroups vary within the targeted population, it is more appropriate to sample each subgroup individually. The stratification divides the population into homogenous subsets before obtaining an appropriate sample for the study. Proportionate stratified sampling requires selecting an equal proportion or percentage from each stratum, whereas disproportionate stratified sampling does not restrict the sampling within any stratum (Yin, 2015). This research applied proportionate stratified random sampling to select a sample for the study. Two strata were made for the study i.e. private and public.

For obtaining the appropriate fraction from each stratum, 20% of total faculty members were selected as a quantitative sample of the study. Creswell, (2017) suggested that 20% of the small and 10% of the large population may be considered an appropriate sample size. Additionally, Cohen, Manion & Morrison (2013), at a 95% confidence level, also recommended obtaining a sample size of 536 for a population up to 5000. Therefore, 536 faculty members were selected from higher education institutions which included 221 private sector and 315 public sector faculty members, which indicates 20% of each stratum.

3.5.2 Sampling Technique (Qualitative)

The qualitative data were collected in parallel to the quantitative data. This additional process helps reduce socially perceived responses and the personal biasedness of the researcher. For qualitative data collection, the deans of social science faculty and heads of departments were sampled. Qualitative responses can support the quantitative survey in various aspects of research.

As previously discussed, the administrators, i.e., deans and heads of departments, were sampled for qualitative data collection. Population data indicated that there were 22

deans and 92 heads in the public sector, while 30 deans and 223 heads working in private sector institutions.

The researcher utilized the Purposeful Sampling Technique to obtain a qualitative sample. The technique is alternatively called selective or purposive sampling process. The process enabled the researcher to figure out an appropriate sample that can provide an in-depth and thorough insight into the phenomenon under study (Creswell, 2018; Patton, 2002). The purposeful sampling was further linked to Homogeneous Sampling, which allows the selection of respondents who acquire identical characteristics and traits. In this study, the identical traits of faculty deans and department heads are to lead the faculty and department towards achieving defined goals and maintaining the productivity of the educational system (Creswell, 2018).

Creswell (2018) mentioned the section criteria of selecting respondents for a qualitative study and indicated that it is suitable to select 6 to 8 respondents from each desired group or subgroup of the population.

Creswell & Creswell (2017) indicated that the appropriate sample for qualitative research could be one, i.e., a case study, or between 2 to 40 i.e. for interviews etc. Qualitative sampling involves noting the detail obtained from each respondent. The large sample can become cumbersome and result in unnatural findings and viewpoints. Furthermore, collecting and evaluating qualitative responses requires reasonable time and transcribing the response of each respondent merely extends the time of research.

Yin (2015) mentioned that there is no defined method for obtaining the actual digit of respondents for qualitative research, and there is no reference for the suitability of a large population for qualitative research. Yin (2015) also mentioned two levels of qualitative instances. At a broader level, one instance is taken from qualitative perspective, while at a narrower phase, the number of respondents can range from 25-50.

Guest, Bunce, & Johnson, (2006) mentioned that 6 is the magic number for conducting interview for phenomenological studies. However 12 interviews can uncover 95% of problem diagnostic.

Anticipating the explained criteria, the scholar has sampled 12 Deans (6 from the public and 6 from the private sector) and 24 heads (14 from the public and 10 from the private sector).

3.5.3 Sample

Private and public sector HEIs of Punjab were taken as two primary strata for the sample of the study. Deans, heads and faculty members were the three main categories of respondents and a sample was obtained within each stratum.

For obtaining a qualitative sample, the total number of private sector faculty members was 1107 and the number of public sector faculty members was 1578, 20% of faculty members from each stratum were selected as a quantitative sample for the study. The sample led to 315 public sectors and 221 private sector faculty members.

While considering the desired criteria of the sampling technique, 536 online questionnaires were distributed among faculty members of the HEIs of Punjab. After the reasonable time frame and follow-up criteria, only 514 faculty members filled the online questionnaire. Hence the return rate was approximately 96%.

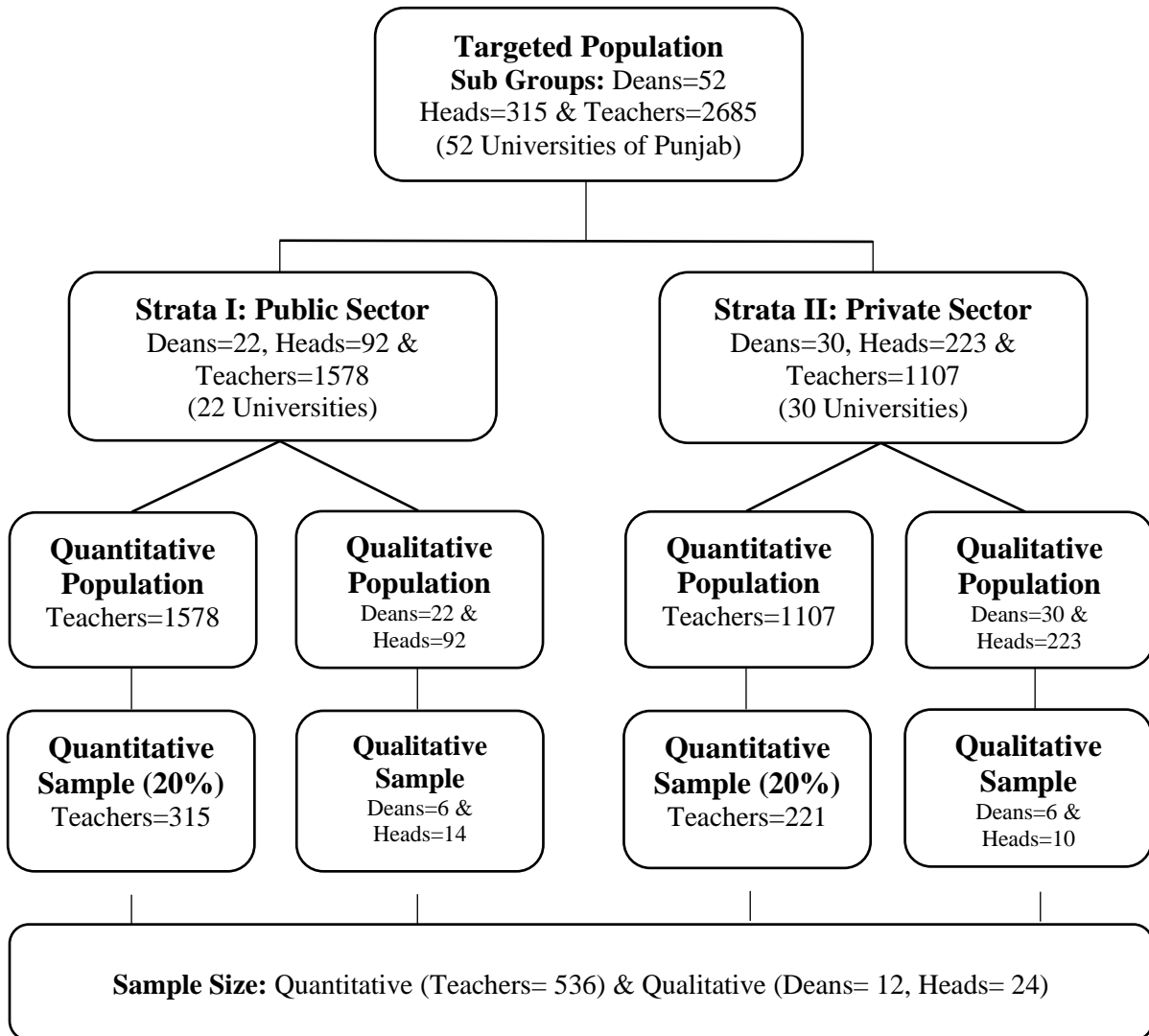


Figure 14: Sample of the Study

For the qualitative data collection, the number of public sector respondents was 22 deans and 92 heads, whereas private sector respondents were 30 deans and 223 heads. Considering the criteria presented by Creswell & Creswell (2017), from each stratum, 6 deans and 12 heads were selected as qualitative samples for the study. Deans were asked to respond to an online Checklist for change management and heads were interviewed with a semi-structured interview protocol. The response rate for qualitative data was 100%.

3.6 Instrumentation

For investigating the teachers' views on implementing change initiatives in higher education, Fullan's (2016) theoretical framework of educational change was used to develop a survey, which depicted the theoretical framework of the model. Fullan presented the model with three broad phases of the educational change process, i.e., initiation, implementation, and continuation. The sub-factors were also considered while developing the survey.

Secondly, for the heads of departments, a semi-structured interview protocol was used. The interview was used to acquire more information about heads' perceptions about initiating, implementing, and continuing change-related activities in relation to Fullan's (2016) model.

Thirdly, a standardized Checklist for change (Harvey, 2001) was used to evaluate the change-related efforts of Deans such as analysis, planning and implementation. The Checklist has also determined the level to which the change-related factors in Harvey's list are present at the higher education level.

3.6.1 Educational Change Management Questionnaire for Faculty

The researcher constructed educational change management survey after a comprehensive review of literature related to educational change management and considering the study's conceptual framework. Questionnaire statements cover various factors of educational change management but the survey was primarily based on Fullan's (2016) model of educational change.

Fullan (2016) indicated that there are three main phases of educational change which include the initiation, implementation and continuation phases. The first phase of Fullan's model of educational change is initiation. During the first phase, the change representatives choose whether to keep up with any change initiative. The second phase i.e. implementation phase, considers the adoption of the change initiative by the stakeholders. This phase takes

account of the practices and views regarding the new initiative in action. The third phase which is continuation, includes perceptions related to whether the change is accepted in the culture of the institution.

The *Initiation* phase covers the change-related decisions in educational settings. Several factors is linked with the initiation phase, organized under leading indicators. The first indicator is the availability and quality of change-related innovations. A change is not worth implementing if the innovation is unattainable. Secondly, Fullan indicated access to information. He highlighted the significance of effective communication and the role of society. Fullan then emphasized the role of stakeholders i.e. the administrators, heads and faculty members as advocates for initiating change. Further, Fullan included the effect of external change managers and finance on change decisions.

The *Implementation* phase covers deploying the initiatives indicated in the initiation phase. Fullan (2016) focused on the factors that affect the degree to which the stakeholders modify their beliefs and actions or deploy new resources through implementing change initiatives. Fullan mentioned nine significant factors that can affect the implementation process. These factors were organized into three main categories involving characteristics of innovation, local characteristics and settings and external influences or factors. In the first category i.e. characteristics of change, Fullan indicated the significance of comprehending the essence of change, understanding the objectives and strategies, the level of expertise expected from the stakeholders responsible for implementing change, and the quality of a particular reform, innovation, or initiative. The second category i.e. local characteristics, deals with the effectiveness of change in the local context, which means the environment and settings in which change agents work and support or strategies provided to change agents. The last category deals with the external factors that affect the community at a broader level.

The *Continuation* phase deals with three major categories. Fullan (2016) mentioned that change must embed new organizational structures. Secondly, change must produce manpower with more significant competence and commitment. Thirdly, change must enable procedures and processes to assist, mainly for the new initiative in practice. During this phase, the change can produce desired and expected results of improving the instructional system. The results mentioned by Fullan (2016) involved improvements in teachers' beliefs, practices, self-efficacy, and expertise, followed by improved student behavior and learning outcomes as well as problem-solving.

This particular research focused on change initiatives in higher education institutions, e.g., changes due to online learning, new programs, administrative processes, instructional processes, admission standards, technological changes and research initiatives etc., as to whether or not to implement these change initiatives at other higher education institutions. This study mainly focused on the implementation and continuation phase of the Fullan educational change process framework.

Therefore, Fullan's concepts of educational change were used in the survey. The first 20 statements of the instrument focused on the initiation phase. The following 18 statements covered the implementation phase. The last 18 statements dealt with the continuation phase of the change model. Hence, the survey collectively consisted of 56 statements.

The survey was named as Educational change Management Questionnaire. The questionnaire consisted of 56 statements. With the help of a questionnaire, the researcher assessed university teachers' perceptions about technological changes and reconstruction at higher education institutions in Punjab and generalized it in the context of Pakistan.

Table 3.1

Sources of Educational Change Management Scale Items

S#	Phases of Change Management	Item Reference
1	Initiation Phase	(Arar, & Abramovitz, 2017; Burdick, 2021; El Dallal, 2020; Galkin, 2015; Hassan, 2016; Hazelwood, 2016; Johnson, 2017; Kells, 2021; Khan, 2021; Lamb, 2021; Miller, 2019; Sacks, 2017; Shmul-Cohen, 2016; Sukhwa, 2017; Taylor, 2015)
2	Implementation Phase	(Amwago, 2018; Aziz, 2018; Bates, 2018; Bautista, 2020; Bianco, 2020; Casiello, 2019; Evans, 2018; Fawbush, 2019; Hundley, 2019; Johnson, 2018; Kelly, 2019; McAndrew, 2018; Pantazis, 2017; Rentsch, 2018; Steinberg, 2018)
3	Continuation Phase	(Barrett, 2021; Cantu-Lee, 2020; Davis, & Fifolt, 2018; Griffo, 2021; Haden, 2021; Harvey, 2021; Hoel, 2020; Kamensky, 2019; Marshall, 2021; Mira-Bohigas, 2021; Rainey, 2021; Seyfried, & Ansmann, 2018; Thacker, 2020; Vlachopoulos, 2021; Wroblewski, 2019)

3.6.2 Description of Checklist for Change

This study sought to strengthen the framework for initiating and implementing complex change. Harvey's (1990) initially published *Checklist for Change* which was later presented in the second (Harvey, 1995) and third editions (Harvey, 2001) of his book. Harvey's (2001) *Checklist for Change* depicted the stages of initiation, implementation and institutionalization of change (Harvey, 2001; Lewin, 1951; Schein, 1987; Borda, 2007). Harvey offered an organized procedure designed to enhance the chances of effective change management (England, 1990; Gavin, 2004; Mahler, 1996; Young, 2004). England (1990) initially validated the Harvey's (1990) checklist in his doctoral research where he used "the number of instances indicated in the checklist as an independent factor and the effectiveness of change implementation of technology as a dependent factor." England (1990) assessed

the validity and reliability of Harvey's checklist and mentioned that Harvey's *Checklist* is a practicable model for assessing the change process. Harvey's *Checklist for Change* was adopted from the checklist and modified to use in the context of Pakistani higher education institutions. The researcher obtained permission to use Harvey's *Checklist for Change* through email.

3.6.3 Description of Semi-Structured Interview for Heads

Considering the phases of Fullan's (2016) educational change model, a semi-structured interview was constructed to collect the views and perceptions of heads of departments regarding implementing change initiatives at higher education. The interviews were conducted to acquire in-depth information to support the quantitative data. The interview protocol was constructed after assessing the related qualitative studies (Carey, 2014; Fullan, 2016; Martin & Samels, 2009; Bergquist & Pawlak, 2008; Fullan & Scott, 2009). The first question was related to the initiation of reforms. The second question prompts respondents about administrative vision while communicating new reforms. The third question asked about support, barriers and challenges of implementing change initiatives. The fourth question was about the requirement of resources and professional development needed in the implementation process. The fifth question directed the respondents toward their views about cultural changes due to recent reforms. The sixth question assesses respondents' perceptions about types of adjustments related to the institutional settings to implement any reform fully.

3.7 Pilot Testing

Before collecting any type of data for research, the pilot study helps improve the instruments through validity tests (Creswell, 2018). Pilot testing is an essential process to determine the validity of the instruments because valid instruments make the findings richer and more realistic (Creswell, 2013; Prudon, 2015). The pilot testing initiates a cognitive

discourse that helps determine the accuracy of items or statements and eliminates the contradicted items, which improves the instruments (Jonker & Pennink, 2010).

Prior to conducting the actual data collection, the pilot study was carried out to assess the validity and reliability of the quantitative and qualitative instruments. In addition to the validity and reliability, the additional importance of conducting a pilot study was to identify factors involved in the well-ordered and proper administration of related measures and challenges and barriers to data collection. Connelly (2008) suggested that 10% of the overall sample size is considered reasonable for pilot testing of the instruments. Mugenda & Mugenda (2008) mentioned that 10% to 20% of the actual sample size is appropriate for the pilot study. However, Johanson & Brooks (2010) indicated that the sample size for the pilot study depends on the purpose of pilot testing.

To pilot test the questionnaire, a sample of 53 faculty members (31 public and 22 private) was taken. For the semi-structured interview, a sample of 4 heads was utilized. Two Deans were requested to fill up the Harvey's (2001) *Checklist for Change* to pilot test the standardized Checklist. The pilot study was completed at two universities in Punjab (1 Public and 1 Private).

The researcher personally the universities to complete the pilot testing process and the respondents were randomly chosen to respond to instruments. Deans were requested to respond to the Checklist, heads were interviewed and faculty members were given the choice to fill out the hardcopy questionnaire or respond to an online survey. At the pilot testing stage, a textbox at the end of the survey was added, prompting faculty members' suggestions for tool improvement. Similarly, Deans and heads were also requested to provide their valuable opinion to improve the research tools. Hence, the pilot testing process provided an opportunity to assess the research approach before collecting the data for main research. Data gathered from pilot testing was analyzed with suitable statistical tests. The

research tools were amended based on opinions and suggestions of respondents and subject specialists.

The current study used survey design to conduct pilot study. A survey is a research involves collecting data sample of individuals through administration of questionnaires or surveys. Surveys can be conducted using various methods, including questionnaires, online survey, telephone, mail, or in-person interviews. The design should be chosen based on the research question, the available resources, and the feasibility of collecting data (Dillman, Smyth, & Christian, 2014).

3.7.1 Validity of the Instruments

Gall *et al.* (2010) informed that validity is a significant feature of quantitative and qualitative research measures. Validity refers to the measurement capacity of an instrument it claims to measure.

Harvey's (2001) *Checklist for Change* was adopted to use in the context of Pakistan. Harvey's (2001) *Checklist for Change* depicted the stages of analysis, planning and implementation of change. *Checklist for Change* was initially published in Harvey's (1990) book and later presented in the second Harvey's (1995) and third editions Harvey's (2001) book. England (1990) assessed the validity and reliability of Harvey's checklist and mentioned that *Checklist for Change* is a practicable model to assess the change process. Harvey permitted the researcher to use the checklist.

Educationists assessed the face validity of the questionnaire and semi-structured interview. The experts assessed the topic, research questions, objectives and statements of both instruments. The items were evaluated in terms of covering the requirements of the study. Instruments were updated based on the feedback of experts.

Best & Kahn (2016) informed that content validity is the degree to which an

instrument applies to the construct it is intended to measure. Educationists assessed the content validity of the questionnaire and semi-structured interview from different higher education institutions. The experts reviewed the questionnaire and interview for item construction in terms of study variables and errors such as double-barreled items. Six educationists validated the instruments. Their opinions and feedback were used to improve the instruments. The survey was further analyzed for its reliability with Chronbach's Alpha test and psychometric properties with exploratory factor analysis (Prudon, 2015).

Blumberg *et al.* (2005) mentioned that the construct validity of an instrument is the degree to which items can legitimately be constructed to operationalize the theoretical constructs of the study. This process is usually verified by applying appropriate tests to verify the correlation among measures.

For construct validity, component factor analysis was used in combination with Varimax rotation enabling maximum factor loading. The supporting analysis was performed to ensure the appropriateness of factor analysis. The suitability of factor analysis was confirmed through Kaiser-Meyer-Olkin test, which resulted in 0.765 which is above 0.5 i.e. threshold of the test. Bartlett's Sphericity Analysis resulted in a significance value, i.e., $p=.000$ that is below .05, indicating that constructs are interrelated and suitable for factor analysis. Items for the constructs were tested and items with loading values under 0.4 were discarded from the measure.

Interview protocol was also assessed for content and construct validity. The experts assessed the relevance of semi-structured items with respect to the research topic, questions and objectives. The Doctoral experts supplied feedback and guidance for the improvements of the instruments (The specialization of expert included, *but not limited to* Higher Education, learning and instruction, curriculum development, educational technology, educational leadership and administration, educational policy, comparative education,

Teacher education, continuing education, educational management, organizational behavior, educational psychology, science education etc.).

Questionnaire items and interview statements were further arranged according to Fullan's (2016) Model. The instruments then came into an accurate outline and were administered to collect data for primary study.

3.7.2 Reliability of the Instruments

Reliability of a research instrument indicates the consistency of producing accurate scores for the phenomenon under evaluation (Creswell, 2018). Reliability is the characteristic of a research measure that specifies its consistency in yielding the same results over multiple or repeated tests (Camelia & Ferris, 2018).

The pilot test was deployed to assess the reliability of the instruments. The pilot study respondents were asked to fill out the Checklist, and survey and participate in the semi-structured interview. The respondents were offered to provide their valuable suggestions about the precision of the items and suggest any amendments if needed.

Reliability of the Checklist was assessed through test-retest correlation coefficient. The findings of test-retest correlation are given in the table below.

Table 3.2

Test-Retest Correlation Coefficients of Checklist for Change

S#	Phases Harvey's (2001) Checklist	Test-Retest Correlation
1	Analysis Phase	0.70
2	Planning Phase	0.91
3	Implementation & Evaluation Phase	0.83
	Overall Success Effort	0.82

Table 3.2 displays that correlation coefficients for all the phases are more significant than 0.60. Hence the test-retest correlation coefficients are in an adequate range.

Exploratory factor analysis (EFA) and reliability tests were used to assess the reliability of the survey instrument. The item difficulty level was indicated by the mean value of items in the EFA analysis (Thompson, 2004). Discrimination index of the items was indicated with the total correlation value which was obtained through statistical analysis of items. The items with higher correlation regarding total score were retained for the survey and considered reliable. The items which were not discriminating among constructs e.g. items with a discrimination index less than 0.4, were considered weak items. Cronbach's Alpha test was used to perform inter-correlation which indicated that few items in the survey resulted in lower inter-correlation. Due to the lower inter-correlation of a few items, the values of sub-phases of change management were affected.

The initial pool of survey items consisted of 62 items. Researcher had to exclude six statements from the initial draft of the survey. Items were then rearranged based on the research constructs. The final instrument contained 56 items, of which 20 items were related to the initiation phase, 18 to the implementation phase and the remaining 18 to the continuation phase of the change model. Table 3.3 shows the items with lower inter-correlation.

Table 3.3
Item Total Correlation of Educational Change Management Scale (n=53)

Items	Item-Total Correlation	Items	Item-Total Correlation	Items	Item-Total Correlation	Items	Item-Total Correlation
1	0.651**	20	0.726**	39	0.551**	58	0.314**
2	0.741**	21	0.705**	40	0.554**	59	0.810**
3	0.429**	22	0.881**	41	0.668**	60	0.701**
4	0.655**	23	0.613**	42	0.651**	61	0.330**
5	0.814**	24	0.721**	43	0.781**	62	0.625**
6	0.430**	25	0.644**	44	0.635**		
7	0.609**	26	0.449**	45	0.726**		
8	0.850**	27	0.618**	46	0.532**		
9	0.734**	28	0.341**	47	0.605**		
10	0.641**	29	0.631**	48	0.229**		
11	0.351**	30	0.652**	49	0.515**		
12	0.600**	31	0.571**	50	0.681**		
13	0.654**	32	0.590**	51	0.726**		
14	0.723**	33	0.511**	52	0.714**		
15	0.524**	34	0.632**	53	0.627**		
16	0.664**	35	0.524**	54	0.651**		
17	0.722**	36	0.611**	55	0.712**		
18	0.801**	37	0.412**	56	0.522**		
19	0.601**	38	0.591**	57	0.355**		

* $p < 0.05$

** $p < 0.01$

Table 3.3 depicts the total correlation of the educational change management survey. Analysis showed that each item correlates significantly with the overall survey items. While the item results of 3, 6, 26, and 37 indicated low correlation because the value is less than 0.5. Hence, the items related to educational change management dimensions were significantly correlated and ranged from (0.412**) to (0.881**). Item 22, holds the highest correlation. In contrast, item 37, holds the lowest correlation.

The reliability of the educational change management questionnaire with its three broader categories and 9 dimensions such as availability of innovations, access to information, the role of stakeholders, change characteristics, local characteristics, external factors, enforcing new structures, employee commitment, and assistance are presented in the table given below.

Table 3.4

Reliability of Educational Change Management Scale (n=53)

<i>Phases/ Dimensions</i>	<i>No of Items</i>	<i>Cronbach's Alpha</i>
a. Initiation	20	0.78
1. Availability of Innovations	06	0.74
2. Access of Information	06	0.77
3. Role of Stakeholders	08	.081
b. Implementation	18	0.79
4. Change Characteristics	06	0.69
5. Local Characteristics	06	0.71
6. External Factors	06	0.72
c. Continuation	18	0.76
7. Embedding New Structures	06	0.80
8. Employees' Commitment	06	0.77
9. Employees' Assistance	06	0.71

Table 3.4 depicts the analysis of Cronbach's Alpha Coefficient. The phases of educational change management were found reliable. The reliability of the Initiation Phase (0.78) was divided into three sub-scales, and their reliability was found as Availability of innovations (0.74), Access of Information (0.77), and Role of Stakeholders (0.81). The reliability of the Implementation Phase (0.79) was divided into three sub-scales, and their reliability was found as Change Characteristics (0.69), Local Characteristics (0.71) and External Factors (0.72). The reliability of the Continuation Phase (0.76) was divided into three sub-scales, and their reliability was found as Embedding New Structures (0.80), Employees' Commitment (0.77), and Employees' Assistance (0.71). Therefore, the phases and phases of the educational change management scale were found reliable for evaluating change management. The researcher had excluded six items with a lesser value of inter-correlation.

Table 3.5
Inter-Scale Correlation of the phases in Educational CM Scale (n=53)

	Initiation	Implementation	Continuation
Initiation	1.000	0.812*	0.761**
		0.000	0.001
Implementation		1.000	0.521**
			0.000
Continuation			1.000

* $p < 0.05$

** $p < 0.01$

Table 3.5 depicts the survey analysis of bivariate correlation or inter-scale correlation for three phases. The analysis showed a significant and positive inter-scale correlation between phases of the educational CM questionnaire. The initiation and implementation phase shows the highest correlation, which is significant at $p = .000$.

Interview protocol was also assessed for the pilot sample. The semi-structured interview was conducted on 4 heads of departments. The respondents were also requested to provide feedback related to the clarity and conciseness of the interview questions as well as any required amendments. The suggestions were incorporated and final interview protocol was then ready to be administered for main study.

3.7.2.1 Assumptions for Factor Analysis

The following assumptions were considered before applying factor analysis:

1. Reliability of the measures: For the reliability of the measures, the Cronbach's alpha coefficient was calculated.
2. The sample size: EFA assumes that the sample size is sufficiently large. A general rule of thumb is to have at least 5-10 observations per variable.

Table 3.6

Factorial Analysis of Educational Change Management Scale (n=53)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.765
Barlett's Test of Sphericity	Approx. Chi-Square	512.80
	Degree of Freedom	52
	Significant Value	.000

Item Scales	Factorial Statistics			Eigen Value	Specified Factor(s)	Cronbach's Alpha
	1	2	3			
1	0.523					
2	0.596					
3	0.671					
4	0.651					
5	0.610					
6	0.551					
7	0.511					
8	0.501					
9	0.541					
10	0.589					
11	0.623			7.41	Initiation	$\alpha=0.78$
12	0.611					
13	0.641					
14	0.613					
15	0.658					
16	0.660					
17	0.677					
18	0.681					
19	0.641					
20	0.622					
21		0.601				
22		0.615				
23		0.627				
24		0.533				
25		0.666				
26		0.771				
27		0.648		8.21	Implementation	$\alpha=0.79$
28		0.622				
29		0.701				
30		0.705				
31		0.710				
32		0.711				
33		0.715				

Item Scales	Factorial Statistics			Eigen Value	Specified Factor(s)	Cronbach's Alpha
	1	2	3			
34		0.722				
35		0.724				
36		0.699				
37		0.655				
38		0.541				
39			0.751			
40			0.742			
41			0.761			
42			0.767			
43			0.777			
44			0.789			
45			0.804	6.12	Continuation	$\alpha=0.76$
46			0.815			
47			0.820			
48			0.901			
49			0.758			
50			0.764			
51			0.755			
52			0.628			
53			0.777	6.12	Continuation	$\alpha=0.76$
54			0.622			
55			0.837			
56			0.767			

Table 3.6 shows the construct validity results through exploratory factor analysis of change management scale. Yu & Richardson (2015) mentioned that factor analysis is an essential process to indicate non-correlated items in the scale. The factor analysis also indicates the variation and magnitudes of variables by indicating the relationship among variables of scale. For factor analysis, Principal Component Analysis (PCA) along with the Varimax Rotation test was carried out. According to the suggestions of Tabachnick & Fidell (2007), items having Eigen Values greater than 1 were reserved for scale.

Therefore, the 56 item *Educational Change Management Scale* was analyzed using PCA with Varimax Rotation. Primarily, Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.765 (>0.70), and Barlett's Test of Sphericity was found significant at $p=.000$, thus specifying adequacy for factor analysis. PCA resulted in the representation of all scale items on their equivalent constructs. The scale had an overall Cronbach's Alpha Coefficient value 0.81 which is greater than the recommended benchmark of 0.6. All three factors were found independent. The three factors resulted in an overall variance of 51.81% for the entire set of constructs. The first construct i.e. initiation resulted in a variance of

29.1%. The second construct i.e. implementation resulted in a variance of 17.2%. The third construct i.e. continuation resulted in variance of 8.7%. The item loading on corresponding constructs was consonance compatible. The factorial statistics of the items were at acceptable level (>0.30).

3.8 Data Collection

The researcher obtained the permission letters for data collection to minimize any hindrances in deploying quantitative instruments and conducting interviews with participants. The convergent parallel design (Creswell, 2018) was used as the research design for the study. The design enabled researcher to acquire qualitative and quantitative data at the same time. At the time of deciding the population, researcher noted down the E-mail addresses of deans, heads, coordinators, and faculty members of departments on institutions' websites. Researcher visited a few institutions to collect data for the deans' Checklist and to conduct heads' interviews and it was obvious that due to COVID-19 restrictions, it would be hard to approach respondents, especially the faculty members. Departmental coordinators were requested to provide any missing e-mail addresses of faculty members. All three instruments were also created through an online survey Google Forms. The questionnaire was distributed among faculty. They were also asked to share the link with their fellow faculty.

Anderson (2008) informed that scholar must clarify the reason for conducting research to the respondents and ensure the privacy of the point of view and opinions of the participants. The ethical considerations were kept in mind by the researcher to maintain the integrity and authenticity of the research. Participants were informed about the purpose of the research with a covering letter. Privacy was insured by the perceptions and opinions gathered through the research instruments.

3.8.1 Data Collection for Questionnaire

The data was obtained with a reliable and validated questionnaire, i.e., an educational change management survey. The data collection process did not go as smoothly as it was predictable. Due to the COVID-19-related measures and restrictions around the country, the questionnaire was made online through Google Forms. At the time of data collection, Most of the faculty members were teaching online. Heads of departments in most cases, were also working online. Email addresses of the respondents were collected from the websites of the institutions and an online questionnaire was shared to acquire a response. Coordinators of departments were also contacted for assistance. The online questionnaire was constructed using Google Docs and the hyperlink was shared through Email and WhatsApp. The Google form was accompanied by a letter of researcher and topic introduction, the permission for data collection was also shared where necessary. Prior to starting the items in the online questionnaire researcher also attempted to explain Fullan's (2016) Educational Change Model, which is part of the conceptual framework of the study. Before starting items of Model phases, each phase was described in a few lines to provide the respondents with the dry run picture of each phase they responded. After providing their consent to participate in the study, the respondents were free to provide their responses for the study. The personal and demographic information of the respondents has been kept private.

The initial stage was apprehensive with a lower response rate. The email addresses were recorded along with the response, which helped the researcher to figure out the passive respondents. After two weeks, an email reminder was sent to the respondents who had not yet provided their response. A second reminder was initiated for the respondents who had not responded in a month. A total of three to four follow-up emails were initiated for each passive respondent. The response rate of lecturers and the assistant professor was

comparatively fast compared to the associate Professors and professors. The data collection of both qualitative and quantitative phases was completed in six months.

The online questionnaire was kept alive from February 2021 to September 2021 to achieve the desired number of responses. After the desired number of responses, the hyperlink for the online questionnaire went offline. The collected data was downloaded from Google Drive and stored privately for data analysis.

Table 3.7

Response Rate of Faculty (n₁=536)

Sector	Sample	Response Rate	Return %	Overall Response
Public Sector	315	304	97%	
Private Sector	221	210	95%	96%
Total	536	514		

The quantitative return rate in table 3.7 indicated that out of 315 public sector teachers, 304 has returned the desirable response of instrument. While, out of 221 private sector teachers, 210 has returned the desirable response. The overall response rate was 96%.

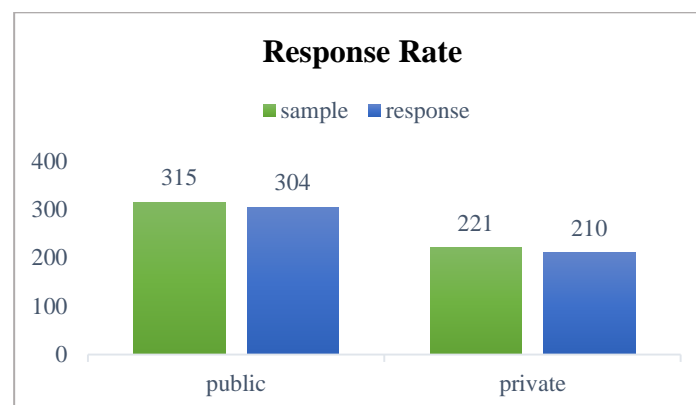


Figure 15: Response Rate of Faculty

The quantitative return rate in figure 15 indicated that out of 315 public sector teachers, 304 has returned the desirable response of instrument. While, out of 221 private sector teachers, 210 has returned the desirable response.

3.8.2 Data Collection for Checklist and Interview

Gall, Gall & Borg (2010) indicated that interview questions and procedures could be addressed and adapted according to the situation to ensure a meaningful and unbiased collection of responses. Creswell (2018) suggested conducting a standardized and semi-structured interview to minimize potential bias. The interviews for this study was conducted using a semi-structured interview protocol based on the research questions of the study.

The collection of qualitative data proved more challenging during the closure of the institutions. The qualitative tools were a Checklist for Deans and semi-structured interview for Heads. The qualitative data were collected in three phases. In the first phase researcher personally visited the Deans and Heads of departments. Punjab province covers a vast territory of Pakistan. The researcher arranged visits to prominent institutions and approached the respondents. This experience was exciting. Approaching Deans and heads required research to take appointments and visiting participants was time taking. Indeed when it comes to the Deans of faculties, usually have greater administrative responsibilities and busy schedules. In the first phase, the researcher only managed to approach 5 Deans and 10 heads of departments.

The second phase involves disseminating an online Checklist to Deans with an email requesting to participate in the study and conducting telephonic or online interviews (Google Meet) with heads of departments. An email request was generated to heads to provide their consent to participate in the interview, after obtaining a formal appointment researcher called the participants on a given time span. The interviewees were asked about their consent to record their response, if they didn't allow it transcriptions were noted down during the interview. Heads were asked to provide their comprehensive views educational change management addressing any recent reforms in their institutions e.g. new program, administrative processes, instructional processes, research initiatives, innovative

technologies etc. This process enabled researcher to acquire response from 7 Deans and 10 heads of departments.

Due to the COVID-19 related limitations, an online interview was also created using Google Forms (<https://forms.gle/oP5zLS1rXo3y8hwN1>) with a permission letter, a paragraph detailing the framework of the study, and open-ended questions with text boxes to provide a response. After obtaining the consent of the respondents an online link was forwarded to the heads of departments to provide their responses. Only 4 responses were required through this process. Two weeks following the initial email, a reminder was initiated for passive respondents. Respondents who were unable to respond for some reason, a second reminder with an online link to the interview was initiated after a month. The online interview was kept alive until the remaining 4 interviewees responded. After obtaining the desired response the Google Form went offline. This phase enables the researcher to acquire remaining interviews, overcoming the limitations of approaching respondents during the pandemic.

The directions for the response, description of Fullan's (2016) model, and repeated reminders helped the researcher to acquire the response from each participant. The telephonic, face-to-face and Google Meet were recorded with the interviewee's consent. Yin (2015) suggested the process called member checking. Member checking was performed in Google Forms, where respondents can glance at the response they have supplied. An online spreadsheet on Google Docs was used to assemble and transcribe the qualitative responses. The spreadsheet provided an optimized and systematic way to code the qualitative information, and later access for thematic analysis.

Table 3.8

Response Rate of Deans ($n_2=12$) & Heads ($n_3=24$)

Sector	Deans ($N_2=12$)	Response Rate	Heads ($N_3=24$)	Response Rate	Overall Response %
Public Sector	6	6	14	14	100%
Private Sector	6	6	10	10	
Total	12	12	24	24	

The qualitative response rate in table 3.8 indicated that the overall response rate of deans of faculty and heads of departments was 100%.

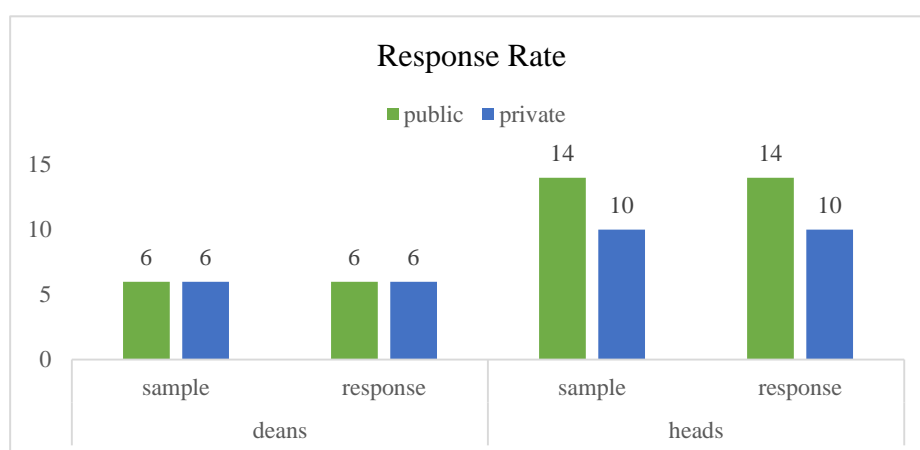


Figure 16: Response Rate of Deans and Heads

The qualitative return rate in figure 16 indicated that the overall response rate of deans of faculty and heads of departments was 100%.

3.8.3 Ethical Considerations

The respondents were assured of the privacy of their responses, and all the individual references and demographic identifiers to respondents were eliminated from the coded data. To ensure the number of respondents for the study was met, all respondents who replied to the email for informed consent were contacted. No respondent name or any indicating characteristic were disclosed. Pseudonyms were used while analyzing the quantitative and qualitative data (Creswell, 2018). The respondents selected to contribute to the study were who genuinely volunteered to participate. The researcher tried to maintain objectivity and

impartiality in the data collection process. Minimal interaction was retained with respondents, not to influence them in any way. Participants were supposed to refer the survey to their colleagues, and there was no non-voluntary participation. Respondents were appreciated for their valuable contributions.

3.9 Data Analysis

It is a careful process that demands specific considerations and expertise of defined approaches (Creswell, 2018). The process requires the systematic arrangement of raw data, field notes, interview transcripts and supporting material that was accumulated to achieve the research findings. Data analysis and interpretation is a procedure of generating ideas from findings and linking those ideas with existing empirical studies of the topic to widen the area of research (Leedy & Ormrod, 2013).

3.9.1 Quantitative Data Analysis

Harvey's (2001) *Checklist for Change* was closed-ended and was analyzed through mean and standard deviation. The first section of the *Educational Change Management Survey* was related to the demographic data about the participants. The demographic information was analyzed through descriptive statistics. The second section of the survey was based on Likert scale items related to the statements based on Fullan's (2016) educational change model. Descriptive and inferential statistics were utilized to assess the data. Frequency, average i.e. Mean, standard deviation and t-test statistic were calculated where necessary. The raw scores of both instruments were handled differently. Frequency count and percentage were used to analyze the data from Checklist responses. The data for both instruments were received through Google Forms, which were downloaded as a spreadsheet and later imported to SPSS (Serial: 53595fc69139e7c88dec) for analysis. The research created variables and allocated the weights. The variable weights were based on Likert Scale of the survey. Responses from the Checklist were analyzed through mean and

standard deviation. For the survey analysis, t-test statistic was used to find the differences between the public and private sectors.

3.8.1.1 Assumptions of t-test

The assumptions of the independent sample t-test are as under:

- Independent samples (Public/Private).
- Interval or ratio levels within data.
- Populations are normally distributed (Appendix-M).
- Populations with equal variances (Table 4.18).

3.9.2 Qualitative Data Analysis

Creswell (2018) suggested that the researcher should constantly return to the research questions to assess whether the analysis is producing the outcomes that are linking back to the research questions. The common themes were acquired after the coding and analysis of the qualitative data. The process required mapping the liaison of textual and raw data to the research questions. This mapping process defines the relationship between research questions and the coding of data (Creswell, 2013).

Inductive approach was used to code the qualitative responses. The qualitative responses were clustered and highlighted in particular sections (Creswell, 2018). The unique codes were assigned to the sections to classify the information. This process of coding is known as open coding. It helps obtain separate ideas and classifications acquired from the review of raw qualitative data. Descriptive Coding (Saldaña, 2021) was used to re-assess the initial codes to obtain new grouping and defined themes.

According to Yin (2015, p. 220) the analysis of qualitative data can be performed in five phases. The first phase *Compiling*, requires practices to arrange data in a formal database and careful organization of original data. The second phase is *Disassembling*,

which involves breaking the original data into smaller pieces and fragments. This is a formal coding procedure. This process may be repeated the desired number of times for testing the codes. The two-sided arrow in the figure below shows that the assembling and disassembling phases can be repeated several times. The third phase, *Reassembling*, requires the researcher to reveal and examine the emerging patterns of codes through the researcher's insightfulness. The fourth phase *Interpretation*, involves using the reassembled data to create narratives and provide tables and graphics where necessary or relevant. The product of this phase is key analytic portion of the manuscript. The initial interpretation may lead to disassembling or reassembling the data. These sequences are represented in the figure. The fifth phase is related to the *Conclusions*. The conclusions should be related to the interpretation and through interpretation to all other phases of the cycle. This process does not fall into linear but has an iterative relationship between the phases. Frequency counts and percentages were used to analyze data in thematic analysis.

3.10 COVID-19-related Implications

During the data collection, there was an outbreak of the novel coronavirus. Many institutions had been closed for weeks around the country. It was uncertain when institutions would resume normal activities. Higher education institutions have also moved to virtual teaching and learning. This technological reform may also have severe implications for the study. The inclusion criteria for selecting the institutions for the study were the institutions with "technological changes." The administration of institutions was quickly engaged in improving the educational technology within institutions for smooth teaching and learning operations. Depending upon how online teaching goes, the perceptions of administrators, heads and teachers might change rapidly. The researcher collected most of the study data remotely through, e.g. Email, WhatsApp, Google Forms and Google Meet. The administrators, heads and teachers were more willing to provide their perceptions regarding

educational change management during this rapid technological change. The researcher also adjusted the research methodology to these reforms as needed.

3.11 Delimitations of the Study

Population delimitation is a systematic process by which it attempts to define boundaries to narrow the scope of the study. Delimitations help researchers to control the features and characteristics of the research. It is often necessary to delimit the population so the readers can comprehend the different factors of the study (Creswell, 2018).

The specified delimitations of this research were as under:

- The research was geographically delimited to Public and Private sector HEIs of Punjab province.
- Faculty of Social Sciences, and departments with the faculty of SS.
- Regular Deans, Heads, and Faculty members of FSS departments.
- Three phases of Fullan's Educational Change Model (2016) and
- Harvey's Checklist for Educational Change (2001).

Table 3.9
 Mapping of Research Methodology ($n_1=12$, $n_2=24$ & $n_3=514$)

<i>Research Question 1: What are the level of change management in higher education?</i>				
<i>Research Question 2: Is there any difference between change management of public and private sector HEIs, in the light of faculty opinion?</i>				
<i>Research Question 3: What are the views of heads regarding change management in public and private sector HEIs?</i>				
S#	Objective	Hypothesis	Statistical Procedures	Explanations
1	To investigate level of change management in the light of Fullan's Educational Change Model.	N/A	Frequency Count, Percentages, Average (Mean), Standard Deviation	Descriptive Statistics or summary statistics is a quantitative representation of information. It usually describes the distribution of participant scores (frequency count, percent, average) and measures of dispersion, i.e., Standard Deviation. S.D measures the spread of data about the average or mean (Best & Kahn, 2016; Mugenda & Mugenda, 2008; Tabachnick & Fidell, 2007)
2	To compare phases of Fullan's Educational Change Model among Public and Private Sector Universities.	H₀₁ There are no statistical differences regarding change management processes within public and private sector universities.	Independent t-test <i>Assumptions:</i> <ul style="list-style-type: none"> ▪ <i>Independent Sample</i> ▪ <i>Interval or Ratio data</i> ▪ <i>Homogeneity in population Variances</i> ▪ <i>Normally distributed data</i> 	t-test statistic is an inferential statistic that is used to test the hypotheses while comparing the means of two independent groups. It determines whether two groups are different from one another. To test the significant difference between two data sets, it follows a normal distribution (Best & Kahn, 2016; Mugenda & Mugenda, 2008; Tabachnick & Fidell, 2007).
3	To explore the views of heads regarding change management in Public and Private HEIs.	N/A	Thematic Study	Thematic analysis is the procedure for analyzing qualitative data. The process involves identifying, analyzing, and interpreting the common themes, ideas and patterns of information within interview transcripts (Creswell, 2018; Lewis <i>et al.</i> 2014; Ormston <i>et al.</i> , 2014; Yin, 2015).
4	To propose a model for change management in Pakistani HEIs, based on gaps identified through research.	N/A	Gaps and Findings	Based on findings of research, and existing gaps, a model was developed for change management in Pakistani HEIs will later be proposed.

CHAPTER 4

ANALYSIS AND INTERPRETATION OF DATA

This chapter provides details about analyzing and interpreting information acquired through quantitative and qualitative measures. This particular study was based on the investigation related to the investigation of the administrators, heads and faculty views on implementing change initiatives in higher education using Fullan's (2016) educational change framework and Harvey's (2001) Checklist for Change at public and private universities. The study utilized Convergent Parallel Design i.e., a mixed method process (Creswell, 2018). The study's results were based on the perceptions of Deans, Heads and Faculty members working in public and private HEIs. The quantitative measures for acquiring data involved a survey based on a model of educational change and qualitative measures involved Checklist for Deans and semi-structured interviews for heads of departments in social sciences.

The raw data was administered and validated through the specified numerical and qualitative processes. The quantitative data was portrayed in tabular and graphical representation along with the relevant explanation, while qualitative data was narrated and accompanied by a thematic analysis of information. The analysis was split into three units. The descriptive statistics of deans' response to change checklist and teachers' response to educational change management questionnaire. The inferential statistic through which the inferences of the study were tested. The thematic analysis of the responses acquired through semi-structured interviews of heads was conducted.

4.1 Descriptive Statistics

The descriptive statistics summarize the information gathered from the sample of the study, later generalizable for the whole population. The process involves relevant tests and graphs.

Section I: Demographic Analysis

The analysis section of demographic information of respondents uncovered the potential particulars of the participants. It is essential to include demographic information about the participants, which ultimately indicates diversity among the participants (Gay, Mills & Ariasian, 2012).

Section II: Objective 1- To investigate level of change management in the light of Fullan's Educational Change Model.

The section determines the faculty views on implementing change initiatives in higher education using Fullan's (2016) educational change management framework. Suitable analysis such as Mean and Standard Deviation were applied to the acquired data. The instrument used to acquire data was a self-developed survey based on Fullan's (2016) three-phase educational change framework.

4.2 Inferential Statistics

This section analyzed the inferences made for the population. This study applied probability distribution and hypothesis testing (Creswell & Creswell, 2017).

Section III: Objective 2- To compare phases of Fullan's Educational Change Model among Public and Private Sector Universities.

The section covers the achievement of the second objective of the research, which was to compare three phases of Fullan's Educational Change Model among Public and Private Sector Universities. To achieve the objective, the independent t-test was applied to determine the statistical differences among the specified variables.

4.3 Thematic Analysis

It is an iterative approach to compile, assemble, disassemble, interpret and conclude data to obtain relevant codes, which can later be converted to relevant themes or the variables of interest in the qualitative study (Creswell, 2018; Yin, 2015).

Section IV: Objective 3- To explore the views of heads regarding change management in Public and Private HEIs.

The section contains the processes involved in achieving the second objective, which was to explore the views of heads regarding change management in Public and Private HEIs. Heads of departments within the social science faculty were the participants in the study. The process involves asking semi-structured questions related to three domains of the study's conceptual framework. The analysis of this section involves information coding and later converting those codes to meaningful themes, which represent the variables of the qualitative study (Creswell, 2018; Yin, 2015).

4.4 Comparison of Results

Section V: Result Comparison

The section encloses the primary requisite of the convergent parallel design i.e. the integration of qualitative and quantitative results. After the separate analysis of qualitative and quantitative, the research design demands the integration of both natures to provide an in-depth glance at the study variables and results in significant findings of the study (Cresswell, 2018).

4.1 Descriptive Statistics

4.1.1 Demographic Analysis

Table 4.1

Sector of Respondents ($n_1=12$, $n_2=24$, $n_3=514$)

S#	Sector	$n_1=Deans$		$n_2=Heads$		$n_3=Faculty$	
		<i>Freq.</i>	<i>Percent</i>	<i>Freq.</i>	<i>Percent</i>	<i>Freq.</i>	<i>Percent</i>
1.	Public	6	50%	14	58%	304	59%
2.	Private	6	50%	10	42%	210	41%
	Total	12	100%	24	100%	514	100%

Table 4.1 depicts the distribution of respondents based on the sector of institutions. Equal participation of Deans was sampled for the study (six from each sector). Most of the Department Heads 58% ($n=14$), were from the public sector, while 42% ($n=10$) were from the private sector. Most of the faculty 59% ($n=304$) were from public sector, 41% ($n=210$) were from private sector institutions.

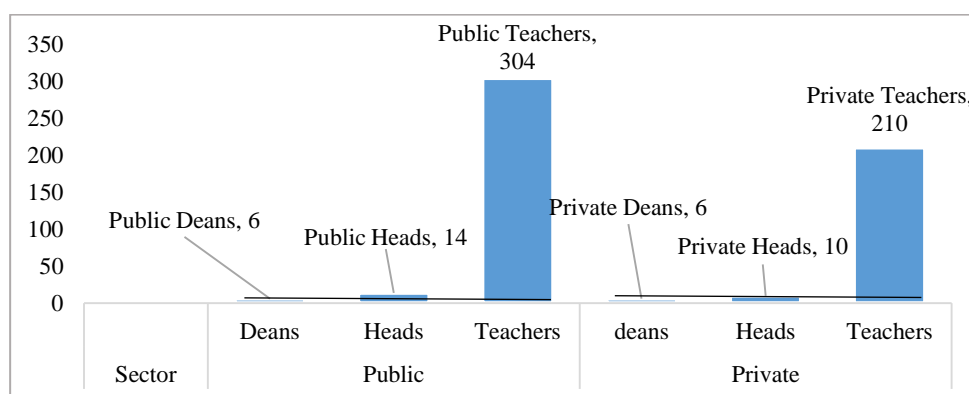


Figure 17: Sector of the Respondents

Figure 17 illustrates that Equal participation of Deans was sampled for the study, (six from each sector). Most of the Department Heads, 14 were from the public sector, while 10 were from the private sector. Most of the faculty, 304 were from public sector, 210 were from private sector institutions.

Table 4.2

Gender of Respondents (n₁=12, n₂=24, n₃=514)

S#	Gender	<i>n₁=Deans</i>		<i>n₂=Heads</i>		<i>n₃=Faculty</i>	
		<i>Freq.</i>	<i>Percent</i>	<i>Freq.</i>	<i>Percent</i>	<i>Freq.</i>	<i>Percent</i>
1.	Male	10	83%	15	63%	292	57%
2.	Female	2	17%	9	38%	222	43%
	Total	12	100%	24	100%	514	100%

Table 4.2 represents the distribution of respondents based on gender. Results specify that Most of the Deans 83% (n=10) were male, while 17% (n=2) Deans were female. The analysis further shows that 63% (n=15) heads of departments were male and 38% (n=9) were female. Results further mention that 57% (n=292) teachers were male and 43% (n=222) were female.

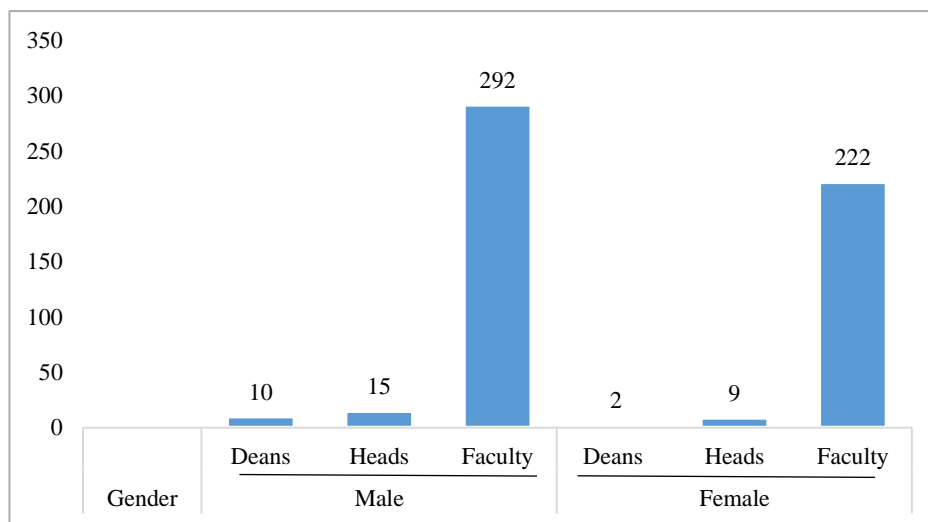


Figure 18: Gender of Respondents

Figure 18 illustrates the distribution of the respondents based on gender. It shows that Most of the Deans, 10 were male, while 2 Deans were female. The analysis further shows that 15 heads of departments were male and 9 were female. Results further mention that 292 teachers were male and 222 were female.

Table 4.3

Academic Qualification of Respondents (n₁=12, n₂=24, n₃=514)

S#	Academic Qualification	n ₁ =Deans		n ₂ =Heads		n ₃ =Faculty	
		Freq.	Percent	Freq.	Percent	Freq.	Percent
1.	M.Phil.	0	0%	0	0%	179	35%
2.	Ph.D.	8	67%	19	79%	292	57%
3.	Post Doc.	4	33%	5	21%	43	8%
	Total	12	100%	24	100%	514	100%

Table 4.3 shows the analysis of the study participants regarding their qualifications. Results depict that Most of the Deans, 67% (n=8) were Ph.D. and 33% (n=4) were Post Doc. Results further mention that 79% (n=19) of heads of the departments were Ph.D. and 21% (n=5) were Post Doc. Analysis further indicate that 35% (n=179) were M.Phil. qualified, 57% (n=292) were Ph.D. while 8% (n=43) were Post Doc.

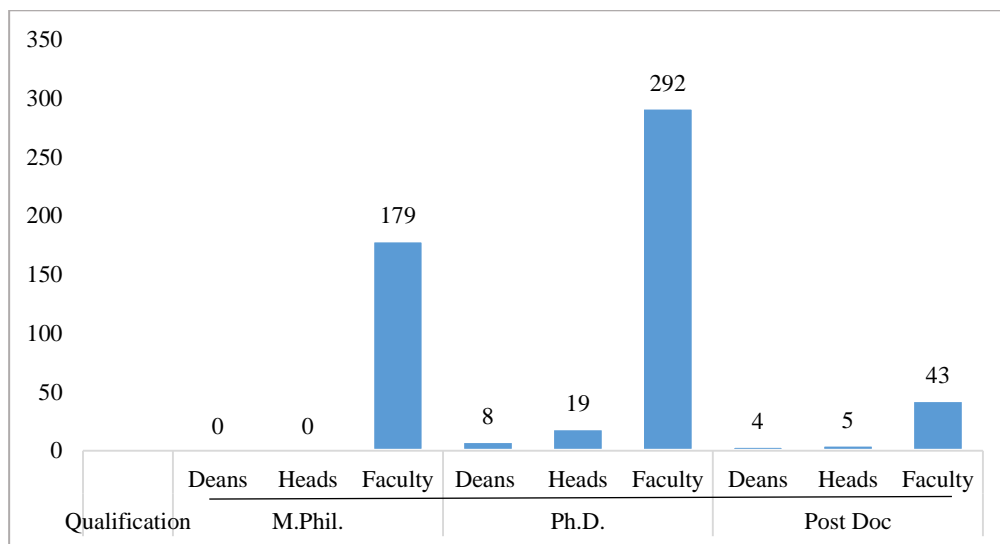


Figure 19: Qualification of Respondents

Figure 19 illustrates the distribution of the respondents based on their academic qualifications, that Most of the Deans, 8 were Ph.D. and 4 were Post Doc. Results further mention that 19 heads were Ph.D. and 5 were Post Doc. Analysis further indicate that 179 were M.Phil. qualified, 292 were Ph.D. 43 were Post Doc.

Table 4.4
Teaching Experience of Respondents (n₁=12, n₂=24, n₃=514)

S#	Teaching Exp. (Years)	n ₁ =Deans		n ₂ =Heads		n ₃ =Faculty	
		Freq.	Percent	Freq.	Percent	Freq.	Percent
1.	<3	0	0%	0	0%	45	9%
2.	3 – 6	0	0%	1	4%	121	24%
3.	7 – 10	0	0%	7	29%	195	38%
4.	10<	12	100%	16	67%	153	30%
	Total	12	100%	24	100%	514	100%

Table 4.4 exhibits all Deans have more than 10 years of academic experience. Most heads 67% (16), have more than 10 years of experience, 29% (n=7) have experience ranging from 7 to 10 years and only 4% (n=1) have experience from 3 to 6 years. The analysis further reveals that Most of the faculty members 38% (n=195) have experience from 7 to 10 years, 30% (n=153) have experience more than 10 years, 24% (n=121) have experience ranging from 3 to 6 years. Only 9% (n=45) have experience up to 3 years.

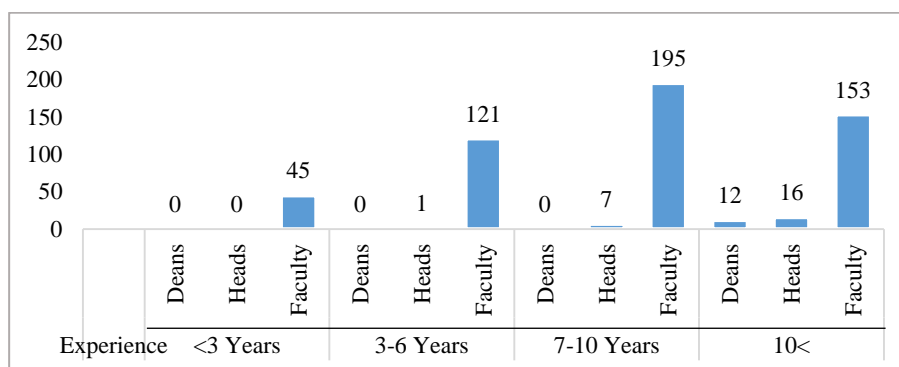


Figure 20: Experience of Respondents

Figure 20 illustrates that Deans have more than 10 years of experience. 16 heads have more than 10 years of experience, 7 heads have experience ranging from 7 to 10 years and only 1 head have experience from 3 to 6 years. Most of the faculty members, 195 have experience from 7 to 10 years, 153 have more than 10 years, 121 have experience ranging from 3 to 6 years. Only 45 have experience up to 3 years.

Table 4.5
Designations of Respondents ($n_1=12$, $n_2=24$, $n_3=514$)

S#	Designation	$n_1=Deans$		$n_2=Heads$		$n_3=Faculty$	
		Freq.	Percent	Freq.	Percent	Freq.	Percent
1.	Professor	12	100%	5	21%	71	14%
2.	Assoc. Prof.	0	0%	16	67%	278	54%
3.	Assist. Prof.	0	0%	3	13%	115	22%
4.	Lecturer	0	0%	0	0%	50	10%
	Total	12	100%	24	100%	514	100%

Table 4.5 reveals the analysis of participants based on their designation in the institution. Analysis depicts that all Deans were Professors and Most of the heads 67% ($n=16$) were associate professors. Furthermore, 21% ($n=5$) heads were Professors and only 13% ($n=3$) were assistant professors. Faculty data indicate that 54% ($n=278$) faculty members were associate professors, 22% ($n=115$) were assistant professors, 14% ($n=71$) were Professors and 10% ($n=50$) were lecturers.

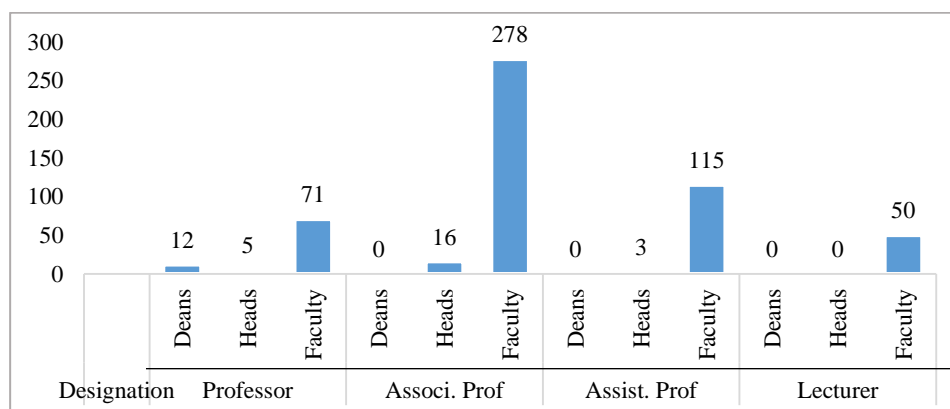


Figure 21: Designations of Respondents

Figure 21 illustrates that all Deans were Professors and Most of the heads 16 were associate professors. Furthermore, 5 heads were Professors and only 3 were assistant professors. Faculty data indicate that 278 faculty members were associate professors, 115 were assistant professors, 71 were Professors and 50 were lecturers.

Table 4.6
Age of Respondents ($n_1=12$, $n_2=24$, $n_3=514$)

S#	Age (Years)	$n_1=Deans$		$n_2=Heads$		$n_3=Teachers$	
		Freq.	Percent	Freq.	Percent	Freq.	Percent
1.	21 – 30	0	0%	0	0%	95	18%
2.	31 – 40	0	0%	3	13%	147	29%
3.	41 – 50	5	42%	13	54%	241	47%
4.	50<	7	58%	8	33%	31	6%
	Total	12	100%	24	100%	514	100%

Table 4.6 displays the analysis of participants based on their age range. Results showed that 58% ($n=7$) of Deans had their ages more than 50 and 42% ($n=5$) ranging from 41 to 50 years. The analysis further depicts that Most heads 54% ($n=13$) had their ages ranging from 41 to 50 years, 33% ($n=8$) more than 50 years, and only 13% ($n=3$) ranging from 31 to 40 years. Results further mention that 47% ($n=241$) faculty were from age range 41 to 50 years, 29% ($n=147$) were from age range 31 to 40 years, 18% ($n=95$) were from age range 21 to 30 years and only 6% ($n=31$) having age more than 50.

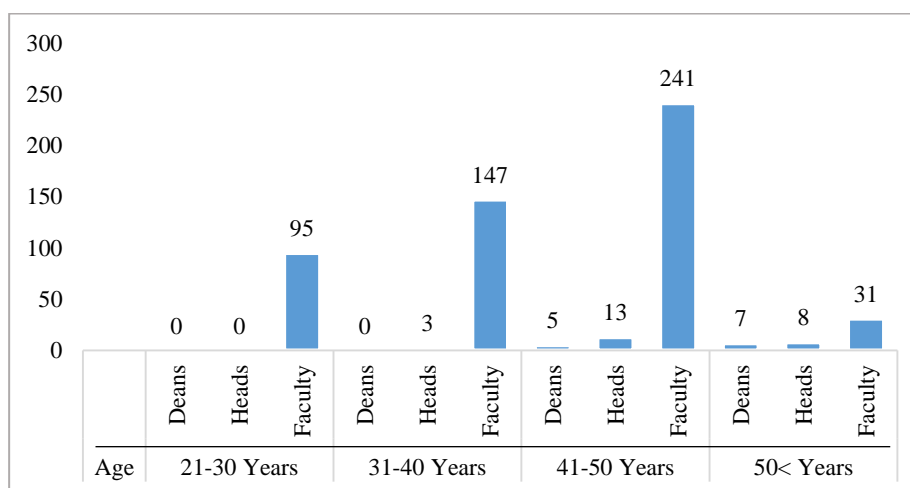


Figure 22: Ages of Respondents

Figure 22 illustrates that 7 of Deans had their ages more than 50 and 5 ranging from 41 to 50 years. Most heads 13 had their ages ranging from 41 to 50 years, 8 more than 50 years, and only 3 ranging from 31 to 40 years. Furthermore, 241 faculty were from age range 41 to 50 years, 147 were from age range 31 to 40 years, 95 were from age range 21 to 30 years and only 31 having age more than 50.

Table 4.7

Demographic Analysis of Quantitative Sample: Public and Private Sector (n₃=514)

Demographics		<i>n₃=Teachers</i>	
		<i>Freq.</i>	<i>Percent</i>
<i>Public Sector Faculty Sample</i>			
Gender	Male	174	57%
	Female	130	43%
	Total	304	100%
Qualification	M.Phil.	106	35%
	Ph.D.	172	57%
	Post Doc.	25	8%
	Total	304	100%
Experience	< 3 Years	27	9%
	3 – 6 Years	72	24%
	7 – 10 Years	115	38%
	10< Years	90	30%
	Total	304	100%
Designation	Professor	42	14%
	Associate Prof.	164	54%
	Assistant Prof.	68	22%
	Lecturer	30	10%
	Total	304	100%
Age	21 – 30	56	18%
	31 – 40	87	29%
	41 – 50	143	47%
	More than 50	18	6%
	Total	304	100%
<i>Private Sector Faculty Sample</i>			
Gender	Male	113	54%
	Female	97	46%
	Total	210	100%
Qualification	M.Phil.	73	35%
	Ph.D.	119	57%
	Post Doc.	18	9%
	Total	210	100%
Experience	< 3 Years	18	9%
	3 – 6 Years	50	24%
	7 – 10 Years	80	38%
	10< Years	62	30%
	Total	210	100%
Designation	Professor	29	14%
	Associate Prof.	114	54%
	Assistant Prof.	47	22%
	Lecturer	20	10%
	Total	210	100%
Age	21 – 30	39	19%
	31 – 40	60	29%
	41 – 50	98	47%
	More than 50	13	6%
	Total	210	100%

Table 4.7 analyzes public and private sector faculty based on their demographic information. The sample of faculty members was comprised of 514 regular faculty members working in public and private HEIs of Punjab. Among 304 public sector faculty 57% (n=174) were Male and 43% (n=130) were female. Most of the faculty, 57% (n=172) were Ph.D. holder, 35% (n=106) had M.Phil. and only 8% (n=25) had Post Doc. Most of the respondents 38% (n=115) had 7 to 10 years of experience, whereas only 9% (n=27) had less than 3 years of experience. Most respondents were Associate Professors 54% (n=164) whereas only 10% (n=30) were lecturers. Furthermore, most of the respondents 47% (n=143) had their ages from range 41 to 50 years, and only 18% (n=56) had their ages ranging from 21 to 30 years.

Table 4.7 also shows the analysis of private sector faculty based on their demographic information. Among 210 private sector faculty 54% (n=113) were Male and 46% (n=97) were female. Most of the faculty 57% (n=119) had a Ph.D. degree, 35% (n=73) had an M.Phil. degree and only 9% (n=18) were holding Post Doc. Most of the respondents 38% (n=80) were having 7 to 10 years of academic experience, 30% (n=62) had more than 10 years of experience, about 24% (n=50) had 3 to 6 years of experience and only 9% (n=18) were having less than 3 years of experience. Most respondents were Associate Professors 54% (n=114) whereas only 10% (n=20) were lecturers. Furthermore, most of the respondents 47% (n=98) had their ages were from range 41 to 50 years, and only 19% (n=39) had their ages ranging from 21 to 30 years.

Objective 1- To investigate level of change management in the light of Fullan's Educational Change Model.

4.1.2 Level of Change Management

The analysis below analyzes the perceptions of change management at the higher education level in the light of three phases of Fullan's educational change model, i.e., initiation, implementation and continuation.

Table 4.8

Level of Change Management at University Level (n₃=514)

<i>Fullan's Model</i>			
Phases of Change Management	n	Mean	S.D
Initiation	514	4.71	0.32
Implementation	514	4.60	0.44
Continuation	514	3.95	0.69
Total	514	4.14	0.39

Table 4.8 measures the level of educational change management at the higher education level. The first phase of Fullan's model of educational change i.e. Initiation, depicts high mean scores (M=4.71, S.D=0.32). The second phase of the model i.e. Implementation shows high-level mean scores (M=4.60, S.D=0.44). The third phase of Fullan's model i.e. Continuation also reveals medium mean scores (M=3.95, S.D=0.69). Results of the analysis specify that higher education institutions are adequately coping with educational change and institutions place their focus on all three phases of the model.

4.2 Analysis of Harvey's Checklist

The analysis below analyzes the perceptions of Deans about change at the higher education level in the light of three phases of change i.e. analysis (step 1 to 8), Planning (step 9 to 15) and implementation & evaluation (step 16 to 20) (England, 1990; Harvey, 2001; Hernandez, 2016; Mahler, 1996; Young, 2004).

Table 4.9

Change Management at University Level (n₁=12)

<i>Harvey's Checklist</i>	n	Percent
Phases of Change		
Analysis	12	46%
Planning	12	35%
Implementation & Evaluation	12	19%
Total	12	100

Table 4.9 measures the perceptions of educational change management at the higher education level. The first phase of Harvey's Checklist of change, i.e., Analysis, depicts high scores (*percentage=46%*). The second phase of Harvey's Checklist i.e. Planning shows medium scores (*percentage=35%*). The third phase of Harvey's Checklist i.e. Implementation & Evaluation also reveals low scores (*percentage=19%*). Results of the analysis specify that higher education institutions are adequately coping with educational change and institutions place their focus on the first two phases of change.

4.3 Inferential Statistics

Objective 2- To compare phases of Fullan’s Educational Change Model among Public and Private Sector Universities.

4.3.1 Comparison of Change Management within Sectors

H₀₁ There are no statistical differences regarding change management processes within public and private sector universities.

The following table shows the difference in change management at higher education level, based on sector of institutions.

Table 4.10

Change Management (Public and Private Sector Universities) (n₃=514)

Levene’s test for Equality of Variances	Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen’s <i>d</i>
F=.781	Public	304	4.38	0.59	3.81	512	.000*	0.56
Sig.=.370	Private	210	4.69	0.77				

* $p < 0.05$

** $p < 0.01$

Table 4.10 represents the results of Levene’s test for equality / homogeneity of variances; insignificant results indicates that assumption is tenable, hence equal variances are confirmed. The t-test measured the difference in change management among public and private sector institutions. Results were significant at $t(512)=3.81$ where $p=.000$. Therefore, there exists a significant difference in change management between private (M=4.69, S.D=0.77) and public (M=4.38, S.D=0.59) institutions. Results showed that private sector (M=4.69) institutions hold greater capability for change management than public sector (M=4.38) perceived by the faculty. Cohen’s *d* was found at 0.56, shows a Medium effect size. Hence, the Null hypothesis H₀₁ ‘There are no statistical differences regarding change management processes within public and private sector universities’ is not accepted.

H_{01a} There are no statistical differences regarding Change Initiation processes used in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and first phase of Fullan's model of educational change, i.e., Initiation.

Table 4.11

Change Initiation (Public and Private Sector Universities) (n₃=514)

Variable	Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Initiation	Public	304	4.40	0.78	2.54	512	.001*	0.47	Sig. H ₀ Rejected
	Private	210	4.57	0.72					

* $p < 0.05$

** $p < 0.01$

Table 4.11 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's Initiation. The t-test measured the difference in change management among public and private sector institutions in relation to the first phase of Fullan's model of educational change i.e. Initiation. Results were significant at $t(512)=2.54$ where $p=.001$. Therefore, there exists a significant difference in change management between private (M=4.57, S.D=0.72) and public (M=4.40, S.D=0.78) institutions. Results showed that private sector (M=4.57) institutions hold greater capability for change management than public sector (M=4.40) perceived by the faculty. Cohen's *d* was found at 0.47, shows a Medium effect size. Hence, the Null hypothesis H_{01a} 'There are no statistical differences regarding Change Initiation processes used in Public and Private Sector Universities' is rejected.

H_{01a(i)} There are no statistical differences regarding Availability of Innovations in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and first phase of Fullan's educational change model, i.e., initiation and its sub-phase, i.e., availability of innovations.

Table 4.12

Change Initiation & Availability of Innovations (Public and Private Sector Universities) (n₃=514)

Variable	Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Availability of Innovations	Public	304	3.95	1.31	3.02	512	.001*	0.33	Sig. H ₀ Rejected
	Private	210	4.10	1.11					

* $p < 0.05$

** $p < 0.01$

Table 4.12 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's Initiation and its sub-phase, i.e., availability of innovations. The t-test measured the difference in change management among public and private sector institutions in relation to the first level of Fullan's model of educational change, i.e., Initiation and its sub-phase, i.e., availability of innovations. Results were significant at $t(512)=3.02$ where $p=.001$. Therefore, there exists a significant difference in change management between private (M=4.10, S.D=1.11) and public (M=3.95, S.D=1.31) institutions. Results showed that private sector (M=4.10) institutions hold greater capability for change management than public sector (M=3.95) perceived by the faculty. Cohen's *d* was found at 0.33 showing a Medium effect size. Hence, the Null hypothesis H_{01a(i)} 'There are no statistical differences regarding Availability of Innovations in Public and Private Sector Universities' is rejected.

Table 4.13

Policy standards and targets are regularly followed in institution (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.49	1.64	3.75	512	.001*	0.46	<i>Significant</i>
Private	210	4.15	1.41					

* $p < 0.05$

** $p < 0.01$

Table 4.13 indicates that results were significant at $t(512)=3.75$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from public sector were near to agree and private were agree with the statement that "Policy standards and targets are regularly followed in institution."

Table 4.14

Monitoring and assessment criteria are reviewed on a regular basis (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.09	1.41	1.81	512	.211	0.057	<i>Insignificant</i>
Private	210	4.52	1.58					

* $p < 0.05$

** $p < 0.01$

Table 4.14 measured the difference between public and private sector. The results were insignificant at $t(512)=1.81$ where $p=.211$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that "Monitoring and assessment criteria are reviewed on a regular basis."

Table 4.15

Classroom teaching programs are also the prior concern of administrators (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.84	1.02	1.77	512	.310	0.13	<i>Insignificant</i>
Private	210	3.87	1.45					

**p*<0.05

***p*<0.01

Table 4.15 measured the difference between public and private sector. The results were insignificant at $t(512)=1.77$, where $p=.310$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Classroom teaching programs are also the prior concern of administrators.”

Table 4.16

Professional development seminars and workshops are encouraged by administrators (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.14	1.43	4.35	512	.001*	0.51	<i>Significant</i>
Private	210	3.45	1.37					

**p*<0.05

***p*<0.01

Table 4.16 indicates that results were significant at $t(512)=4.35$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Public sector institutions hold greater capability than private sector. However, overall, faculty from private sector were near to agree and public were agree with the statement that “Professional development seminars and workshops are encouraged by administrators.”

Table 4.17

Class management strategies are strictly being practiced in the institution (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.81	0.69	6.51	512	.001*	0.41	<i>Significant</i>
Private	210	4.47	1.36					

**p*<0.05

***p*<0.01

Table 4.17 indicates that results were significant at $t(512)=6.51$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Class management strategies are strictly being practiced in the institution.”

Table 4.18

Intervention and special assistance are regular practices of administrators (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.30	0.65	1.74	512	.131	0.11	<i>Insignificant</i>
Private	210	3.73	0.76					

**p*<0.05

***p*<0.01

Table 4.18 measured the difference between public and private sector. The results were insignificant at $t(512)=1.74$, where $p=.131$. Therefore, there is no significant difference between private and public sector institutions. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that “Intervention and special assistance are regular practices of administrators.”

H_{01a(ii)} There are no statistical differences regarding Access of Information in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and the first phase of Fullan's educational change model, i.e., initiation and its sub-phase i.e. access of information.

Table 4.19

Change Initiation & Access of Information (Public and Private Sector Universities) (n₃=514)

Variable	Group	n	Mean	S.D	t	d.f	Sig (2-tailed)	Cohen's d	Result
Access of Information	Public	304	3.75	1.03	5.19	512	.001*	0.34	Sig. H ₀ Rejected
	Private	210	4.12	0.70					

* $p < 0.05$

** $p < 0.01$

Table 4.19 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's Initiation and its sub-phase i.e. access of information. The t-test measured the difference in change management among public and private sector institutions in relation to the first level of Fullan's model of educational change i.e. Initiation and its sub-phase, i.e., access of information. Results were significant at $t(512)=5.19$ where $p=.001$. Therefore, there exists a significant difference in change management between private (M=4.12, S.D=0.70) and public (M=3.75, S.D=1.03) institutions. Results showed that private sector (M=4.12) institutions hold greater capability for change management than public sector (M=3.75) perceived by the faculty. Cohen's *d* was found at 0.34, shows a Medium effect size. Hence, the Null hypothesis H_{01a(ii)} 'There are no statistical differences regarding Access of Information in Public and Private Sector Universities' is rejected.

Table 4.20

Administrators and coordinators spend enough time organizing workshops and seminars (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.39	0.49	4.42	512	.001*	0.52	<i>Significant</i>
Private	210	3.50	0.85					

* $p < 0.05$

** $p < 0.01$

Table 4.20 indicates that results were significant at $t(512)=4.42$ where $p=.001$.

Hence, a significant difference between private and public HEIs was observed. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that “Administrators and coordinators spend enough time organizing workshops and seminars.”

Table 4.21

Partnerships and collaborations of professional networks (training providers etc.) are encouraged by administrators (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.19	0.48	7.60	512	.001*	0.61	<i>Significant</i>
Private	210	4.45	0.63					

* $p < 0.05$

** $p < 0.01$

Table 4.21 indicates that results were significant at $t(512)=7.60$ where $p=.001$.

Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Partnerships and collaborations of professional networks (training providers etc.) are encouraged by administrators.”

Table 4.22

The development of innovations is encouraged by administrators (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.91	1.02	3.22	512	.001*	0.63	<i>Significant</i>
Private	210	4.31	0.88					

* $p < 0.05$

** $p < 0.01$

Table 4.22 indicates that results were significant at $t(512)=3.22$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “The development of innovations is encouraged by administrators.”

Table 4.23

Administrators spend time and energy building communication infrastructure to create central administration (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.41	1.03	1.91	512	.061	0.18	<i>Insignificant</i>
Private	210	3.56	0.97					

* $p < 0.05$

** $p < 0.01$

Table 4.23 measured the difference between public and private sector. The results were insignificant at $t(512)=1.91$ where $p=.061$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from public sector were near to agree and private sector were agree with the statement that “Administrators spend time and energy building communication infrastructure to create central administration.”

Table 4.24

Access to innovations and resources is encouraged in my institution (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.51	0.77	1.62	512	.074	0.22	<i>Insignificant</i>
Private	210	3.85	0.69					

**p*<0.05

***p*<0.01

Table 4.24 measured the difference between public and private sector. The results were insignificant at $t(512)=1.62$ where $p=.074$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from public sector merely agreed with the statement that "Access to innovations and resources is encouraged in my institution."

Table 4.25

Administrators have the capacity to effectively operate while initiating new standards (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.41	1.02	4.17	512	.001*	0.65	<i>Significant</i>
Private	210	3.48	0.43					

**p*<0.05

***p*<0.01

Table 4.25 indicates that results were significant at $t(512)=4.17$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Public sector institutions hold greater capability than private sector. However, overall, faculty from private sector merely agreed with the statement that "Administrators have the capacity to effectively operate while initiating new standards."

H_{01a(iii)} There are no statistical differences regarding Role of Stakeholders in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and first phase of Fullan's educational change model, i.e., initiation and its sub-phase, i.e., role of stakeholders.

Table 4.26

Change Initiation & Role of Stakeholders (Public and Private Sector Universities) (n₃=514)

Variable	Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Role of Stakeholders	Public	304	3.91	1.05	5.77	512	.001*	0.49	Sig. H ₀ Rejected
	Private	210	4.20	0.67					

* $p < 0.05$

** $p < 0.01$

Table 4.26 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's Initiation and its sub-phase i.e. role of stakeholders. The t-test measured the difference in change management among public and private sector institutions in relation to the first level of Fullan's model of educational change i.e. Initiation and its sub-phase i.e. role of stakeholders. Results were significant at $t(512)=5.77$ where $p=.001$. Therefore, there exists a significant difference in change management between private (M=4.20, S.D=0.67) and public (M=3.91, S.D=1.05) institutions. Results showed that private sector (M=4.20) institutions hold greater capability for change management than public sector (M=3.91) perceived by the faculty. Cohen's *d* was found at 0.49, shows a Medium effect size. Hence, the Null hypothesis H_{01a(iii)} 'There are no statistical differences regarding Role of Stakeholders in Public and Private Sector Universities' is rejected.

Table 4.27

Central administrators (Top level Management) are considered the locus of decision-making (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.64	0.55	6.23	512	.001*	0.51	<i>Significant</i>
Private	210	4.10	0.69					

**p*<0.05

***p*<0.01

Table 4.27 indicates that results were significant at $t(512)=6.23$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Central administrators (Top level Management) are considered the locus of decision-making.”

Table 4.28

Administrators are capable of maintaining focus on innovative directions (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.37	0.62	3.09	512	.001*	0.42	<i>Significant</i>
Private	210	4.15	0.56					

**p*<0.05

***p*<0.01

Table 4.28 indicates that results were significant at $t(512)=3.09$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that “Administrators are capable of maintaining focus on innovative directions.”

Table 4.29

Heads act as “gatekeepers” of change, often determining the fate of innovations (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.50	0.75	5.24	512	.001*	0.36	<i>Significant</i>
Private	210	3.61	0.29					

**p*<0.05

***p*<0.01

Table 4.29 indicates that results were significant at $t(512)=5.24$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from public sector were near to agree and private were merely agree with the statement that “Heads act as “gatekeepers” of change, often determining the fate of innovations.”

Table 4.30

Heads and coordinators lead the change and act as critical sources of change initiation (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.25	0.76	1.89	512	.088	0.18	<i>Insignificant</i>
Private	210	4.37	0.62					

**p*<0.05

***p*<0.01

Table 4.30 measured the difference between public and private sector. The results were insignificant at $t(512)=1.89$, where $p=.088$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Heads and coordinators lead the change and act as critical sources of change initiation.”

Table 4.31

Faculty is considered a preferred source of ideas for other colleagues (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.05	0.69	1.92	512	.067	0.23	<i>Insignificant</i>
Private	210	4.15	0.61					

**p*<0.05

***p*<0.01

Table 4.31 measured the difference between public and private sector. The results were insignificant at $t(512)=1.92$, where $p=.067$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that "Faculty is considered a preferred source of ideas for other colleagues."

Table 4.32

Community partnerships are encouraged where necessary (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.47	1.20	1.74	512	.261	0.20	<i>Insignificant</i>
Private	210	3.58	0.95					

**p*<0.05

***p*<0.01

Table 4.32 measured the difference between public and private sector. The results were insignificant at $t(512)=1.74$ where $p=.261$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from private sector were agree with the statement that "Community partnerships are encouraged where necessary."

Table 4.33

Government is ready to release funds for capacity building and educational reforms (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.51	1.53	4.68	512	.004*	0.61	<i>Significant</i>
Private	210	2.52	0.85					

**p*<0.05

***p*<0.01

Table 4.33 indicates that results were significant at $t(512)=4.68$ where $p=.004$.

Hence, a significant difference between private and public HEIs was observed. Public sector institutions hold greater opportunity than private sector. However, private sector faculty disagreed with the statement that "Government is ready to release funds for capacity building and educational reforms."

Table 4.34

Government act in a problem-solving rather than a bureaucratic manner while initiating reforms (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.45	0.70	4.99	512	.04*	0.51	<i>Significant</i>
Private	210	3.18	0.83					

**p*<0.05

***p*<0.01

Table 4.34 indicates that results were significant at $t(512)=4.99$ where $p=.04$. Hence, a significant difference between private and public HEIs was observed. Public sector institutions hold greater capability than private sector. However, overall, faculty from private sector were found neutral with the statement that "Government act in a problem-solving rather than a bureaucratic manner while initiating reforms."

H_{01b} There are no statistical differences regarding Change Implementation processes used in Public and Private Sector Universities.

The following table shows the difference in change management at the higher education level, based on the sector of institutions and the second phase of Fullan's model of educational change, i.e., implementation.

Table 4.35

Change Implementation (Public and Private Sector Universities) (n₃=514)

Variable	Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Implementation	Public	304	4.53	1.51	3.14	512	.000*	0.52	Sig. H ₀ Rejected
	Private	210	4.64	0.83					

* $p < 0.05$

** $p < 0.01$

Table 4.35 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's Implementation. The t-test measured the difference in change management among public and private sector institutions in relation to the second phase of Fullan's model of educational change i.e. Implementation. Results were significant at $t(512)=3.14$ where $p=.000$. Therefore, there exists a significant difference in change management between private (M=4.64, S.D=0.83) and public (M=4.53, S.D=1.51) institutions. Results showed that private sector (M=4.64) institutions hold greater capability for change management than public sector (M=4.53) perceived by the faculty. Cohen's *d* was found at 0.52, shows a Medium effect size. Hence, the Null hypothesis H_{01b} 'There are no statistical differences regarding Change Implementation processes used in Public and Private Sector Universities' is rejected.

H_{01b(i)} There are no statistical differences regarding Change Characteristics in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and second phase of Fullan's educational change model i.e. implementation and its sub-phase i.e. change characteristics.

Table 4.36

Change Implementation & Change Characteristics (Public and Private Sector Universities) (n₃=514)

Variable	Group	n	Mean	S.D	t	d.f	Sig (2-tailed)	Cohen's d	Result
Change Characteristics	Public	304	3.59	1.46	7.42	512	.000*	0.31	Sig. H ₀ Rejected
	Private	210	4.40	1.56					

* $p < 0.05$

** $p < 0.01$

Table 4.36 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's Implementation and its sub-phase i.e. change characteristics. The t-test measured the difference in change management among public and private sector institutions in relation to the second phase of Fullan's model of educational change i.e. Implementation and its sub-phase i.e. role of stakeholders. Results were significant at $t(512)=7.42$ where $p=.000$. Therefore, there exists a significant difference in change management between private (M=4.40, S.D=1.56) and public (M=3.59, S.D=1.46) institutions. Results showed that private sector (M=4.40) institutions hold greater capability for change management than public sector (M=3.59) perceived by the faculty. Cohen's d was found at 0.31, shows a Medium effect size. Hence, the Null hypothesis H_{01b(i)} 'There are no statistical differences regarding Change Characteristics in Public and Private Sector Universities' is rejected.

Table 4.37
Changes or innovations are attempted according to perceived priority needs (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.50	1.49	6.81	512	.001*	0.56	<i>Significant</i>
Private	210	4.15	1.45					

* $p < 0.05$

** $p < 0.01$

Table 4.37 indicates that results were significant at $t(512)=6.81$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from public sector merely agreed with the statement that “Changes or innovations are attempted according to perceived priority needs.”

Table 4.38
Administrators are clear about goals and resources before implementing innovation (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.56	1.40	3.12	512	.002*	0.47	<i>Significant</i>
Private	210	4.14	1.14					

* $p < 0.05$

** $p < 0.01$

Table 4.38 indicates that results were significant at $t(512)=3.12$ where $p=.002$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Administrators are clear about goals and resources before implementing innovation.”

Table 4.39

Initiation of a new educational program is strictly based on needs (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.78	1.54	1.91	512	.081	0.21	<i>Insignificant</i>
Private	210	3.65	1.43					

**p*<0.05

***p*<0.01

Table 4.39 measured the difference between public and private sector. The results were insignificant at $t(512)=1.91$ where $p=.081$. Therefore, there is no significant difference between private and public sector institutions. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that "Initiation of a new educational program is strictly based on needs."

Table 4.40

Administrators make critical inquiries into current practices before suggesting innovation (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.03	1.47	1.72	512	.409	0.12	<i>Insignificant</i>
Private	210	3.90	1.33					

**p*<0.05

***p*<0.01

Table 4.40 measured the difference between public and private sector. The results were insignificant at $t(512)=1.72$ where $p=.409$. Therefore, there is no significant difference between private and public sector institutions. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that "Administrators make critical inquiries into current practices before suggesting innovation."

Table 4.41

Administrators provide formal recognition regarding unmet needs (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.52	1.45	5.14	512	.002*	0.61	<i>Significant</i>
Private	210	4.29	1.12					

* $p < 0.05$

** $p < 0.01$

Table 4.41 indicates that results were significant at $t(512)=5.14$ where $p=.002$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from public sector merely agreed with the statement that “Administrators provide formal recognition regarding unmet needs.”

Table 4.42

Faculty members effectively deal with innovations and change directions (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.81	1.20	4.21	512	.002*	0.71	<i>Significant</i>
Private	210	4.21	1.31					

* $p < 0.05$

** $p < 0.01$

Table 4.42 indicates that results were significant at $t(512)=4.21$ where $p=.002$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Faculty members effectively deal with innovations and change directions.”

H_{01b(ii)} There are no statistical differences regarding Local Factors in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and second phase of Fullan's educational change model i.e. implementation and its sub-phase i.e. local factors.

Table 4.43

Change Implementation & Local Factors (Public and Private Sector Universities) (n₃=514)

Variable	Group	n	Mean	S.D	t	d.f	Sig (2-tailed)	Cohen's d	Result
Local Factors	Public	304	4.49	1.45	3.06	512	.000*	0.55	Sig. H ₀ Rejected
	Private	210	4.65	1.20					

* $p < 0.05$

** $p < 0.01$

Table 4.43 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's Implementation and its sub-phase i.e. local factors. The t-test measured the difference in change management among public and private sector institutions in relation to the second phase of Fullan's model of educational change i.e. Implementation and its sub-phase i.e. local factors. Results were significant at $t(512)=3.06$ where $p=.000$. Therefore, there exists a significant difference in change management between private (M=4.65, S.D=1.20) and public (M=4.49, S.D=1.45) institutions. Results showed that private sector (M=4.65) institutions hold greater capability for change management than public sector (M=4.49) perceived by the faculty. Cohen's d was found at 0.55, shows a Medium effect size. Hence, the Null hypothesis H_{01b(ii)} 'There are no statistical differences regarding Local Factors in Public and Private Sector Universities' is rejected.

Table 4.44

Adoption decisions for change are made with adequate follow-through considering subjective realities (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.68	1.52	5.64	512	.006*	0.54	<i>Significant</i>
Private	210	4.13	1.49					

**p*<0.05

***p*<0.01

Table 4.44 indicates that results were significant at $t(512)=5.64$ where $p=.006$.

Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that "Adoption decisions for change are made with adequate follow-through considering subjective realities."

Table 4.45

A track record of the change process is viewed before taking the next initiative (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.50	1.51	1.88	512	.077	0.15	<i>Insignificant</i>
Private	210	3.71	1.55					

**p*<0.05

***p*<0.01

Table 4.45 measured the difference between public and private sector. The results were insignificant at $t(512)=1.88$ where $p=.077$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from public sector merely agreed with the statement that "A track record of the change process is viewed before taking the next initiative."

Table 4.46

Heads effectively perform instructional or change leadership roles (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.68	0.31	1.91	512	.120	0.19	<i>Insignificant</i>
Private	210	3.55	0.46					

**p*<0.05

***p*<0.01

Table 4.46 measured the difference between public and private sector. The results were insignificant at $t(512)=1.91$ where $p=.120$. Therefore, there is no significant difference between private and public sector institutions. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that “Heads effectively perform instructional or change leadership roles.”

Table 4.47

Teachers always exchange ideas, support, and positive feelings about their work (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.89	1.03	1.84	512	.085	0.25	<i>Insignificant</i>
Private	210	3.94	0.56					

**p*<0.05

***p*<0.01

Table 4.47 measured the difference between public and private sector. The results were insignificant at $t(512)=1.84$ where $p=.085$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Teachers always exchange ideas, support, and positive feelings about their work.”

Table 4.48

Teachers and administrators plan, design, research, evaluate and prepare teaching materials together (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.18	0.69	4.47	512	.002*	0.67	<i>Significant</i>
Private	210	3.77	0.77					

* $p < 0.05$

** $p < 0.01$

Table 4.48 indicates that results were significant at $t(512)=4.47$ where $p=.002$. Hence, a significant difference between private and public HEIs was observed. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that “Teachers and administrators plan, design, research, evaluate and prepare teaching materials together.”

Table 4.49

The community seems cooperative and supports the change-related decisions of administrators (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.48	0.52	9.21	512	.004*	0.58	<i>Significant</i>
Private	210	3.55	0.51					

* $p < 0.05$

** $p < 0.01$

Table 4.49 indicates that results were significant at $t(512)=9.21$ where $p=.004$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors merely agreed with the statement that “The community seems cooperative and supports the change-related decisions of administrators.”

H_{01b(iii)} There are no statistical differences regarding External Factors in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and second phase of Fullan's educational change model i.e. implementation and its sub-phase i.e. external factors.

Table 4.50

Change Implementation & External Factors (Public and Private Sector Universities)
($n_3=514$)

Variable	Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
External Factors	Public	304	3.93	1.56	6.99	512	.000*	0.69	Sig. H ₀ Rejected
	Private	210	4.49	0.84					

* $p < 0.05$

** $p < 0.01$

Table 4.50 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's Implementation and its sub-phase i.e. external factors. The t-test measured the difference in change management among public and private sector institutions in relation to the second phase of Fullan's model of educational change i.e. Implementation and its sub-phase i.e. external factors. Results were significant at $t(512)=6.99$ where $p=.000$. Therefore, there exists a significant difference in change management between private (M=4.49, S.D=0.84) and public (M=3.93, S.D=1.56) institutions. Results showed that private sector (M=4.49) institutions hold greater capability for change management than public sector (M=3.93) perceived by the faculty. Cohen's *d* was found at 0.69, shows a Medium effect size. Hence, the Null hypothesis H_{01b(iii)} 'There are no statistical differences regarding External Factors in Public and Private Sector Universities' is rejected.

Table 4.51

National priorities for education are set according to government policies (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.02	0.68	1.40	512	.078	0.23	<i>Insignificant</i>
Private	210	4.12	0.35					

**p*<0.05

***p*<0.01

Table 4.51 measured the difference between public and private sector. The results were insignificant at $t(512)=1.40$ where $p=.078$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “National priorities for education are set according to government policies.”

Table 4.52

New policies and new program initiatives arise from public concern (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.89	1.47	9.45	512	.000*	0.65	<i>Significant</i>
Private	210	4.06	1.43					

**p*<0.05

***p*<0.01

Table 4.52 indicates that results were significant at $t(512)=9.45$ where $p=.000$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “New policies and new program initiatives arise from public concern.”

Table 4.53

Education system is excellently developing career-relevant skills and provides a highly interactive support infrastructure (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.20	1.71	7.45	512	.003*	0.78	<i>Significant</i>
Private	210	3.95	1.58					

**p*<0.05

***p*<0.01

Table 4.53 indicates that results were significant at $t(512)=7.45$ where $p=.003$. Hence, a significant difference between private and public HEIs was observed. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that "Education system is excellently developing career-relevant skills and provides a highly interactive support infrastructure."

Table 4.54

Government agencies are aware of problems and the process of change implementation (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.12	1.52	12.1	512	.000*	0.67	<i>Significant</i>
Private	210	3.76	1.21					

**p*<0.05

***p*<0.01

Table 4.54 indicates that results were significant at $t(512)=12.1$ where $p=.000$. Hence, a significant difference between private and public HEIs was observed. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that "Government agencies are aware of problems and the process of change implementation."

Table 4.55

HEC and university administrators provide high-quality teaching and training materials (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.66	1.31	1.74	512	.211	0.20	<i>Insignificant</i>
Private	210	4.13	1.41					

**p*<0.05

***p*<0.01

Table 4.55 measured the difference between public and private sector. The results were insignificant at $t(512)=1.74$ where $p=.211$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “HEC and university administrators provide high-quality teaching and training materials.”

Table 4.56

Policy makers prefer university practitioners to identify change-related gaps (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.87	0.68	1.69	512	.071	0.28	<i>Insignificant</i>
Private	210	3.50	0.77					

**p*<0.05

***p*<0.01

Table 4.56 measured the difference between public and private sector. The results were insignificant at $t(512)=1.69$ where $p=.071$. Therefore, there is no significant difference between private and public sector institutions. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that “Policy makers prefer university practitioners to identify change-related gaps.”

H_{01c} There are no statistical differences regarding Continuation processes used in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and third phase of Fullan's model of educational change i.e. continuation.

Table 4.57

Change Continuation (Public and Private Sector Universities) (n₃=514)

Variable	Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Continuation	Public	304	3.73	1.22	4.67	512	.000*	0.64	Sig. H ₀ Rejected
	Private	210	4.13	1.21					

* $p < 0.05$

** $p < 0.01$

Table 4.57 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's Continuation. The t-test measured the difference in change management among public and private sector institutions in relation to the third phase of Fullan's model of educational change i.e. Continuation. Results were significant at $t(512)=4.67$ where $p=.000$. Therefore, there exists a significant difference in change management between private (M=4.13, S.D=1.21) and public (M=3.73, S.D=1.22) institutions. Results showed that private sector (M=4.13) institutions hold greater capability for change management than public sector (M=3.73) perceived by the faculty. Cohen's *d* was found at 0.64, shows a Medium effect size. Hence, the Null hypothesis H_{01c} 'There are no statistical differences regarding Continuation processes used in Public and Private Sector Universities' is rejected.

H_{01c(i)} There are no statistical differences regarding Embedding New Structures in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and third phase of Fullan's educational change model i.e. continuation and its sub-phase i.e. embedding new structures.

Table 4.58

Change Continuation & Embedding New Structures (Public and Private Sector Universities) (n₃=514)

Variable	Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Embedding New Structures	Public	304	3.61	1.32	5.30	512	.001*	0.71	Sig. H ₀ Rejected
	Private	210	4.20	1.58					

* $p < 0.05$

** $p < 0.01$

Table 4.58 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's continuation and its sub-phase i.e. embedding new structures. The t-test measured the difference in change management among public and private sector institutions in relation to the third phase of Fullan's model of educational change i.e. continuation and its sub-phase i.e. embedding new structures. Results were significant at $t(512)=5.30$ where $p=.001$. Therefore, there exists a significant difference in change management between private (M=4.20, S.D=1.58) and public (M=3.61, S.D=1.32) institutions. Results showed that private sector (M=4.20) institutions hold greater capability for change management than public sector (M=3.61) perceived by the faculty. Cohen's *d* was found at 0.71, shows a Medium effect size. Hence, the Null hypothesis H_{01c(i)} 'There are no statistical differences regarding Embedding New Structures in Public and Private Sector Universities' is rejected.

Table 4.59

Administration provides moral support in the continuation of initiated reforms (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.59	1.04	4.10	512	.004*	0.61	<i>Significant</i>
Private	210	4.41	0.43					

* $p < 0.05$

** $p < 0.01$

Table 4.59 indicates that results were significant at $t(512)=4.10$ where $p=.004$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Administration provides moral support in the continuation of initiated reforms.”

Table 4.60

Effective implementation of innovative projects is the main focus of administrators (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	4.08	1.18	9.31	512	.001*	0.49	<i>Significant</i>
Private	210	4.34	0.88					

* $p < 0.05$

** $p < 0.01$

Table 4.60 indicates that results were significant at $t(512)=9.31$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Effective implementation of innovative projects is the main focus of administrators.”

Table 4.61

HEC and administrators invest great interest and funding to sustain the innovative projects (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.88	1.41	1.92	512	.067	0.28	<i>Insignificant</i>
Private	210	3.50	1.45					

**p*<0.05

***p*<0.01

Table 4.61 measured the difference between public and private sector. The results were insignificant at $t(512)=1.92$ where $p=.067$. Therefore, there is no significant difference between private and public sector institutions. Public sector institutions hold greater capability than private sector. However, overall, faculty from private sector merely agreed with the statement that “HEC and administrators invest great interest and funding to sustain the innovative projects.”

Table 4.62

Administrators provide professional development and staff support for both continuing and new teachers for newly implemented programs (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.95	1.51	1.89	512	.081	0.21	<i>Insignificant</i>
Private	210	3.79	1.53					

**p*<0.05

***p*<0.01

Table 4.62 measured the difference between public and private sector. The results were insignificant at $t(512)=1.89$ where $p=.081$. Therefore, there is no significant difference between private and public sector institutions. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that “Administrators provide professional development and staff support for both continuing and new teachers for newly implemented programs.”

Table 4.63

Heads are performing their role as key to both implementation and continuation of innovations (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.81	0.79	7.21	512	.000*	0.66	<i>Significant</i>
Private	210	4.37	0.94					

**p*<0.05

***p*<0.01

Table 4.63 indicates that results were significant at $t(512)=7.21$ where $p=.000$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Heads are performing their role as key to both implementation and continuation of innovations.”

Table 4.64

Coordinators provide explicit support for innovative project methods or materials (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.95	1.32	8.10	512	.001*	0.50	<i>Significant</i>
Private	210	4.51	0.85					

**p*<0.05

***p*<0.01

Table 4.64 indicates that results were significant at $t(512)=8.10$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Coordinators provide explicit support for innovative project methods or materials.”

H_{01c(ii)} There are no statistical differences regarding Employees' Commitment in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and third phase of Fullan's educational change model i.e. continuation and its sub-phase i.e. employees' commitment.

Table 4.65

Change Continuation & Employees' Commitment (Public and Private Sector Universities)
($n_3=514$)

Variable	Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Employees' Commitment	Public	304	3.82	1.21	9.33	512	.000*	0.75	Sig. H ₀ Rejected
	Private	210	4.05	1.68					

* $p < 0.05$

** $p < 0.01$

Table 4.65 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's continuation and its sub-phase i.e. employees' commitment. The t-test measured the difference in change management among public and private sector institutions in relation to the third phase of Fullan's model of educational change i.e. continuation and its sub-phase i.e. employees' commitment. Results were significant at $t(512)=9.33$ where $p=.000$. Therefore, there exists a significant difference in change management between private (M=4.05, S.D=1.68) and public (M=3.82, S.D=1.21) institutions. Results showed that private sector (M=4.05) institutions hold greater capability for change management than public sector (M=3.82) perceived by the faculty. Cohen's *d* was found at 0.75, shows a Medium effect size. Hence, the Null hypothesis H_{01c(ii)} 'There are no statistical differences regarding Employees' Commitment in Public and Private Sector Universities' is rejected.

Table 4.66

Administrators pay early attention to mobilizing broad-based support for the innovation (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.94	1.39	7.44	512	.002*	0.51	<i>Significant</i>
Private	210	4.08	1.09					

**p*<0.05

***p*<0.01

Table 4.66 indicates that results were significant at $t(512)=7.44$ where $p=.002$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Administrators pay early attention to mobilizing broad-based support for the innovation.”

Table 4.67

Administration always establishes procedures for continuing assistance (such as a trained cadre of assisters) (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.62	1.45	6.56	512	.001*	0.48	<i>Significant</i>
Private	210	4.45	0.84					

**p*<0.05

***p*<0.01

Table 4.67 indicates that results were significant at $t(512)=6.56$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Administration always establishes procedures for continuing assistance (such as a trained cadre of assisters).”

Table 4.68

Researchers are putting great effort into finding gaps to propose new initiatives (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.74	1.32	1.90	512	.064	0.20	<i>Insignificant</i>
Private	210	3.68	1.52					

**p*<0.05

***p*<0.01

Table 4.68 measured the difference between public and private sector. The results were insignificant at $t(512)=1.90$ where $p=.064$. Therefore, there is no significant difference between private and public sector institutions. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that “Researchers are putting great effort into finding gaps to propose new initiatives.”

Table 4.69

Administrators introduce alternates for initiatives those clashed or were misaligned with reform designs (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.66	1.73	1.77	512	.221	0.15	<i>Insignificant</i>
Private	210	3.84	1.16					

**p*<0.05

***p*<0.01

Table 4.69 measured the difference between public and private sector. The results were insignificant at $t(512)=1.77$ where $p=.221$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Administrators introduce alternates for initiatives those clashed or were misaligned with reform designs.”

Table 4.70

Heads effectively implement the chosen reform designs (pertaining to the quality of implementation and impact on student learning) (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.74	1.23	1.62	512	.081	0.27	<i>Insignificant</i>
Private	210	3.85	1.16					

**p*<0.05

***p*<0.01

Table 4.70 measured the difference between public and private sector. The results were insignificant at $t(512)=1.62$ where $p=.081$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that "Community partnerships are encouraged where necessary."

Table 4.71

Heads and teachers are skilled and committed to the change (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.52	0.87	9.44	512	.001*	0.51	<i>Significant</i>
Private	210	3.85	0.86					

**p*<0.05

***p*<0.01

Table 4.71 indicates that results were significant at $t(512)=9.44$ where $p=.001$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from public sector merely agreed with the statement that "Heads and teachers are skilled and committed to the change."

H_{01c(iii)} There are no statistical differences regarding Employees' Assistance in Public and Private Sector Universities.

The following table shows the difference in change management at higher education level, based on sector of institutions and third phase of Fullan's educational change model i.e. continuation and its sub-phase i.e. employees' assistance.

Table 4.72

Change Continuation & Employees' Assistance (Public and Private Sector Universities)
($n_3=514$)

Variable	Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Employees' Assistance	Public	304	3.77	0.85	12.81	512	.000	0.76	Sig. H ₀ Rejected
	Private	210	3.95	1.36					

* $p < 0.05$

** $p < 0.01$

Table 4.72 represents the results of t-test, which assess the difference in variances between public and private sector change management while focusing on Fullan's Continuation and its sub-phase, i.e., employees' assistance. The t-test measured the difference in change management among public and private sector institutions in relation to the third level of Fullan's model of educational change, i.e., Continuation and its sub-phase, i.e., employees' assistance. Results were significant at $t(512)=12.81$ where $p=.000$. Therefore, there exists a significant difference in change management between private (M=3.95, S.D=1.36) and public (M=3.77, S.D=0.85) institutions. Results showed that private sector (M=3.95) institutions hold greater capability for change management than public sector (M=3.77) perceived by the faculty. Cohen's *d* was found at 0.76, shows a Medium effect size. Hence, the Null hypothesis H_{01c(iii)} 'There are no statistical differences regarding Employees' Assistance in Public and Private Sector Universities' is rejected.

Table 4.73

Change factors effectively build into the structure (through policy, budget, timetable, etc.)
($n_3=514$)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.71	1.34	5.11	512	.000*	0.47	<i>Significant</i>
Private	210	3.94	1.24					

* $p<0.05$

** $p<0.01$

Table 4.73 indicates that results were significant at $t(512)=5.11$ where $p=.000$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that "Change factors effectively build into the structure (through policy, budget, timetable, etc.)."

Table 4.74

Administrators are effectively guiding and coping with implementation at a level consistent with the designers of change models ($n_3=514$)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.49	1.42	3.98	512	.001*	0.51	<i>Significant</i>
Private	210	3.51	1.51					

* $p<0.05$

** $p<0.01$

Table 4.74 indicates that results were significant at $t(512)=3.98$ where $p=.000$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors merely agreed with the statement that "Administrators are effectively guiding and coping with implementation at a level consistent with the designers of change models."

Table 4.75

Administrators organize seminars and workshops for the professional development of the teachers regarding new reforms (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.65	1.53	6.78	512	.002*	0.71	<i>Significant</i>
Private	210	3.90	1.47					

* $p < 0.05$

** $p < 0.01$

Table 4.75 indicates that results were significant at $t(512)=6.78$ where $p=.002$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Administrators organize seminars and workshops for the professional development of the teachers regarding new reforms.”

Table 4.76

Heads and coordinators provide desired leadership for faculty, focusing on instruction and learning (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.80	1.43	1.73	512	.218	0.27	<i>Insignificant</i>
Private	210	3.68	1.21					

* $p < 0.05$

** $p < 0.01$

Table 4.76 measured the difference between public and private sector. The results were insignificant at $t(512)=1.73$, where $p=.218$. Therefore, there is no significant difference between private and public sector institutions. Public sector institutions hold greater capability than private sector. However, overall, faculty from both sectors agreed with the statement that “Heads and coordinators provide desired leadership for faculty, focusing on instruction and learning.”

Table 4.77

Teachers frequently receive assistance and support for any new program or reform/initiative (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.65	1.14	1.51	512	.075	0.18	<i>Insignificant</i>
Private	210	3.78	1.24					

**p*<0.05

***p*<0.01

Table 4.77 measured the difference between public and private sector. The results were insignificant at $t(512)=1.51$, where $p=.075$. Therefore, there is no significant difference between private and public sector institutions. Private sector institutions hold greater capability than public sector. However, overall, faculty from both sectors agreed with the statement that “Teachers frequently receive assistance and support for any new program or reform/initiative.”

Table 4.78

To deal with staff turnover, administrators have already planned the orientation and in-service support for new faculty members who joined after the program started (n₃=514)

Group	n	Mean	S.D	<i>t</i>	<i>d.f</i>	Sig (2-tailed)	Cohen's <i>d</i>	Result
Public	304	3.50	1.14	6.46	512	.004*	0.65	<i>Significant</i>
Private	210	3.73	1.56					

**p*<0.05

***p*<0.01

Table 4.78 indicates that results were significant at $t(512)=6.46$, where $p=.004$. Hence, a significant difference between private and public HEIs was observed. Private sector institutions hold greater capability than public sector. However, overall, faculty from public sector merely agreed with the statement that “To deal with staff turnover, administrators have already planned the orientation and in-service support for new faculty members who joined after the program started.”

4.4 Thematic Analysis

Objective: To explore the views of heads regarding change management in Public and Private HEIs.

4.4.1 Initiation of Reforms

Interview Question 1- How would you describe the initiation of any of the reform/s related to your institution? (*New practices/new resources etc.*)

4.4.1.1 Themes Emerged

Following themes have emerged from coding:

Increased Learning Outcome

First theme that attained through thematic analysis was the increased learning outcomes. Interviewees mentioned that change management initiatives might cultivate a healthy climate and increase student learning outcomes. This theme is also linked with Beer's (2003) theory of Organizational Capability Approach, also known as "Theory O." Change initiatives such as new study programs were associated with increased learning outcomes in the institution.

One of the heads from Public Sector University mentioned that

I believe we (heads) are all pleased that this year's efforts have led to the development of a new course in which students participated. It is invigorating to observe the initiation of the tangible consequences of our effort....

One of the department heads from Private Sector University revealed that

There is a threshold for the number of change initiatives can endure and be comfortable with, and I would say that in the 12 months since I've been here, we've undergone the most significant shifts. As soon as the COVID epidemic began, online education gained precedence....

Positive Impact

Respondents informed that leaders at higher education institutions initiate innovative strategies concerning the positive impact of change on the process of learning. Changes in instructional processes help students with learning and retention.

In the public sector university, one of the department heads mentioned that

We wanted to make it clear that all ideas were on the table during our brainstorming meetings, but when it came time to initiate changes, we would need to carefully consider what could be accomplished within the present system of teaching and learning....

One Head of Private Sector indicated that

We're a little confused about how to define goals for our organization since we want it to be independent, strategic, and responsive. This is why we like having our own objectives established by them related to process of learning. We hope that the administration will reevaluate the way things are done at the institution....

Aesthetics and Morale

Respondents also mentioned that the environment and aesthetics of the new building on the campus help increase the morale of student and faculty members. This morale is also associated with the facilities such as new technology and smart boards. Heads noted that technological upgrades in the building brought faculty members together, and they liked the upgrade.

Another public sector Head stated that

Taking the effort to explain the long-term benefits of the changes we're making is well worth it. Acceptance rates, research facilities, a brand-new building structure, and the layout of the campus all fall under this category. The university administration could see that this group did not put forth a significant effort....

Whereas a head from private sector mentioned that

The institution's strategic plan for 2021-25 includes a focus on reforms and long-term viability. In other words, it appears like a new campus will be built. The approach mandates a comprehensive assessment of curricula to ensure that are included in all educational programs. Technological upgrades in the building brought faculty members together.....

Peer-to-peer Learning

During an interview, respondents indicated that the initiatives such as collaborative research and technological initiatives enhanced the opportunities for peer-to-peer learning among faculty members. They also mentioned that reform initiatives enhance teamwork, valuable feedback and gaining new perspectives.

One of the department heads from Public Sector University claimed that

I think it will need to advocate for some of the same clear steps put in place to support new ideas such as collaborative research and I feel that we as an HEI need to embrace further action research involving our students to create positive, and I would argue, much-needed changes to how we are approaching teaching and learning....

Another department head from Private Sector University asserted that

You have to get things moving before they go wrong, and there was much planning that went into this. We spent two years on this because I refused to expedite the process. This was already in place when I took over the position. Reform initiatives enhance teamwork, valuable feedback and gaining new perspectives

Support from HEC

Additional key theme that acquired from the interviews was support from HEC. Fullan (2016) informed that administrators' mission is to improve the capability of the

organization to accommodate change. The administrative influence of HEC is being utilized as a resource in reforms of various natures such as initiating a new program that requires approval from HEC.

In a public sector university, one department head reported that

It depends on the priority level of the present chairman [of HEC] as to whether or not our institution and HEC would create a mechanism behind executing the constructive initiatives. Our organization serves as a kind of "innovation center." It is a business and social science campus affiliated with a larger institution. Both academic resources and business entities are linked. They are investigating cutting-edge hardware...

In a private sector university, one department head revealed that

The transition to online advising on campus has been a tremendous change for students and faculty, as depicted by these maps. Many people are relearning their roles in a digital context and learning to do formerly in-person tasks online. The spread of COVID-19 has compounded existing inequalities.

Change is Inevitable

Almost all interviewees depicted reasonable concern over change initiatives, thus causing the analysis to indicate it as a theme. Most of the respondents were in favor of the change in general. Respondents believed that change is inevitable and they felt it is essential. Respondents also mentioned that change in higher education is seen as coming through the top-down process rather than from change agents within the university.

In the public sector, a department head informed that

Better chances for student retention and development have resulted from the recent administrative initiatives. Whether for the students themselves or teachers, the new building has everything they could require. Test scores have gone up and students are receiving more

tailored lessons thanks to the shift to teaching that is data-driven. It is also obvious that change in HEIs is inevitable...

One of the heads pointed out that

The change is unescapable in 21st century. The reason we held this "21st Century Faculty Institute" was to establish a faculty resource center; now, there isn't one and we intend to change that. Our goal is to provide faculty a place to meet and communicate in ways they never have before...

Relevance of Change

The need and feasibility and usefulness of the change initiatives are significant factors in higher education. The respondents mentioned that leaders must understand and clarify the proposed reform and how it will contribute to student learning.

Head from Public Sector University informed that

So far, I like the changes that have been made. Before my current position, professional trainings were utilized, so I am familiar with the method and can see its value. This is my first encounter with the newly initiated programs, as I attended an educational institution that followed the conventional teaching methodologies.... Having breaks spread out across the academic year is a good perk...

Another Private Sector head disclosed that

Working with students and instructors has been the most enjoyable aspect. Using procedures has provided me with the confidence to facilitate group cooperation and ensure that all kids are heard. Students' involvement becomes a "token" student voice, but in this instance, I felt good about our new teaching method and students' participation...

Change Readiness

This factor of change initiatives relates to the institutional capacity to implement

change considering the capabilities and needs of stakeholders compared to those of the institution. Weiner (2009) mentioned that change readiness involves two key factors stakeholders' assurance to reforms and change efficacy, i.e., belief in the collective competency to make the change.

One of the heads from Public Sector University mentioned that

..... By doing so, we were not rejecting anyone's ideas, but we did need to curb our ambition. Some may argue that this is excessively restrictive, but it does raise knowledge of how huge systems, such as an institution, operate.

One of the department heads from Private Sector University revealed that

When I consider how our institution may be better, I first consider my own experiences and am honest with myself about the extent to which they were the result of the institution's actions and my own choices. This made me consider how I learn and how I prefer to learn...

Resources

In addition to the change readiness, respondents also reported that for effective initiation of any reform, leaders must identify the accessibility and provision of resources during the initiation of reform. They may also ensure the support essential to proceed and sustain the change-related efforts.

In the Public sector University, one of the department heads mentioned that

As the COVID epidemic began, we realized we were falling behind due to our lack of online programs and LMS. We offered certain courses but no online programs, although many other institutions were expanding. I believe that we foresaw where online education was heading and that we needed to move in that direction

One Head of Private Sector indicated that

The coordinators of post-graduate programs and services reported feeling unprepared to satisfy the demands of their students and in need of professional development. Because of the difficulty of the problems we solve, we often need to ask for help from our coworkers and friends; this is facilitated by having established personal connections. "Communication is getting harder due to Covid-19."

Collaboration

Collaboration among stakeholders is an essential factor. Respondents believed that leaders might invite teachers to the meetings during the initiation process. Teachers can participate as a volunteer and provide valuable suggestions for reform, such as new study programs, etc.

Another public sector Head stated that

We are getting ready to start environmental sciences. Students are perhaps the most enthusiastic set of stakeholders, as seen by the current environmental concerns of young people. Within the next two years, this group will begin enrolling in higher education, and suddenly, senior leadership will be attentive to the markets in which they operate.

Whereas a head from private sector mentioned that

Working with students and instructors has been the most enjoyable aspect. Using procedures has provided me with the confidence to facilitate group cooperation and ensure that all kids are heard. I was apprehensive about the impact of this on any new work since we frequently attempt to incorporate students

Shared Decision Making and Leadership

Respondents felt that strategies such as shared decision-making and leadership were applied to initiating relevant reforms. Shared decision-making reduces the power struggle in the process. This way the volunteers in the process feel a part and effectively involve

themselves in meaningful brainstorming.

One of the department heads from Public Sector University claimed that

Regarding education, we are currently thinking through our potential recommendations for incorporating personal development into course content for students and professional development opportunities for faculty. Our (change/reform) working groups are interdisciplinary, which we believe will help mitigate change resistance...

Another department head from Private Sector University asserted that

The institution's strategic plan for 2021-25 includes a focus on reforms and long-term viability. In other words, it appears like a new campus will be built. The approach mandates a comprehensive assessment of curricula to ensure that are included in all educational programs.

Problem Solving Process

Respondents informed that reforms such as research initiatives and administrative processes also applied problem-solving strategies. This process addressed valid problems and encouraged applying group efforts to minimize them. Respondents mentioned that leaders could look at all sides of problems during reform planning.

In a public sector university, one department head reported that

I think it will need to advocate for some of the same clear steps put in place to support new ideas and I feel that we as an institution need to embrace further action research involving our students to create positive, and I would argue, much-needed changes to how we are approaching teaching and learning...

In a private sector university, one department head revealed that

The coordinators of post-graduate programs and services reported feeling unprepared to satisfy the demands of their students and in need of professional development.

Because of the difficulty of the problems we solve, we often need to ask for help from our coworkers and friends; this is facilitated by having established personal connections. "Communication is getting harder due to Covid-19."...

Involvement of Stakeholders

Gathering inputs and opinions from stakeholders is necessary to plan and initiate any educational reform effectively. Respondents noted that leaders in the innovation process often give a chance to volunteers to be leaders or a position on a committee where they can freely work in their area of expertise. Stakeholders in the reform process are usually the leaders, administrative staff, parents and teachers.

In the public sector, a department head informed that

I hope that the enthusiasm and self-assurance I've gained this year will carry over into next year when I aim to be more proactive in supporting the change I believe is necessary within the institution...

One of the heads pointed out that

The teachers contributed greatly, particularly during meetings. The coordinator has welcomed our suggestions for more materials. Also, "the coordinator would ask for instructors to write things down and discuss them," as one educator put it. She elaborated, saying, "He would show us the designs for the new facility and we would give him our feedback on furnishings and equipment."...

Funding

Additional theme that achieved from the heads' views was the funding for equipment. The technological changes during the pandemic required reasonable finances for the IT directorate to accommodate the necessary change. To adapt to virtual learning, there was a need for hardware and software for LMS and lecture recording rooms for faculty

members. Funding relates to the implementation process, but the situational analysis is necessary for the initiation phase of change.

Head from Public Sector University informed that

Taking the effort to explain the long-term benefits of the changes we're making is well worth it. Acceptance rates, research facilities, a brand-new structure, and the layout of the campus all fall under this category. The university administration could see that this group did not put forth a significant effort...

Another private sector head disclosed that

The coordinators of post-graduate programs and services reported feeling unprepared to satisfy the demands of their students and in need of professional development. Because of the difficulty of the problems we solve, we often need to ask for help from our coworkers and friends; this is facilitated by having established personal connections. "Communication is getting harder due to Covid-19."...

Communication

Respondents noted that in their institutions, various communication approaches and practices were commenced by stakeholders during the initiation of reforms such as admission standards and instructional processes for the new program and curriculum reforms for existing study programs. Fullan (2016) also considered communication as a necessary component to enhance the possibility of practical implementation.

One of the heads from Public Sector University mentioned that

We wanted to make it clear that all ideas were on the table during our brainstorming meetings, but when it came time to initiate changes, we would need to carefully consider what could be accomplished within the present system of teaching and learning....

One of the department heads from Private Sector University revealed that

The coordinators of post-graduate programs and services reported feeling unprepared to satisfy the demands of their students and in need of professional development. Because of the difficulty of the problems we solve, we often need to ask for help from our coworkers and friends; this is facilitated by having established personal connections. "Communication is getting harder due to Covid-19."...

Preparedness and Self-efficacy

Respondents informed that the preparedness and self-efficacy of leaders do play a significant role in leading the initiatives of educational reforms. Leaders must believe reasonably in their capacity to lead the reform initiatives.

In the Public sector University, one of the department heads mentioned that

As said at the beginning, the first evident quality was that initiation of reforms were desired and appealing. I developed a new attitude and new concepts, stretched the education outside the educational settings, and focused on co-curricular events, etc. Further, on the level of interpersonal contacts, it enabled me to build a really great professional linkage...these prospects can lead to more teamwork or partnership chances...

One Head of Private Sector indicated that

There is a threshold/benchmark for the number of change individuals can endure and be comfortable with, and I would say that in the 12 months since I've been here, we've undergone the most significant shift. As soon as the epidemic began, online education gained precedence...

External Factors

Another theme that was attained from interview transcripts was the effect of external factors during the process of change initiatives. These factors included national education policies, professional development of teachers, faculty recruitment processes, and HEC

standards for any reform such as new undergraduate and Ph.D. policy etc.

Another public sector Head stated that

As said at the beginning, the first evident quality was that initiation of reforms were desired and appealing. I developed a new attitude and new concepts, stretched the education outside the educational settings, and focused on co-curricular events, etc. Further, on the level of interpersonal contacts, it enabled me to build a really great professional linkage...these prospects can lead to more teamwork or partnership chances...

Whereas a head from private sector mentioned that

There is a lack of coordination in the system at the moment, and administrative directives are at odds with equitable approaches to student support which involve HEC's new undergraduate and Ph.D. policy. This might be an unintended consequence of institutional size. The transition to online advising on campus has been a tremendous change for students and faculty, as depicted by these maps...

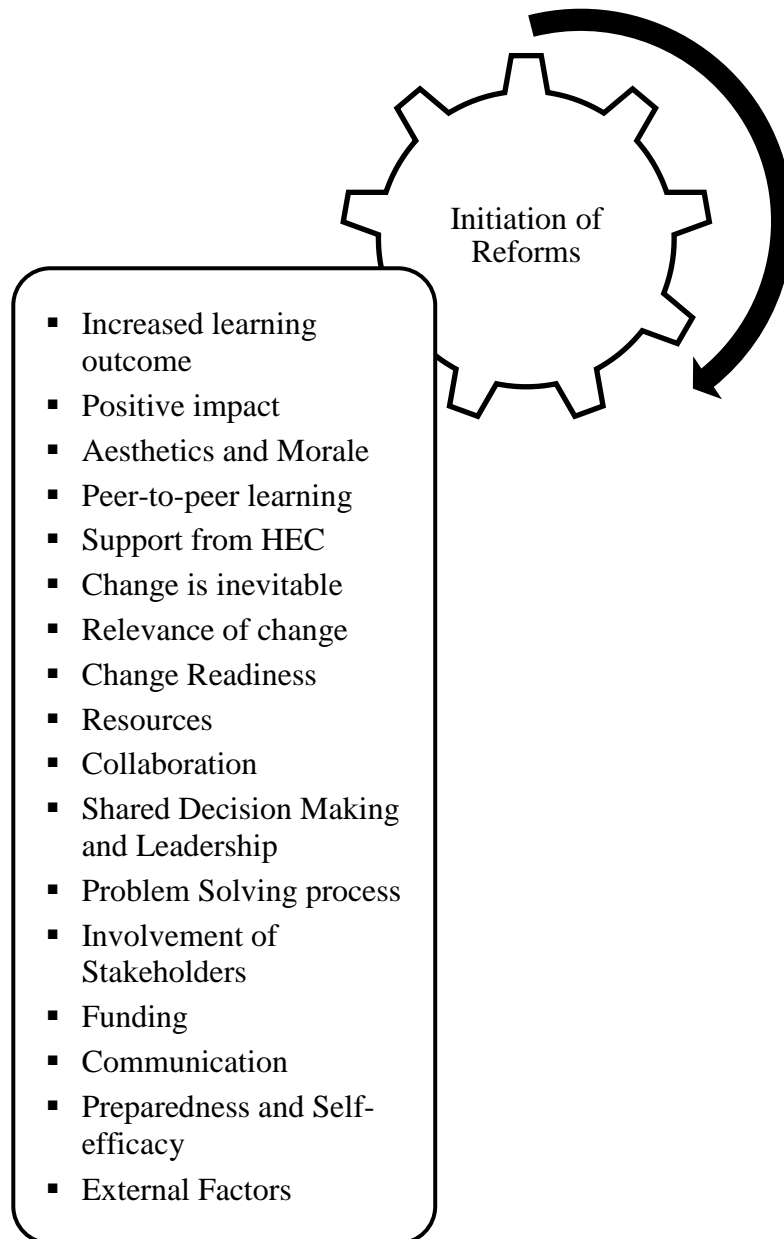


Figure 23: Themes for Initiation of Reforms

4.4.2 Clear Vision for Reforms

Interview Question 2- How was a vision established and articulated when communicating these change initiatives? (*Mutual adaptation, contributing roles, development of new practices/ programs/ building etc.*)

4.4.2.1 Themes emerged

Following themes have emerged from coding:

Collective and Shared Vision

First theme that acquired after thematic analysis is the collective and shared vision of the stakeholders. Participants considered shared vision as an essential factor of reform initiatives and an essential factor in fostering learning. Collective and shared vision tends to create a climate of common ambition, which ultimately leads to team learning and strategy.

One of the heads from Public Sector University mentioned that

I believe the vision for changes will differ if they are implemented locally, as you will only learn from instructors in your immediate vicinity who have essentially the same experience as you.... however when we're concern about institutional development, we're concern about diverse approaches, mentalities of faculty, individuals, and learners, so we have a wider perspective on the reforms and growth. Then on... We will have a broader understanding of reform initiatives.

One of the department heads from Private Sector University revealed that

We enlist the believers, who become the standard bearers of the new routines, habits, and behaviors, and who then spread the word to the rest of their offices, coworkers, and peers...

Change as Evolution

Second important theme that achieved from the analysis changed as evolution. Respondents perceived change as a system of evolution for the university. They considered

that some initiatives are part of the evolutionary system. It was mentioned that change is how an institution evolves.

In a public sector university, one department head reported that

In recent online learning environment. I am interested the way faculty welcomed all the prospects and actually managed the technological drift, I acknowledge the involvement of faculty, not just simply focusing on teaching, allowing everyone to communicate and assert ideas openly, to recognize what they need, I know the importance of feedback and to motivate teachers and learners to openly assert ideas....

In a private sector university, one department head revealed that

After taking on this role, I am able to see and understand all aspects of the teaching environment. So, I could keep tabs on everything from the I.T. department to my own department...

Leaders' beliefs and actions

Another theme that attained from the analysis was a harmony of leaders' beliefs and actions. Leaders may well be intentioned in the reform process. They must demonstrate certain beliefs and values to achieve the particular reforms. These factors are essential because of the constant change in higher education processes.

In the public sector, a department head informed that

Consequently, this is the primary benefit I derived from the latest adjustments. Aiding individuals in critical thinking. Back in days, as an instructor, it was not one of my primary responsibilities, therefore I was not previously aware of the significance of critical thinking. Now, despite being a head, I think critically, and that is important in establishing vision for reforms...

One of the heads pointed out that

I do not believe our leadership will ever explore a market opportunity that conflicts

with our vision and purpose. When department heads make programmatic choices on whether to offer this or that, we shall follow it unless it is plainly incompatible with institutional and cultural norms...

Assumption of Operations

Another theme that arose from the analysis of interview transcripts was the assumption of operations. This theme is related to the feelings that official and operational initiatives have already been taken. The stage of communicating the vision is followed by the paperwork and team building for change initiatives. Hence, at this stage respondents were of the view that work had already been started behind the scenes.

Head from Public Sector University informed that

However, we started working together year ago, at the end of last year. For instance, I now collaborate with colleague who is a faculty member of software engineering, account computing, and IR. That's the way things are going, and since we're also involved in teaching at the graduate level (both master's and doctoral), it's impossible to focus on a single area of study for our research...

Another private sector head disclosed that

Some individuals embrace change, anticipate change, welcome change, and dislike the status quo. So they say, change is good, and I'm so happy that we have a venture capitalist who has altered things up. Change is challenging for individuals who prefer the status quo, want to be in charge, and do not want anything to interfere with their care, nutrition, or the world...

Change Magnitude

Establishing the vision for certain initiatives at higher education level requires leaders to scale the magnitude of that particular initiative. Respondents mentioned that magnitude of the change could have a noteworthy effect on the reform approach.

Stakeholders must be aware of the magnitude of change, whether it is a significant change e.g., curriculum reforms, administrative processes or a slight change e.g., change related to the instructional process.

One of the heads from Public Sector University mentioned that

I believe I comprehend the process of attempting to generate change, and it appears that it may be beneficial in any corporation. The phases were communicated to everyone involved, and we ensured everyone was aware of the next step as the process progressed...

One of the department heads from Private Sector University revealed that

Change occurs very slowly, and the academic process also shifts gears slowly. I believe that we are receptive to change if the person leading the charge or pushing for the change is prepared to present a justification and display a careful analysis of the potential short or long term, and unintended repercussions of the change, as well as its potential advantages. I believe we respond better to change when it is inspired and driven from inside...

Managing Uncertainty

This theme is linked with the vision of reform stability and external factors such as government policies. Administrators and faculty familiarize to reform initiatives by emerging approaches that assist them survive in composite organizational climates. On the other hand, change resistance occurs when change places an additional burden on the professional practices of stakeholders.

In the public sector university, one of the department heads mentioned that

As a matter of fact, not only is there enough interest among students at this university to pull it off, but everyone is quite enthusiastic about doing so right now. For the second round of curriculum development, for instance, we've brought in a specialist in management studies. They want to educate students in several social science disciplines. Additionally, I

will be present as we will be conducting the co-teaching activities jointly.

One Head of Private Sector indicated that

We live in a dynamic, ever-changing world, and I believe that change will never cease. This is simply life. People retire, teachers move on, and people's assignments change for whatever reason. I believe it depends on each individual's circumstances and their willingness to accept change

Building Networks

Participants indicated the concept of building networks. The concept enables faculty to understand the process of change initiatives. This deals with improved knowledge production after the collaboration of faculty at the national and international levels. This sort of collaboration network enables faculty members to build research, access scholarships, and to formulate policies and procedures.

Another public sector Head stated that

However, we started working together year ago, at the end of last year. For instance, I now collaborate with colleague who is a faculty member of software engineering, account computing, and IR. That's the way things are going, and since we're also involved in teaching at the graduate level (both master's and doctoral), it's impossible to focus on a single area of study for our research...

Whereas a head from private sector mentioned that

As a sustainability adviser, I think one of my goals is to help others achieve their personal leadership and advocacy goals. I have at least a few folks from each department that are in constant communication with me and who are like, "Yeah, and we're doing this. Connecting with others who share similar goals is possible

Embodying Transition

This particular theme deals with the sense-making of change initiatives and

stakeholders' role in amplifying higher education. This characteristic enables administrators and faculty to recognize their role in the reform process. This also develops a sustainable climate for capacity building for individuals and universities.

One of the department heads from Public Sector University claimed that

No one has ever asked me to provide the details of my research procedures, therefore I never have. Therefore, it is in our best interest to assist as an exemplary for the whole institution. We are proposing to form the department's first ethics committee because currently, we do not have one. Therefore, we will do our own study and keep track of how we did it.

Another department head from Public Sector University asserted that

The current VC of the university outlined a clear process for change, which he described as follows: One, identifying the root causes of the challenges and the anticipated and unanticipated change magnitudes; and Two, engaging the campus in creative problem solving and being as transparent as possible. I'm informing them that our existing approach is unsustainable and that we need to change, and I'm calmly asking their views...

Confounding Autonomy

Respondents mentioned that during the reform process, it is essential to communicate the academic freedom of research publications. The reform process may allow faculty to perceive research requirements. This also enhances the teachers' ability to research the phenomenon without restrictions.

In a public sector university, one department head reported that

However, we started working together year ago, at the end of last year. For instance, I now collaborate with [colleague] who is a faculty member of software engineering, account computing, and IR. That's the way things are going, and since we're also involved in teaching at the graduate level (both master's and doctoral), it's impossible to focus on a

single area of study for our research...

In a private sector university, one department head revealed that

Since the appointment of the new vice chancellor, I have observed an effort to capitalize on the potential the university has. He has endeavored to embrace it in a more meaningful and deliberate manner. The dissemination of research and extension of R&D activities are initiated recently.

Motivate and Inspire Progress

Another theme related to communicating change initiatives was inspiring and motivating. To keep things moving and stakeholders informed, it is necessary to communicate the vision of the new initiative effectively. The process motivates the administrators and faculty and ultimately inspires progress.

In the public sector, a department head informed that

Vision is essential. To be effective, it must reflect reality. It needs to be ambitious yet grounded in reality. And it should tie up with the VC's overall goals for the institution. I've been at this university for 25 years, and I feel like we've frequently missed that sense of community. During my time here, this is the first time I can say that everyone is on the same page about the university's long-term goals and objectives....

One of the heads pointed out that

This location of new campus has always cherished and encouraged community, if not always effectively, throughout particular phases of development. However, the purpose was always present. I believe that, altogether, we've emerged stronger. We retain a strong sense of motivation in the community.

Urgency of Initiatives

Respondents mentioned that effective communication of the reform vision contributes to the significance and expected rate of change. The practice contributes to

revealing the urgency of work in specific areas for instance, raising the admission standards or transitioning from a traditional instructional model to a modern and research-based approach.

Head from Public Sector University informed that

Taking responsibility is essential to effective collaboration but can be difficult. Especially so in the public sector, in my opinion. The other night I was thinking about this same thing. I noticed a trend in the methods used by several start-ups to motivate their staff. Obviously, there are many things that might be accomplished with a share in the company that we are unable to

Another private sector head disclosed that

We live in a dynamic, ever-changing world, and I believe that change will never cease. This is simply life. People retire, teachers move on, and people's assignments change for whatever reason. I believe it depends on each individual's circumstances and their willingness to accept change

Self-sustaining Change

Communicating vision help individuals to observe and differentiate between self-sustaining changes and changes that require attention and a strategic approach. It is about how much reform has been self-sustaining.

One of the heads from Public Sector University mentioned that

Educating the public on sustainability's meaning and purpose, as well as soliciting feedback on what should be included in a plan of action, requires going out into the world and raising people's awareness

One of the department heads from Private Sector University revealed that

Some individuals embrace change, anticipate change, welcome change, and dislike the status quo. So they say, change is good, and I'm so happy that we have a venture

capitalist who has altered things up. Change is challenging for individuals who prefer the status quo, want to be in charge

Reforms and Social Justice

Respondents indicated that the vision might describe the need and effort required for certain transformations. Administrators may play an advisory role to ensure the questions to reform initiatives are addressed.

In the public sector university, one of the department heads mentioned that

As a sustainability adviser, I think one of my goals is to help others achieve their personal leadership and advocacy goals. I have at least a few folks from each department that are in constant communication with me and who are like, "Yeah, and we're doing this. Connecting with others who share similar goals is possible..."

One Head of Private Sector indicated that

If you accept a culture of change, you must also embrace a culture of program review and strategic plan review, as well as the institutionalization of these practices. It is frightening because you need to maintain your big numbers high and you need to really concentrate on doing your best since change is not permanent and everyone now understands this...

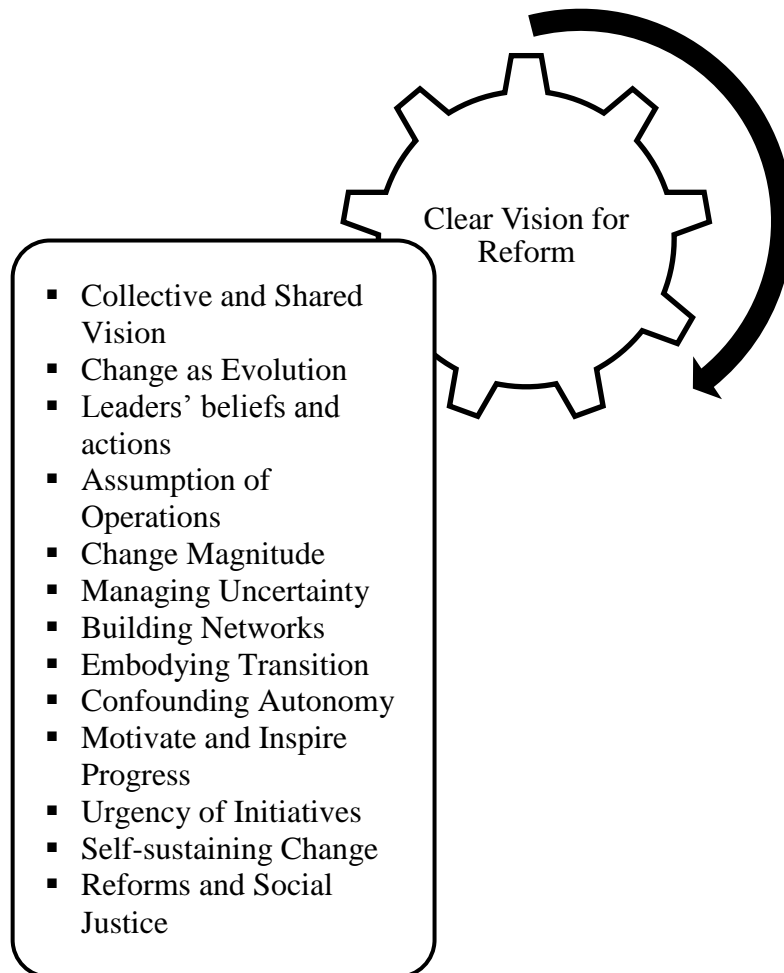


Figure 24: Themes for Clear Vision for Reforms

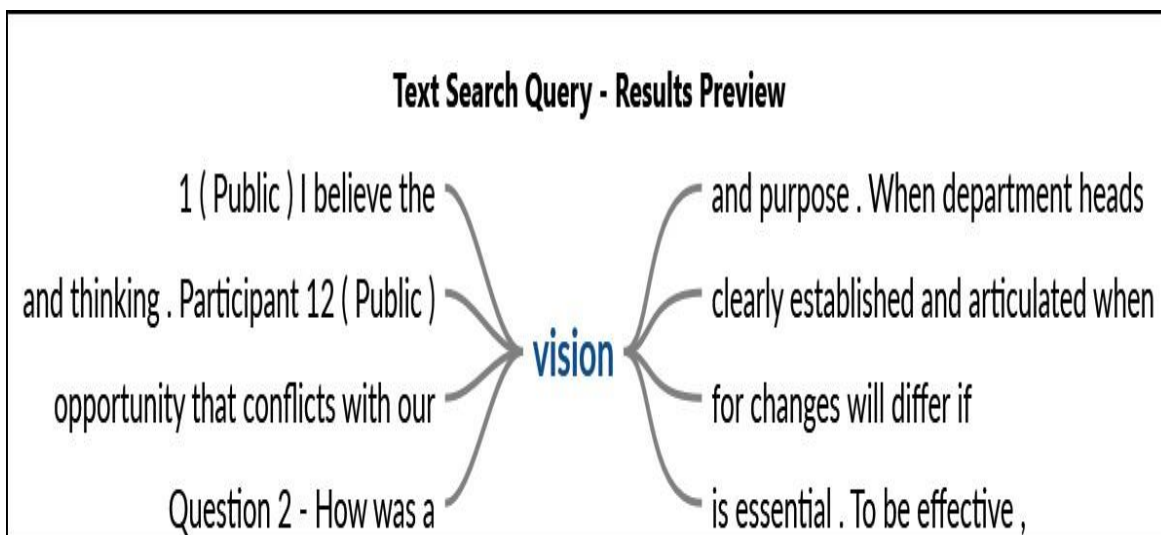


Figure 24a: Word Cloud and Text Search Query for Question 2

4.4.3 Support/Challenges/Barriers to Change Initiatives

Interview Question 3- What support/challenges/barriers were voiced when the recent change initiatives were implemented? (*Beliefs, Behavioural Action, Curriculum Change, etc.*)

4.4.3.1 Themes emerged

Following themes have emerged from coding:

Scale of change

A significant theme attained from views is the scale of change. The change management in HEIs has different aspects. The context, scale, and depth of reforms in higher education increase the complexity of the reform implementation. Two subthemes that emerged from the participants' views were communication and coordination.

- a. *Communication:* Communication is a critical factor for effectively implementing change. It helps to report facts to decision-makers and engage members involved in the reform process. However, respondents felt less equipped or under-facilitated to communicate appropriately, a factor that they felt was destabilizing their practices. Effective communication involves the aspects such as *raising awareness, campus engagement and perceived institutional inertia*.
- b. *Coordination:* A systematic educational reform requires the involvement of significant stakeholders of HEIs. Respondents mentioned that coordination of several change activities is a major challenge and affects the reform implementations. Effective coordination involves the aspects such as *support, capacity building, trust and managing expectations, multidisciplinary approach, networking and knowledge exchange*.

One of the heads from Public Sector University mentioned that

....when you do something differently, you step outside of your comfort zone. Therefore, I believe that doing anything gradually would be effective. As, the implementation process is often complicated, and we cannot expect true reforms after just communicating few things and applying few approaches. It requires much time and collective effort...

One of the department heads from Private Sector University revealed that

I don't hide anything from colleagues, and communicate the reform efforts. I do involve all members. During the reform implementation members felt free and creative. I perceived somewhat less fearful, which had a beneficial impact on the entire experience...

Power Obstacles

Another theme from the data was the Power Obstacles to effective change implementation. Instances of power obstacles emerged in relation to both change resistance and leadership.

- c. *Resistance to Change:* Respondents mentioned that academics might resist educational reforms for sustainability. Sometimes, particular reforms may be considered a threat to academic freedom when started using a top-down manner, meaning that teachers are compelled to implement changes by others such as legislators, administrators, and researchers. Change resistance can be linked with the aspects such as *culture, academic freedom, knowledge gatekeeper, sustainability literacy, and faculty / administrator engagement.*
- d. *Leadership:* Power can influence the change implementation process in many ways. Institutional leadership was indicated as the barrier to change implementation. In many HEIs, the senior management may be intensely

involved in the process to facilitate and legitimize the change-related efforts. Self-interests of top management can place a more significant impact on the change process. Following are the instances where power dimensions of institutional leadership can play their role in *planning, strategy and support of senior management*.

Head from Public Sector University informed that

The reality is that policymakers alter matters frequently and persistently so that by the time you figure out what to do, the rules have changed again. That's a continuity issue, which makes accurate future prediction impossible. Some of us keep mulling over [community outreach] projects without fully appreciating the financial commitment required, which leads to delays and additional stress...

Another private sector head disclosed that

There needs to be someone motivated and willing to take responsibility of the coordination of all those days, and while I am that person, I can only devote the time necessary when I have some free time...

Pedagogy and Examination

Another important theme attained from the heads' views was pedagogy and examination. Respondents reflected on the issues relating to curriculum reforms in the semester system. In most cases, the pedagogy is still linked with cramming. The exam papers are still textbook based. Teachers face the challenges of activity-based teaching and conceptual understanding of the learners.

In the public sector university, one of the department heads mentioned that

The focus of [change-related] initiatives is on individual faculty members, rather than on administrative leaders. Therefore, I believe that much more might be accomplished

if they were provided with the means and encouraged to mainstream excellent pedagogy and assessment practices within their own institutions and also within their own curricula and to share ideas...

One Head of Private Sector indicated that

The technique of utilizing action research and collaborating with students has afforded me a chance with a clear vision for effecting change since I've been involved as a leader in what feels like effort after initiative that is not well planned. Each of us has devised concrete tasks and methods to participate...

Institutional Strategies

Furthermore, the theme that acquired was institutional strategies. In the review of literature, it was also found that institutional strategies can provide significant approaches to implement the change. Respondents mentioned that implementing change is slightly different from formulating procedures and policies. Leaders are responsible for evolving institutional strategies to respond to structural, cultural, organizational as well as personal change.

Another public sector Head stated that

The threat of losing financing is a major motivation for the implementations of reform in HEIs. Since I am aware that this has a direct impact on financing, it has been given top priority and is being pushed to the forefront by someone high up in the management chain.

Whereas a head from private sector mentioned that

Increasing students' access to information and technical know-how is not enough to make campuses more welcoming to all students. Creating a more just environment for

students to achieve their goals requires administrators to examine their own biases and the rules and procedures they've implemented

Enabling and Disabling the System

A significant theme that emerged from respondents' views was enabling and disabling the System. Change prioritizing process indicates the urgency or priority of certain reforms. Change agents must ensure the realization of changes in a timely and efficient manner. Enabling or implementing new reform requires change-related compliance and governance.

One of the department heads from Public Sector University claimed that

In my opinion, change cannot happen out of the blue, or in a sudden manner, the process is step by step, mainly the faculty development programs play important roles in implementation of meaningful reforms, and HEC frequently offers workshop on educational leadership ... While implementing any reform in my department, playing my bit in it, I prefer the gradual approach.

Another department head from Public Sector University asserted that

In all likelihood, for example in curriculum reforms the official acknowledgment of that type of contribution is lacking. So, the people who make the ultimate sacrifice are the ones who are truly involved. You may not be able to keep that level of dedication up forever.

Decision Making

Additionally, respondents indicated the hindrances involved in decision-making. Half of the implementation is done by faculty members involved in designing new instructional activities, courses, and programs. Change agents often end up learning from the experiences of teachers. Teachers are also going through the same challenges as

administrators. Therefore, teachers also need support during the implementation process. For instance, private universities face research funding problems that can hinder the process of research initiatives.

In a public sector university, one department head reported that

Consequently, our local context is crucial to how we will adapt to the shift... Certainly, and even if they managed to implement initiatives...even in presence of restrictions and standards, and since the power of the administrator or manager varies from place to place, they may not be able to modify things the way they desire because it is not what they are permitted to do...

In a private sector university, one department head revealed that

Ownership strains problem-solving, which breeds decision-making, which breeds accountability, and so forth until finally, people just don't want to accept responsibility. To me, the word "risk" best captures the essence of what people dislike about higher education when I hear those terms combined. Humans are risk-averse...

Gaps in Reform Process

The challenge of gaps in change procedure was also mentioned in the participants' responses. This was also mentioned as a crucial factor deterring the practical implementation of initiatives. The gaps were observed to be found in the curriculum in relation to its presentation, instructional strategies, level, requirement, time, and resources; in implementation with reference to pace, coordination, consistency and resources; in policy and planning regarding communication, consistency, inclusion and implementation.

In the public sector, a department head informed that

A critical edition of any significant body of literature has never been published. My experience with this is probably on par with that of Science Direct or Elsevier, and I've been

using it for close to a decade. For example, in every other country, tens or even hundreds of individuals devote years to editing and revising a critical edition of the national newspaper. I've been working on this personally, and it's set to be published in December, but I won't receive any recognition for it since it won't be indexed by SCOPUS or ISI or any of those other services.....

One of the heads pointed out that

This technique of utilizing action research and collaborating with students has afforded me a chance with a clear vision for effecting change since I've been involved as a leader in what feels like effort after initiative that is not well planned

Political Unpredictability

Another theme that arose from the responses of heads was political unpredictability. The inconsistency of implementation activities and frequent fluctuation in the political sphere also affects the change process. Politicians often try to propose solutions to educational issues by referring to the change strategies in educational systems of developed countries. The communication of change should focus on the understanding of aims and goals which are flexible to local contexts and operational in higher education classrooms. Respondents suggested that suitable planning may be done to overcome the resistance.

Head from Public Sector University informed that

For instance, we're being pressured to secure private sector funding for research despite the dire economic climate. However, representatives of the private sector have expressed a desire for less bureaucracy, explaining that when companies approach universities with requests to collaborate, the latter typically respond within a week or two. It's a shame, a headache, to have to go through the process of gaining permission and making modifications [in the business world]....

Another private sector head disclosed that

As if that weren't bad enough, the institution has only allocated research funds to some predetermined regions. In order to occasionally avoid having to... Since my work in management may be included in their environmental records, I do it. Not only that, but I have the means to finance this....

Resource Limitations

An additional theme that emerged from the respondents' views was Resource Constraints. Various research studies also mentioned the significance of resources in change management. The significance of the following resources was identified during the data analysis: Infrastructure, Time, Funding, Priorities, Reliance on individuals, Personal resources.

One of the heads from Public Sector University mentioned that

To get things done and to step up performance generally, you need access to resources, preferably time, funding and manpower...Even if it's the finest idea in the world, it won't go down well with the public if you don't explain why you want to make the change, what worries you have, and how you plan to lessen the impact of any negative consequences beforehand....

One of the department heads from Private Sector University revealed that

The need to cooperate throughout the country to fulfill the reform mandates was breaking down previously insurmountable barriers. It felt compelled to build this network since his privately funded university received little funds for research...

Transparency

Transparency in the change process can be obtained through effective

communication and collaboration. For instance, in the curriculum reform process, different workshops can be organized to monitor the progress of the implementation process.

In the public sector university, one of the department heads mentioned that

We are aware that transformation takes time. There are areas of excellent work; the challenge is finding what has the potential to succeed and putting it in place so that people can act on their newly acquired understanding of sustainability....

One Head of Private Sector indicated that

I believe that half of the development is done by other faculty who design new courses, offer new programs, or facilitate hybrid instruction. Heads often learn from the faculty members, and wind up half of ideas from experiences of faculty members. Because, clearly, they are instructors who are experiencing some of the same issues. And teachers are all unique, we all approach challenges differently....

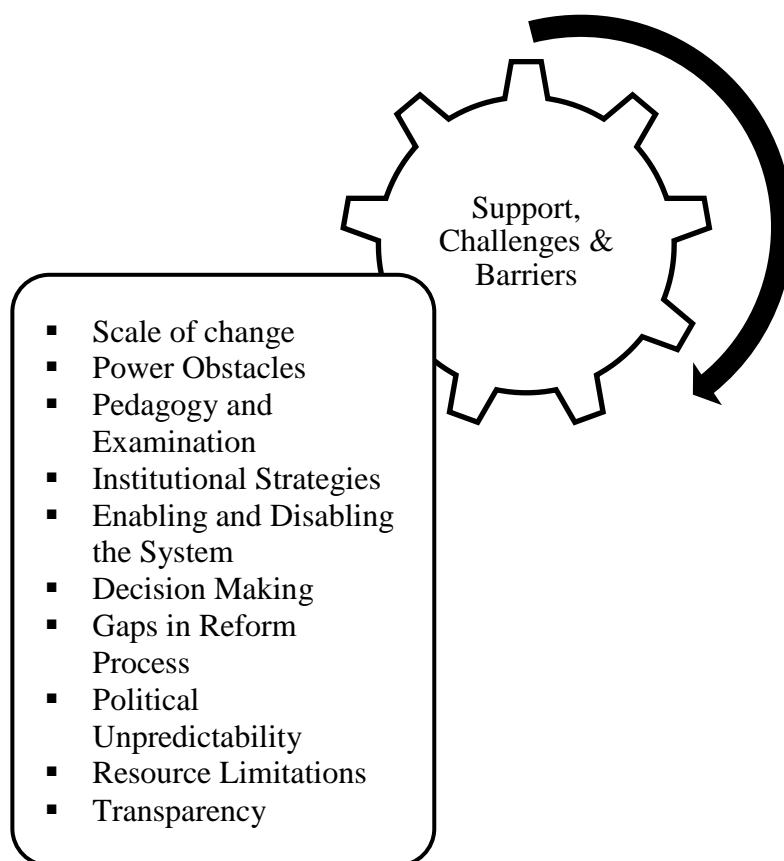


Figure 25: Themes for Support, Challenges & Barriers

4.4.4 Resources/Professional Development for Implementation

Interview Question 4- What types of resources and/or professional development opportunities were given to teachers during the implementation of changes you have indicated? (*Beliefs, Behavioural Action, Curriculum Change, etc.*)

4.4.4.1 Themes emerged

Following themes have emerged from coding:

Program Satisfaction

Major theme that emerged from respondents' views was Program Satisfaction. Change implementation requires the satisfaction of teachers with any type of recent reforms of any program. Suitable training and seminars are necessary during implementing reforms such as curriculum, instructional strategies, management strategies and assessment. The appropriate resources and professional development enhances the satisfaction level of change agents.

One of the heads from Public Sector University mentioned that

The PD can help instructors apply the new concepts, however my reflections on the implementation process, as well as the current environment, have made teachers more receptive to new concepts. Not in my knowledge, but my willingness to strive would have been distinct if this implementation had never initiated..... The appropriate resources and professional development enhances the satisfaction level of change agents.

One of the department heads from Private Sector University revealed that

Reflection is required to analyze the variables that contribute to the transformation process with severe and careful consideration. Teachers engage in the process of reforms because their own involvement and student outcomes are tangled with the final work. Suitable training and seminars are necessary during implementing reforms such as curriculum, instructional strategies, management strategies and assessment.

Self-efficacy to change

Another theme that emerged from respondents' views was Self-efficacy to change. This theme is linked to the question of how confident change agents are in their abilities to implement certain changes e.g. instructional and assessment strategies, classroom management and learning environment.

In the public sector university, one of the department heads mentioned that

The upper management must genuinely communicate with teachers.... I believe it would be a good idea to hold educational workshops or PDs every two months, three months, or so for certain topics. Such contact would improve the support we give to faculty, students, and other staff with whom we interact daily.

One Head of Private Sector indicated that

I consider myself a change agent now that I've had this experience, and I believe I can effect positive change without waiting for advice from other sources. I have a greater grasp of how to approach change in a way that is both attainable and meaningful for people participating in the process and for our university as a whole....

Willingness to change

An additional theme that acquired from the analysis was the willingness to change. Few respondents indicated that “New” refers to the new strategies and reforms for the teachers, not essentially “New” in general. However, willingness to change refers to the readiness and eagerness of teachers to accept new strategies and ideas in the reform process.

Another public sector Head stated that

Reasons for the inadequacy of few PDs are the existing resources. This involves more than simply outside help. It's also the change agents already have on staff; sometimes the greatest people to accomplish your goals may be found within institution. Some of the

new faculty members we've hired have performed exceptionally well. It may be linked with pre-service FDPs.

Whereas a head from private sector mentioned that

I always believe it is essential for administrators and managers to listen to teachers' and request their feedback... We had a few meetings with departmental faculty, but this occurred after we had already begun. Now that we've decided to do this, we'd need your opinion. PDs during reforms can cultivate this skill.

Effectiveness of Professional Development

Professional development is linked to change efforts and is considered as a cornerstone of educational reforms. Respondents mentioned that although PD is considered mandatory for reforms, institutional efforts should be directed toward ensuring the usefulness of PD initiatives.

One of the department heads from Public Sector University claimed that

A sustainable campus initiative requires at least a small team working on sustainability. Why? Since that's what the administration is doing, and because, you know, the university's strategic plan says it wants to be a world leading in campus reform. However, a suitable PD is considered mandatory for reforms, institutional efforts should be directed toward ensuring the usefulness of PD initiatives.

Another department head from Public Sector University asserted that

The training method in PDs is mainly hierarchical. It makes sense since this was in fact a discussion - they had to weigh an enormous investment and resources, not just in terms of money but also in space and other resources. It is an institution that has made a choice. ...

Trust new ideas and teaching methods

Respondents mentioned that ongoing and visioning support, effective PD and provision of sufficient resources could make teachers trust new reforms. Effective PD and adequate resources help in the effective deployment of reforms.

In a public sector university, one department head reported that

Changes often fail because change initiators have not made efforts to facilitate teachers for the expected change and rarely consider the unique teaching environment of teachers. The change agents can facilitate stakeholders with appropriate PD while transitioning from initiation to implementation phase during any educational reform.

In a private sector university, one department head revealed that

Reflection is required to analyze the variables that contribute to the transformation process with severe and careful consideration. Teachers engage in the process of reforms because their own involvement and student outcomes are tangled with the final work.

Self-inventive and creative in teaching

Professional development during the change implementation process enhances teachers' ability to be self-inventive and creative in teaching. Respondents mentioned that effective management strategies of teachers improve student outcomes and learning of skills.

In the public sector, a department head informed that

PDs sometimes offer long seasons of bridging the gap between our available resources and those required to maintain our standard of living. The strategy for bridging the gap consisted of budget cutbacks, personnel reductions, and program eliminations; reduce, decrease, reduce. Effective management strategies of teachers improve student outcomes and learning of skills.

One of the heads pointed out that

During the previous five years, the areas in which we have been financially deficient are abundantly obvious. Neither the private sector nor the HEC is likely to fund long-term cost-cutting initiatives. An effective PD may enhance creativity in faculty members but at the same time it may require desirable funds.

Seek new ideas and ways of teaching

Another theme that emerged from participant views was seeking new ideas and ways of teaching. Respondents' views were linked to the pedagogical changes in program structure, learning environment, assessment, curriculum, classroom management and instructional strategies. The ultimate goal of reform resources and PD is positive learning outcomes. Research studies have also proven the relationship between effective PD and positive student outcomes. In the implementation process teachers are expected to incorporate new ideas and instructional strategies.

Head from Public Sector University informed that

A suitable PD may provide opportunities for teachers to acquire and refine cutting-edge methods of classroom delivery. With these kinds of experiences, teachers may grow into creative, resourceful educators who can apply cutting-edge research on literacy and literacy-building strategies in their classrooms. In this context, "heads" stand for the catalysts that promote professional growth and hence creativity in the classroom.

Another private sector head disclosed that

I believe there is a trend to include online instruction in the curriculum. After overcoming the COVID-19 obstacles, there is a clear mission of technology integration. Over the past five years, I've witnessed a push to encourage staff to integrate technology into their teaching. Therefore, effective PD on blended learning can enhance student

learning.

Assurance to implement changes

Respondents informed that externally initiated changes often fail because change initiators have not made efforts to facilitate teachers for the expected change and rarely consider the unique teaching environment of teachers. The relevance of PD and support combined with teachers' competency to foresee effective implementation ultimately determine their commitment to making changes.

One of the heads from Public Sector University mentioned that

Changes often fail because change initiators have not made efforts to facilitate teachers for the expected change and rarely consider the unique teaching environment of teachers. The change agents can facilitate stakeholders with appropriate PD while transitioning from initiation to implementation phase during any educational reform....

One of the department heads from Private Sector University revealed that

Heads are mainly engaged in administrative tasks, policies, and similar matters. In my opinion, it is always preferable to involve individuals in planning and transformation. The relevance of PD and support combined with teachers' competency to foresee effective implementation ultimately determine their commitment to making changes.

Institutional environment

A significant theme that emerged from respondents' views was linked to the external factors involved in the implementation process. The institutional environment and organizational structure can influence the instructional activities and teachers' ability to implement certain changes. The role of heads and other stakeholders such as students and parents has more significant effect on faculty performance during the reforms. The sub-themes involved. Socialization, culture and cooperation.

a. Socialization:

The association of teachers' orientation with other colleagues of institutional context affects how teachers perform their job whether or not changes to instructional practices have been endeavored. Institutional socialization affects teachers' decisions about the teaching and reform process.

b. Culture:

Cultural norms of the institution have more significant influence on teachers' practices. Institutional culture is a crucial factor in promoting change in the learning environment.

c. Cooperation:

Isolation and lack of communication decrease the possibility that teachers will share common goals and objectives, which is a substantial factor in effective educational reform. Therefore, cooperation among teachers is an essential factor in the reform implementation.

In the public sector university, one of the department heads mentioned that

Some departments came to us when they were having troubles, and they were given to us by the previous administration so that we could assist them get their new programs certified and get them to where they should be; we are now working on this. This may require sufficient amount of socialization and cooperation.... Suitable PDs may help with these scenarios.

One Head of Private Sector indicated that

Recently, our institution has proposed merging two of its campuses. Since the Board of Governors had already been through this process and was demanding this adjustment, it looked like they were not as engaged in the reform implementation process... A proper

briefing sometimes help in these kind of situations.

Overall flexibility of Reforms

Suitable resources and successful PD efforts promote both skills for change implementation and teachers' beliefs. Respondents mentioned that the change process must be flexible. Compared to the other change elements (i.e., learning environment, management strategies, instructional strategies and assessment), the curriculum reforms have the most common adding and subtracting units.

Another public sector Head stated that

Change process must be flexible. Compared to the other change elements, the curriculum reforms have the most common adding and subtracting units. It is not always a question of substance that the academics would have had so much to add. The notion of including the entire institution in the process, however, is based on a different mindset than mine of how to manage teachers' beliefs. Suitable resources and successful PD efforts promote both skills for change implementation and teachers' beliefs

Whereas a head from private sector mentioned that

PD and adequate resources can make the change process flexible enough to accommodate the desired reforms. Respondents also indicated that teaching and assessment were the most frequently changed elements in the reform that occurred during COVID-19. In the present situation the PDs no virtual learning or blended learning are necessary.

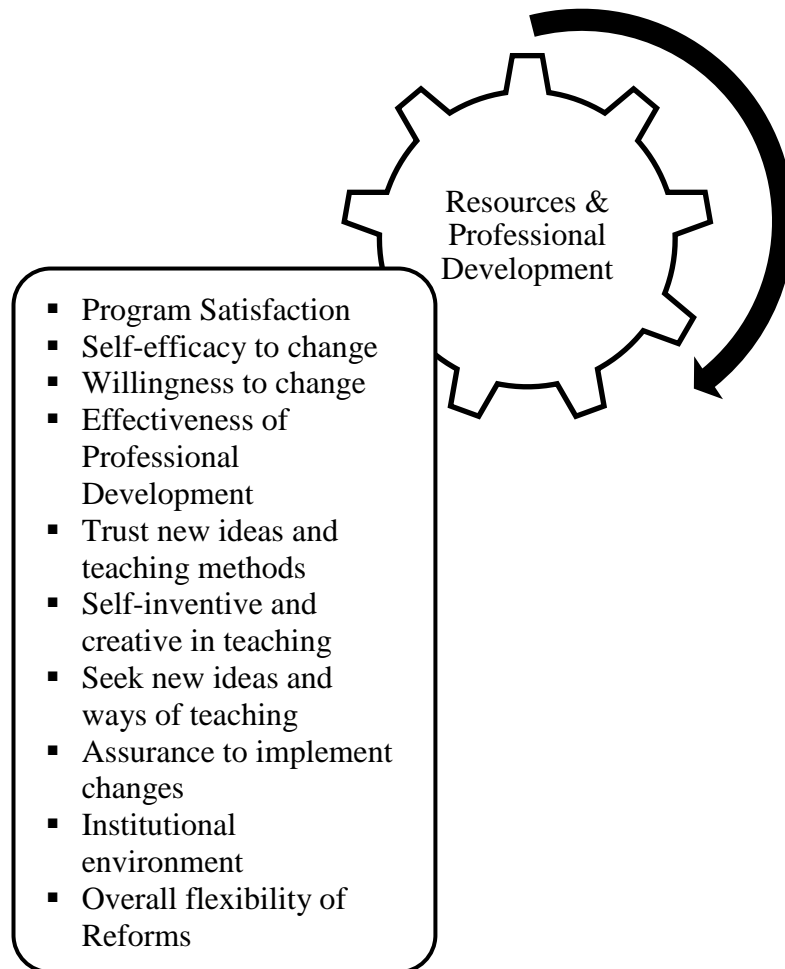


Figure 26: Themes for Resources and Professional Development

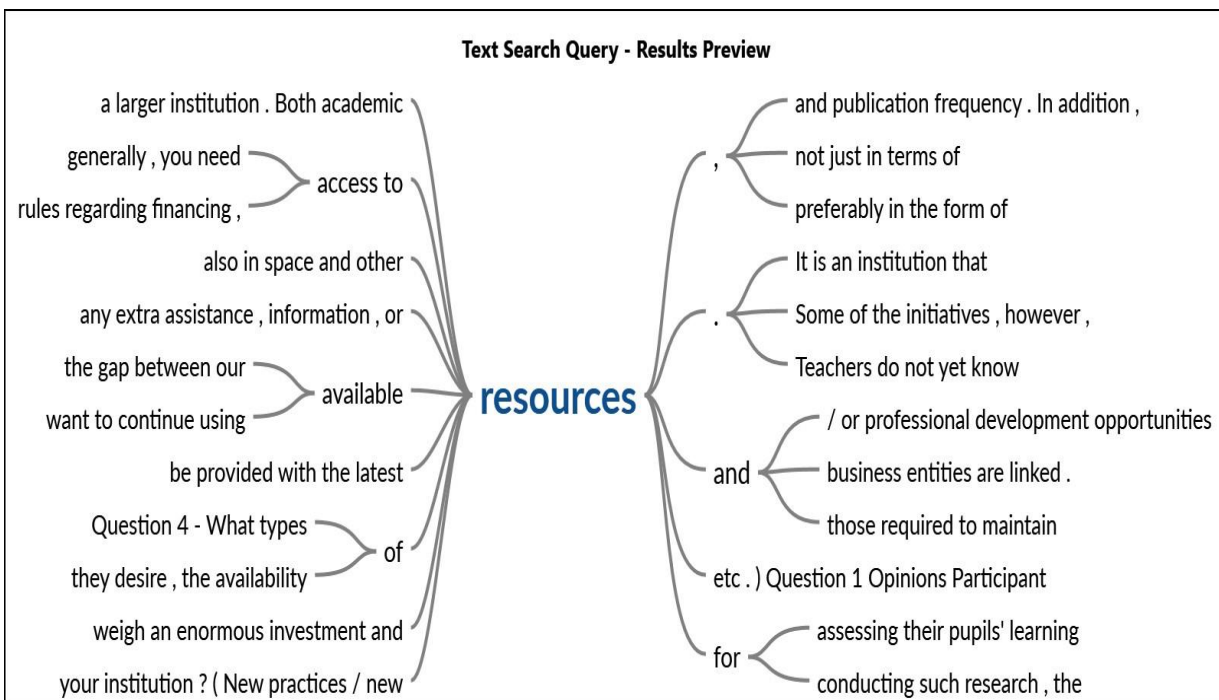
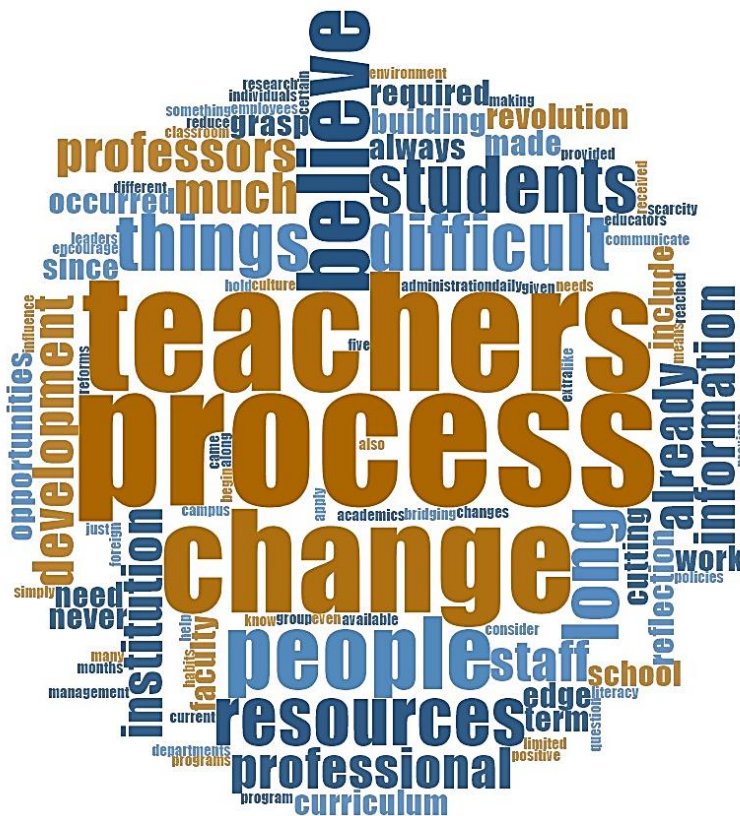


Figure 26a: Word Cloud and Text Search Query for Question 4

4.4.5 Effect of Reforms on Institutional Culture

Interview Question 5- How will the recent changes (e.g., reforms in administrative, instructional and assessment processes) affect the culture of the institution? (*Mutual adaptation, Learning leaders, Shared Learning, etc.*)

4.4.5.1 Themes emerged

Following themes have emerged from coding:

Improved Curriculum

First theme that attained from the analysis was the improved curriculum. Respondents shared a consensus among most that recent reforms help improve the curriculum. Curriculum reforms for content and teaching strategies require administrators to improve support strategies for teachers. Managing curriculum changes across all disciplines enabled sharing of resources across faculty, administrative support and leadership and opportunities for professional development.

One of the heads from Public Sector University mentioned that

The institution's structures run counter to the staff's efforts to foster a student-centered culture that prioritizes reducing equity disparities by providing students with individualized attention, however. Culture is a hidden curriculum; you learn the rules of an organization just by interacting with its members. Recent reforms help improve the curriculum. Curriculum reforms for content and teaching strategies require managers to expand support strategies for the faculty.

One of the department heads from Private Sector University revealed that

There's safety in established procedures, but if you want to see real change, you'll have to focus the curriculum first.... Managing curriculum changes across all disciplines enabled sharing of resources across faculty, administrative support and leadership and opportunities for professional development.

Collaborations

Another theme that acquired from interview was collaboration. Respondents indicated that teacher-administrator collaboration has improved during reforms in the instructional practices and technological changes due to the COVID-19 pandemic. Respondents also indicated that the collaboration of ORIC departments with industry, NGOs and other government agencies has improved during the recent technological reforms.

In the public sector university, one of the department heads mentioned that

Managing curriculum changes across all disciplines always leads to complications in leadership and opposing interests. Even while administrators are just as committed to student achievement as teachers and other staff, they may impose policies that make it hard for teachers and other staff to offer equitable support for all learners. Teacher-administrator collaboration has improved during reforms in the instructional practices and technological changes due to the COVID-19 pandemic.

One Head of Private Sector indicated that

It has been much simpler for us to broaden the conversation in the Academic Council, research committees, and Programme Boards, and to get approval at that level, because we have Social Sciences Departments and SS research groups and a reputation as leaders in the social science sector. In this light, the importance of multidisciplinary research and research financing cannot be overstated.

Peer tutoring

Additional significant theme that arose from the data was peer tutoring. The recent reforms in curriculum and instructional process support learning with peer tutoring environments where students with individual differences can work together in groups. The technological changes also enabled the use of Google Docs, Power points and videos to support learning. This theme is also related to the concept of student-to-student learning.

Even in the virtual learning environment, learners support peers to acquire the information they retrieved.

Another public sector Head stated that

The culture that prioritizes students was established and nurtured by ICT staff. This challenges the idea that those at the top can only form culture. Staff was given an adaptive aim of helping to close equity gaps by offering comprehensive assistance, and in response to the resulting pressure, they devised a series of interconnected, dynamic systems to better aid students.... recent reforms in curriculum and instructional process support learning with peer tutoring environments.

Whereas a head from private sector mentioned that

Some of these restrictions are not the responsibility of the HoDs, and I believe they are unfairly chastised for having to implement policies that students dislike. So, with all of this work, I've presented my ideas,, since there should be limitations on what we produce. The technological changes also enabled the use of Google Docs, Power points and videos to support learning. This enhanced the student-to-student learning. Even in the virtual learning environment, students help peers to acquire the information they retrieved.

Student-centered learning

Respondents also indicated that recent reforms had diverted the emphasis of instruction from faculty to learners. The ultimate goal of the curriculum reform in most HEIs was to inculcate skills and practices that enable independent problem-solving and lifelong learning skills in students. Respondents mentioned that online learning during the past year of the pandemic had provided more opportunities for student-centered learning.

One of the department heads from Public Sector University claimed that

The institution's structures run counter to the staff's efforts to foster a student-centered culture that prioritizes reducing equity disparities by providing students with

individualized attention..... Recent reforms had shifted the focus of instruction from teachers to students

Another department head from Public Sector University asserted that

Understanding the duties connected with attempting to assume a position in the curriculum reform processes provided me with direction throughout the process. Participating in the process of communicating the nature of the work gave me confidence. Online learning during the past year of the pandemic had provided more opportunities for student-centered learning.

Transformational leadership

To institutionalize the recent reforms, teachers need support from administrators. Most of the participants came to the consensus that transformational leadership style is suitable. Administrators are expected to provide adequate resources more transparently. Transformational leaders share their responsibilities among subordinates. This attitude originates and supports reform processes.

In a public sector university, one department head reported that

It ensures that learning continues from the beginning to the finish. Motivation promotes receptivity, and motivation enhances the willingness to change. To institutionalize the recent reforms, teachers need support from administrators. Most of the participants came to the consensus that transformational leadership style is suitable.

In a private sector university, one department head revealed that

The reform's influence on institution, community, NGOs, government and company collaborations has been moderate. Transformational leadership in this context may play a positive role. Transformational leaders share their responsibilities among subordinates. This leadership style enables reform processes in systems.

Innovative practices

The new reforms enable a climate of sharing innovative instructional practices among teachers. These practices work as an intervention to enhance student outcomes. After the reforms teachers are encouraged to learn innovative practices and to share those experiences with other colleagues.

In the public sector, a department head informed that

If a teacher is imaginative enough or believes they are powerful enough to execute or promote changes at their institution, they can accomplish it. "Changing requires much effort... it involves enough commitment and determination..." The new reforms enable a climate of sharing innovative instructional practices among teachers...

One of the heads pointed out that

Launching a brand-new initiative is a serious task in and of itself. Teachers need to be flexible and adapt to pupils' various ways of learning. So that you're prepared for the first-year experience, which involves a period of transition as students develop new learning habits and new instructional practices in campus...

Workshops for teachers

Administrators utilize the established trust with faculty to gain faculty participation in workshops. Respondents mentioned that administrators provide faculty with professional development workshops and strategies of suitable instructional practices for their classrooms. Strategies such as sharing reasonable practices with faculty in workshops support teachers in continuation of educational changes.

Head from Public Sector University informed that

In order to have access to finances, companies partnered with HEC may help to foster the reform process. Administrators utilize the established trust with faculty to gain faculty participation in workshops... Administrators provide faculty with professional

development workshops and strategies of suitable instructional practices for their classrooms.

Another private sector head disclosed that

Conventional restricted approaches to change management may need to be abandoned if reforms and stability are to be implemented at the required rate. Instead, the difficult reform tasks of creating more sustainable behaviors require sharing reasonable practices with faculty in workshops support teachers in continuation of educational changes.

Research Opportunities

Recent reforms affect HEIs in many ways. Another significant theme that attained from data was research opportunities. HEIs and industry have a strong association through multidisciplinary research, technological knowledge and skill development. Research centers in HEIs connect various faculty researchers and proceed for multidisciplinary collaborations with the industry. Industry linkages in HEIs are critical for student internships for students, conferences and professional development workshops for teachers. Research funding also acts as external stimuli for university change initiatives.

One of the heads from Public Sector University mentioned that

Faculty members are now skeptical of their institution's leadership and the government because of the lack of clarity surrounding the outcomes they may anticipate from their community service efforts. HEIs and industry have a strong association through multidisciplinary research, technological knowledge and skill development. Research centers in HEIs connect various faculty researchers and proceed for multidisciplinary collaborations with the industry.

One of the department heads from Private Sector University revealed that

Our faculty members differ significantly from our staff members and our pupils.

Consequently, the institution's internal stakeholders all bring unique perspectives and expertise to the table. Matched to the outer world, where choices are made at a boarder aspect and then conveyed below, I would suggest that this is a key difference. Industry linkages in HEIs are critical for student internships for students, conferences and professional development workshops for teachers.

Policy Regularity

Critical success factors for educational reforms identified by respondents included policy regularity and staff support systems. International declarations such as SDGs and government policies are the external drivers of change. Respondents mentioned that the policy outcomes are often unpredictable, so the change process needs to be resilient, responsive and adaptable.

In the public sector university, one of the department heads mentioned that

It's evolving rapidly, and I believe that in order to be successful in academia today, one must constantly seek out and advocate for novel approaches. I will provide an example of open-mindedness, innovative pedagogical approaches, and for the advancement of reform processes. Prevailing aspects for educational reforms identified by respondents included policy regularity and staff support systems.

One Head of Private Sector indicated that

Teachers must do a better job of incorporating into the classroom some of the suggestions made by students during our sessions. It won't be tough, but teachers must drive themselves to attempt something new and not fall back on what is comfortable and known. Supporting student-centered and inquiry-based learning should be their priority for the next year...

Green Campus

Recent reforms also lead to the Green campus movement in various HEIs.

Respondents mentioned the progress of sustainable development within HEIs. After the Prime Minister's Clean and Green Campus program in 2018, the Green Youth Movement (GYM) was initiated, and the public sector HEIs are seen to be participating in the GYM at the time of interviews. Respondents mentioned that HEIs now has collaborations with the Ministry of climate change to work on agriculture, waste, water, eco-tourism and energy. It also requires HEIs to formulate associations with curriculum and sustainability.

Another public sector Head stated that

An opportunity to think, discuss, and make is what that institute is all about. I encourage faculty assessment, administrators put effort, and we see many incentives and consequences... Recent reforms also lead to the Green campus movement in various HEIs. The Green Youth Movement (GYM) is initiated, and HEIs are observed to be participating in the GYM.

Whereas a head from private sector mentioned that

The Department's and faculties are revising their future mission statements to reflect the intended changes, which will be reflected in new policies on strategy, finance, research, and the necessary operations. HEIs now has collaborations with the Ministry of climate change to work on agriculture, waste, water, eco-tourism and energy. It also requires HEIs to formulate associations with curriculum and sustainability.

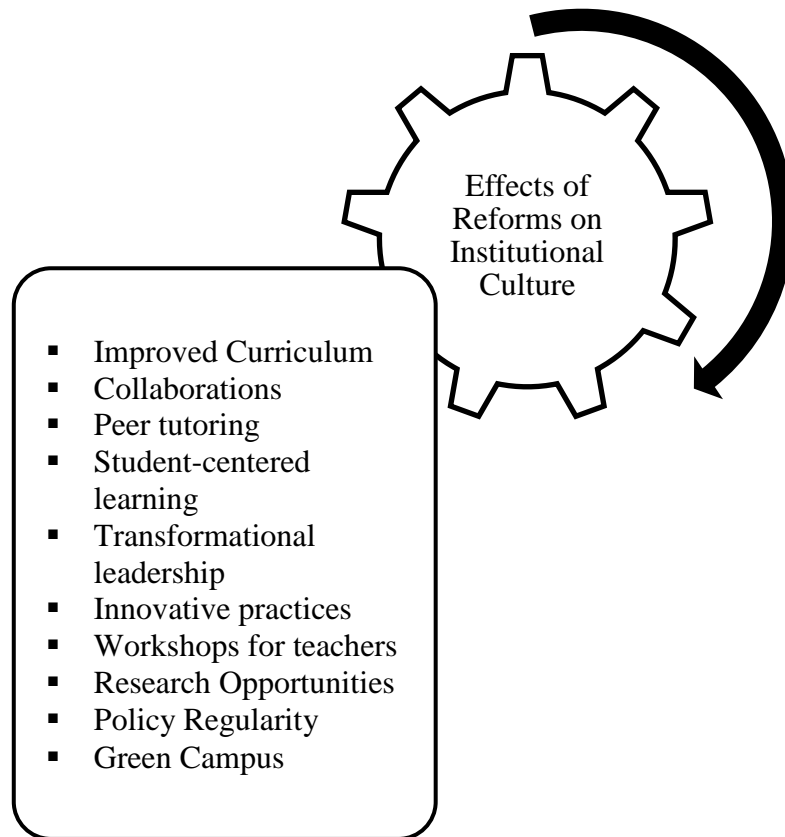


Figure 27: Themes for Effects of Reforms on Institutional Culture

4.4.6 Implementation of Reforms

Interview Question 6- What types of things would have to change for any of the initiatives to become fully implemented? (*Adjustment of beliefs, contributing to sustainability and implementation, etc.*)

4.4.6.1 Themes emerged

Following themes have emerged from coding:

Technology Integration

The growing use of online literacy demands adequate technology integration in the content area. Respondents mentioned that the technology-related initiatives are associated with the technology integration competencies and efficacy of teachers. The successful implementation of technology initiatives also requires technology and connectivity available for all students.

One of the heads from Public Sector University mentioned that

I admit the implementation is really meaningful in the way that it prompted me to ask queries during the session, and when learners went offline and through sharing ideas with heads in my network I believe that the technology-related initiatives are associated with the technology integration competencies and self-efficacy of teachers.

One of the department heads from Private Sector University revealed that

With the goal of helping educators better incorporate technology into their classrooms. Students nowadays cannot hope to excel in department or the workforce without a firm grasp of the technologies available. The disparity between technology and other disciplines can be mitigated by using technology integration in higher education. Adding some tech won't make your lessons more engaging or your students more innovative...

Leadership and Communication

Respondents indicated effective leadership and communication as integral elements

in change implementation. Leaders must take actions based on the situation and environment, more significantly, the subordinates they are dealing with. Leaders understanding their role is just as crucial as understanding subordinates who work with them. Effective communication strategies enable interrelationship between the leaders and subordinates. Communication allows for sharing the appropriate information and using the suitable strategy for change implementation.

In the public sector university, one of the department heads mentioned that

Online and hybrid learning was possibly complicated to initiate, it was diverse from the traditional learning, with varied effects on learning... Effective leadership and communication as integral elements in change implementation. Leaders may take actions based on the situation and environment, more significantly, the subordinates they are dealing with.

One Head of Private Sector indicated that

Faculty members are networking with their peers around the country to achieve the desired objectives of research projects and scholarly output. They are building these networks to publicize the research being done at various universities and to facilitate mentoring relationships amongst faculty members. It's time we broke down the barriers to working together with our fellow citizens...

Organizational Structure

Respondents mentioned that a stable organizational structure balances horizontal collaboration and vertical leadership. Respondents indicated that during the change implementation process, HEIs are expected to allow equilibrium in the institution. Respondents suggested that the administration may impose top-down strategies on how something should be performed. Respondents informed that the major challenge is to align the innovative strategies with a decentralized way of implementation. Respondents

mentioned that alignment of organizational structure with organizational culture is also necessary.

Another public sector Head stated that

A stable organizational structure balances horizontal collaboration and vertical leadership. During the change implementation process, HEIs are expected to allow equilibrium in the institution. The funding crisis and the difficulty of enacting fundamental change have monopolized discussions and actions in the higher education sector...

Whereas a head from private sector mentioned that

Since universities are often classified as either teaching or research-teaching establishments, they must develop sustainable methods to aid in their institutions' development. Due to the high percentage of graduates among the attendees, the major challenge is to align the innovative strategies with a decentralized way of implementation. Respondents mentioned that alignment of organizational structure with organizational culture is also necessary.

Teams and Collaboration

Additional theme that arose from data was teams and collaboration. Respondents mentioned that although each change agent has his or her separate duties and performs tasks differently, the change implementation team is collectively responsible for effective implementation. Respondents suggested that teamwork and leader participation is necessary. Leaders may involve in specific tasks as team members rather than micro-manager.

One of the department heads from Public Sector University claimed that

We need to accept accountability if we want to make any improvements. Since our department draws students from all over the world, we are in a concern to do all in our power to help them succeed. This responsibility includes, but is not limited to, doing ground-

breaking academic research and providing creative reform leadership

Another department head from Public Sector University asserted that

To ensure that employees continue to grow in their respective fields, managers should facilitate chances for team-based training. Support and training in creating successful techniques for managing change are helpful for teachers who need to alter their approach to the classroom. Administrators should be instrumental in delivering such services as technology support and literacy instruction.

Policies and Procedures

Respondents mentioned that while implementing change initiatives, it is necessary to understand the concept of any particular policy and identify its insights. Respondents identified that there is rarely a clear definition of policy, whether theoretical or practical, mainly when separating the concept from its implementation. Respondents mentioned that change agents could attain information regarding how the goals behind the any national or organizational policy assessed through its association with organizational structure influence the change. Respondents suggested that while exploring the policy, it is essential to understand how a certain policy emerged and how stakeholders respond to it. Policies and procedure may clarify the concept of how an institutions operate and how the institution involves participants in the reform process.

In a public sector university, one department head reported that

Despite having the right to academic freedom under the law, many faculty members feel limited by government and institutional restrictions relating to research and publishing. It is often the case that each participant's institution and HECs publication mechanisms dictate the participant's ability to conduct the type of research they desire, the availability of resources for conducting such research, the ability to publish, and the location of such publications.

In a private sector university, one department head revealed that

It is not common practice for faculty at my university or elsewhere to discuss the moral implications of writing and disseminating research work in English when that is not the native language of the policy makers and stakeholders. Undergraduates are all native Urdu/Punjabi speakers who would be unable to read publications since the institution requires all publications to be written in English.

Conflicts

Despite effective leadership, communication, and team collaboration, respondents also mentioned group conflicts. Change agents tend to have diverse viewpoints on the productivity of conflicts. Respondents encouraged constructive, healthy and productive conflicts which help build consensus within groups.

In the public sector, a department head informed that

Assume that I am open to criticisms and recommendations. I'm a conversation starter. I lay forth an idea and provide context by discussing relevant experiences and potential outcomes. To the extent that others have viewpoints that differ from mine, I am open to hearing them. If theirs [ideas] are sounder, I'll advise them to attempt and perform it...

One of the heads pointed out that

Change agents tend to have diverse viewpoints on the productivity of conflicts. Respondents encouraged constructive, healthy and productive conflicts which help build consensus within groups. In addition, teachers realize they are in a bind and must conform if they want to continue using available resources. Some of the initiatives, however, are seen as a way to boost Institutions' standing as research powerhouses internationally.

Management Practices

Another important theme that emerged from data analysis was management

practices. Management practices play a vital role in promoting change processes within higher education. Respondents identified that strategic and operational change practices help in the effective implementation of change. Management practices underlie procedures about how to implement reforms in HEIs.

Head from Public Sector University informed that

Faculty need to adjust to new policies and procedures as they are introduced. University administrators must ensure that their students graduate with the skills necessary to succeed in 21st century employment due to the introduction of online learning. Participants believed that it was unrealistic to presume curriculum based faculty to be online-pedagogy specialists, even though not all instructors were reading teachers.

Another private sector head disclosed that

In the start of pandemic university network and LMS (Learning Management System) was catastrophic. We had to repeat each step a thousand times. It was ridiculous that we have to rely on paper for everything and then waste paper on printing. Due to a lack of suitable communication tools, we cannot collaborate. Later the management took notice of it. Management practices play a vital role in promoting change processes within higher education.

Transition and decision making

Respondents mentioned that faculty often experience uncertainty about the change and then move towards reforms acceptance depended on how much they were involved in the implementation process. Respondents identified that those participants who were involved in first two phases of change process reached reform acceptance earlier than those stayed away from the change processes.

One of the heads from Public Sector University mentioned that

Teachers who are called upon to adapt any reform, must be provided with the latest

resources for assessing their pupils' learning gaps and given a chance to refine their methods of incorporating literacy instruction. Peer teaching is a form of student-to-student assistance that may be fostered when teachers actively pursue pedagogical improvement

One of the department heads from Private Sector University revealed that

In order to encourage students, who have expressed an interest in going abroad for education,....., we must streamline the application procedure by working with universities abroad to deliver it. Strategic and operational reform practices help in the effective implementation of change. Management practices underlie protocols regarding how to initiate and accomplish reforms in HEIs.

Work Climate

Another theme that appeared from data was work climate. Interviewees mentioned that Institutional structure, management practices and educational policies have a strong mutual effect on institutional climate. Respondents further indicated that the synergetic association between institutional structure and work climate has a direct influence on institutional climate. A freedom and trust-led climate is an essential factor of institutional elements i.e., policies, institutional structure and administrative strategies. Therefore, institutional culture and elements significantly affect individual approaches to change. Academic freedom also promotes a climate for innovation and creativity. There was a shared perception among respondents that implementing new ideas empowers a climate of participation.

In the public sector university, one of the department heads mentioned that

I want to give chances to individuals in our department who are willing to enhance the educational experience for all children, and I see this happening here. You are all actively striving to enhance our department, and I wholeheartedly support your efforts...

One Head of Private Sector indicated that

A freedom and trust-led climate is an essential factor of institutional elements i.e., policies, institutional structure and administrative strategies. Therefore, institutional culture and elements significantly affect individual approaches to change. Academic freedom also promotes a climate for innovation and creativity.

New direction

Another theme that attained from data was new direction. New initiatives in the university should enable the stakeholders to see the university moving in a new direction. Change initiatives expect to bring the institutions in a position to achieve national goals and perform tasks systematic manner than ever performed before. Respondents indicated that there might be some initiatives that are crucial for the culture shift of the institution. It is the same as a ship changing its direction. It needs to slow down (with previous practices) before it turns around and picks up speed (with new initiatives and reforms).

Another public sector Head stated that

I would want to see change in our institution has always been a daunting chore that I avoided until someone else took the initiative. Now that I've participated in this process, I see that if we form a group devoted to improving our own department and set a clear procedure, I may be in a position to take the initiative. New initiatives in the university should enable the stakeholders to see the university moving in a new direction...

Whereas a head from private sector mentioned that

Change initiatives expect to bring the institutions in a position to achieve national goals and perform tasks in systematic manner than ever performed before. So yet, there has been no repercussion for faculty who aren't fulfilling the institution's community service responsibility. Teaching and research, in particular, are seen as more personally and professionally fulfilling and significant by faculty members.

Inspiring progress and motivating

Respondents indicated that explaining the reasons behind new initiatives enhances individual participation. Another significant theme that appeared from data was inspiring progress and motivation. Respondents suggested that administrators can use a change of perception as a tool to inspire progress and motivate individuals to involve in the process. Respondents further mentioned that explaining the reasons behind new initiatives also enhances the rate of change and eventually inspires progress.

One of the department heads from Public Sector University claimed that

Instead of communicating the reform vision of what we needed to achieve and merely expecting others to do the same, I regarded our team as the ones who would carry out what they needed to have done. But, explaining the reasons behind new initiatives with team members enhances individual participation.

Another department head from Public Sector University asserted that

Faculty members are networking with their peers around the country to achieve the desired objectives of research projects and scholarly output. They are building these networks to publicize the research being done at various universities and to facilitate mentoring relationships amongst faculty members. It's time we broke down the barriers to working together with our fellow citizens.

Curriculum Reforms

Additional theme that acquired from data was curriculum reforms. Interviewees mentioned that traditional theories and practices endorse several unsustainable practices that can be targeted through recent curriculum reforms in pedagogy, class management, assessment and learning environment. Respondents indicated that curricular developments tend to occur within disciplines enforced by professional accreditation bodies such as NACTE for educational programs. Respondents also indicated that most curriculum

innovations are associated with traditional pedagogies which may reduce the impact of the implementation process.

In a public sector university, one department head reported that

Over the past five years, our department has increased the number of its undergraduate and graduate courses focusing on sustainable development. They need to look at the possibility of integrating philosophical ideas into other fields. Reforms to the curriculum center on the use of digital tools for instruction and evaluation. Curricular developments tend to occur within disciplines enforced by professional accreditation bodies such as NACTE for educational programs.

In a private sector university, one department head revealed that

To ensure that employees continue to grow in their respective fields, managers should facilitate chances for team-based training. Support and training in creating successful techniques for managing change are helpful for teachers who need to alter their approach to the classroom.

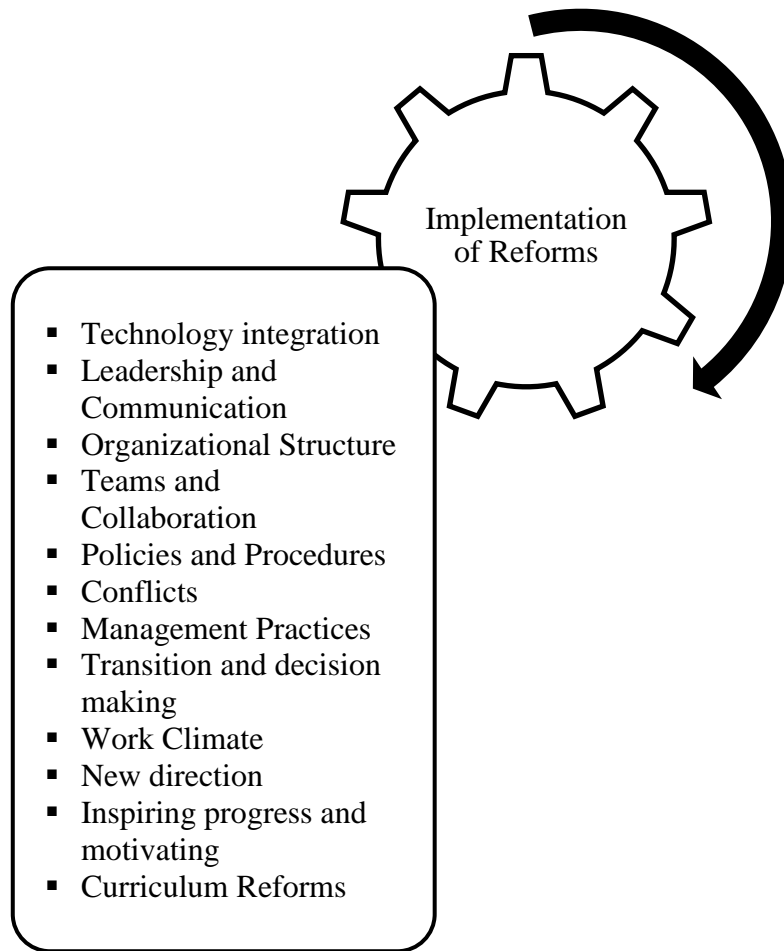


Figure 28: Themes for Implementation of Reform

Section V: Comparison of Results

4.5 Comparison of Quantitative & Qualitative Analysis

The convergent parallel design by Creswell (2018) suggested comparing results obtained from quantitative and qualitative measures to understand the in-depth detail of the research problem.

Quantitative data from the survey and Checklist responded by many participants provide strengths to decrease the limitations of the qualitative data obtained from few respondents (Creswell, 2018).

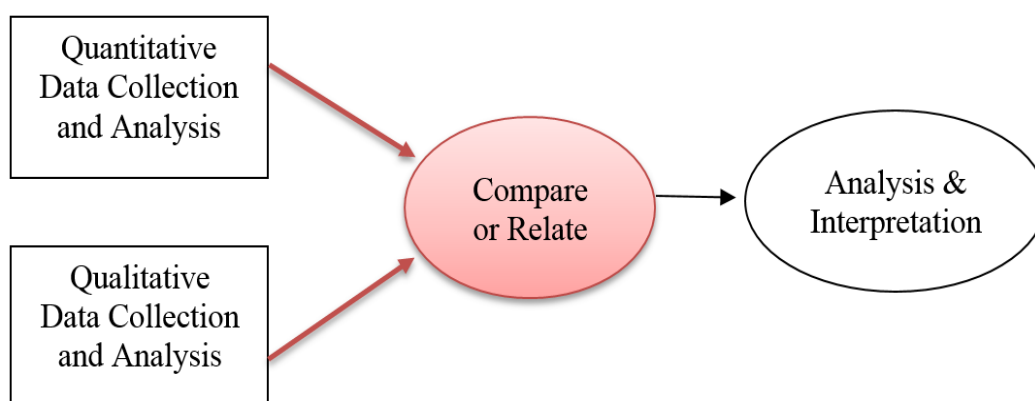


Figure 29: Comparison of Quantitative and Qualitative (Creswell, 2018)

The qualitative and quantitative data were based on three research questions. The first question enquired about the level of change management in higher education. The second question was to assess the difference between change management in public and private sectors. Third question was based on new initiatives and the challenges of implementing those initiatives in public and private sector HEIs. The COVID-19 pandemic had a greater impact on all levels of education. This impact led to technological changes both in public and private sector. The technological changes resulted in a paradigm shift from traditional to online/virtual learning. Higher education teaching required updated

equipment and suitable connectivity to manage this sudden change. The data for this study were collected in the mist of COVID-19 and the process is explained in the previous chapter.

The study investigated the implementation of change initiatives in higher education by focusing on three major phases of educational change originating from Fullan's (2016) theoretical framework of educational change. The views of Deans, Heads and faculty members were obtained through Harvey's (2001) Checklist, semi-structured interview and self-developed questionnaire based on Fullan's (2016) model for educational change.

Results from descriptive statistics revealed that the contribution of higher education institutions towards change management was satisfactory, yet there was a difference among both sectors. Institutions mainly focus on the upper two phases of the educational change model i.e. implementation and continuation. The study found that the administrators and faculty of public and private HEIs have observed the effective planning and implementation of change-related processes. The study found that reforms related to infrastructure, research initiatives, and new programs (e.g., starting M.Phil. or Ph.D.) including instructional and administrative processes, were clear and understandable. Respondents believed that there existed clear evidence of the need for such reforms. Responsibilities were clearly defined among personnel responsible for implementing the change. Administrators perceived that change implementers possess the responsible capacity to implement the desired reforms. Faculty members agreed that there exists an availability of innovations in their institution. Policy standards and change-related targets are regularly followed. Faculty members believe that monitoring and assessment criteria of new initiatives are reviewed rapidly.

Results of inferential statistics revealed a statistical difference among public and private HEIs based on contribution toward change management, and the contribution of private sector HEIs was comparatively higher than the public sector institutions. As compared to the other phases, the continuation phase showed a more significant effect size,

and the initiation phase has shown a smaller effect size for private institutions. There existed a significant difference in change management of the public and private sectors based on the initiation phase of the model. The study also found the statistical difference in change management of public and private sectors based on the implementation phase of the model. It was further found that a statistical difference existed in change management of the public and private sectors, based on the continuation phase.

The qualitative data analysis was based on the responses of interviews conducted with heads of social sciences departments. The purpose was to acquire a more comprehensive understanding of the change management processes in the public and private sectors. The thematic analysis of the first question indicated that change management initiatives might cultivate a healthy climate and increase student learning outcomes. Leaders at higher education institutions initiate innovative strategies in relation to the positive impact of change on the process of learning. Environment and aesthetics of the new building on the campus help increase the morale of student and faculty members. The initiatives such as collaborative research and technological initiatives enhanced the opportunities of peer-to-peer learning among faculty members. Respondents also indicated that external factors such as educational policies, professional development and HEC standards play a significant role in change initiatives.

The interview analysis further revealed that a collective and shared vision creates a climate of common ambition, ultimately leading to team learning and strategy. Respondents mentioned that magnitude of the change could have a significant impact on the strategy of the reform approach. Respondents mentioned that during the reform process, it is essential to communicate the academic freedom of research publications. Communicating vision help individuals to observe and differentiate between self-sustaining changes and changes that require attention and a strategic approach. Administrators may play an advisory role to

ensure the questions to reform initiatives are addressed. The qualitative data analysis also indicated several challenges related to change management. The major themes included the scale of change, power obstacles, resource limitations, instructional strategies, enabling and disabling the system, decision making, transparency, political unpredictability, pedagogy and examination and gaps in the reform process.

Respondents indicated different types of resources and professional development during the implementation of change. Suitable training and seminars are necessary during implementing reforms such as curriculum, instructional strategies, management strategies and assessment. The appropriate resources and professional development enhances the satisfaction level of change agents. Respondents mentioned that recent changes such as improved curriculum, collaboration and peer tutoring etc. in HEIs also affect the culture of the institutions. Interview responses also indicated factors those need to be improved for a successful implementation of any change initiatives. Those factors involve technology integration, leadership and communication, organizational structure etc.

Table 4.79

Major Results (Quantitative $N_1=12$, $N_3=514$ & Qualitative $N_2=24$)

Quantitative Outcomes	Qualitative Outcomes
<p>Descriptive statistics: <i>Initiation:</i> (Higher Faculty Scores) <i>Implementation:</i> (Higher Faculty Scores) <i>Continuation:</i> (Medium Faculty Scores)</p>	<p>Thematic analysis was performed on interview transcripts. The first question probed heads of social sciences about factors involved in initiation of any reform. The themes that emerged from the first interview question included Increased learning outcome, positive impact, aesthetics and morale, peer-to-peer learning, external factors, the relevance of change, change readiness, resources, collaboration, shared decision making and leadership, problem-solving process, involvement of stakeholders, funding, communication, preparedness and self-efficacy, support from HEC.</p>
<p>Harvey's Checklist: <i>Analysis:</i> (Higher Faculty Scores) <i>Planning:</i> (Higher Faculty Scores) <i>Implementation & Evaluation:</i> (Medium Faculty Scores)</p>	<p>The second interview question probed heads about establishing vision while communicating change initiatives. The themes that emerged from the second interview question included collective and shared vision, change as evolution, leaders' beliefs and actions, assumption of operations, change magnitude, managing uncertainty, building networks, embodying transition, confounding autonomy, motivating and inspiring progress, the urgency of initiatives, self-sustaining change, reforms, and social justice.</p>

Inferential statistics:

Change Management (Public/Private):
significant difference at
 $t(512)=3.81$ where $p=.000$

The third interview question probed heads about support/ challenges and barriers during implementation. The themes that emerged from the third interview question included the scale of change, power obstacles, resource limitations, institutional strategies, enabling and disabling the system, decision making, transparency, political unpredictability, pedagogy and examination, and gaps in the reform process.

Change Initiation (Public/Private):
significant difference at
 $t(512)=2.54$ where $p=.001$

The fourth interview question probed heads about types of resources and professional development during the implementation of change. The themes that emerged from the fourth interview question included program satisfaction, self-efficacy to change, willingness to change, the effectiveness of professional development, trust in new ideas and teaching methods, self-inventive and creativity in teaching, seeking new ideas and ways of teaching, assurance to implement changes, institutional environment, overall flexibility of reforms.

Change Implementation (Public/Private):
significant difference at
 $t(512)=3.14$ where $p=.000$

The fifth interview question probed heads about the effect of recent changes on institutional culture. The themes that emerged from the fifth interview question

included improved curriculum, collaborations, peer tutoring, student-centered learning, transformational leadership, innovative practices, teacher workshops, research opportunities, policy regularity, and a green campus.

Change Continuation (Public/Private):
significant difference at
 $t(512)=4.67$ where $p=.000$

The sixth interview question probed heads about the types of things to change while fully implementing any reform. The themes that emerged from the sixth interview question included technology integration, leadership and communication, organizational structure, teams and collaboration, policies and procedures, conflicts, management practices, transition and decision making, work climate, new direction, inspiring progress and motivating, curriculum reforms.

4.5.1 Major Results

Change management processes were observed both in public and private sector institutions in Pakistan. Change management in higher education has addressed several reforms including new study programs, infrastructure, administrative processes, instructional processes, curriculum reforms, technological changes, organizational structure and learning environment etc. The analysis showed that the contribution of change management processes in higher education was adequate. Emphasis on HEIs was on all three phases of Fullan's (2016) educational change model but mainly on the upper two levels i.e. implementation and continuation. Results further revealed that reforms related to research initiatives, and new programs including instructional and administrative processes, were clear and understandable for change agents and stakeholders. Additionally, results showed statistical difference among public and private HEIs based on contribution towards change management, and private sector HEIs in change processes was comparatively higher than the public sector institutions. In contrast, a medium effect size was found while comparing the sectors. It was also found that there existed significant differences in change management of public and private sectors, based on the initiation, implementation and continuation phases of the model, with a medium effect size for the first two phases and large for the third phase. Several factors involved in initiating any reform included increased learning outcome, positive impact, aesthetics and morale, peer-to-peer learning, external factors, the relevance of change, change readiness, resources, collaboration, shared decision making and leadership etc. Establishing vision while communicating change initiatives involved collective and shared vision, change as evolution, leaders' beliefs and actions, assumption of operations, change magnitude etc. Challenges during implementation involved scale of change, power obstacles, resource limitations, institutional strategies, enabling and disabling the system, decision making, transparency, political unpredictability,

pedagogy and examination, and gaps in the reform process. Types of resources and professional development during the implementation of change involved program satisfaction, self-efficacy to change, willingness to change, the effectiveness of PD etc. Effect of recent changes on institutional culture involved factors such as improved curriculum, collaborations, peer tutoring, student-centered learning, transformational leadership, innovative practices, workshops for teachers, etc. Types of things to change while fully implementing any reform involved technology integration, leadership and communication, organizational structure, teams and collaboration, policies and procedures.

Table 4.80

Summary of Statistical Analysis (n_1 , Deans=12, n_2 , Heads =24, n_3 , Faculty=514)

S#	Objectives	Hypothesis	Research Questions	Test Statistics	Table No.
1	To investigate level of change management in the light of Fullan's Educational Change Model.	N/A	<i>RQ1: What is the level of change management in higher education?</i>	Frequency Count, Percentages, Average (Mean), Standard Deviation	Table 4.1 to 4.9
2	To compare phases of Fullan's Educational Change Model among Public and Private Sector Universities.	H₀₁ There are no statistical differences regarding change management processes within public and private sector universities.	<i>RQ2: Is there any difference between change management of public and private sector HEIs, in the light of faculty opinion?</i>	Independent t-test	Table 4.10 to 4.78
3	To explore the views of heads regarding change management in Public and Private HEIs.	N/A	<i>RQ3: What are the views of heads regarding change management in public and private sector HEIs?</i>	Thematic Analysis	Heading 4.4
4	To propose a model for change management in Pakistani HEIs, based on gaps identified through research.	N/A		Based on findings of research, and existing gaps, a model was developed for change management in Pakistani HEIs was proposed.	Chapter 5

CHAPTER 5

SUMMARY, FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

The previous chapter has presented a detailed analysis of the research. This chapter provides the study's summary findings in relation to change management in higher education. The section also provides conclusions based on the findings of the research. Further, it entails the discussion section highlighting the similarities and contradictions with the existing research studies in educational change management. This section also provides recommendations based on the findings of the research. Future implications of the research are also presented. The researcher also presented harmony among change management models. Based on findings and conclusions, a model has been proposed for stakeholders to manage educational change at the higher educational level.

5.1 Summary

The current study intended to conduct a comparative analysis of educational change management of public and private sector HEIs. Major objectives were: to investigate level of change management in the light of Fullan's Educational Change Model, to compare phases of Fullan's Educational Change Model among Public and Private Sector Universities, to explore the views of heads regarding change management in Public and Private HEIs, to propose a model for change management in Pakistani HEIs, based on gaps identified through research. To achieve the objectives of the study, a self-developed questionnaire based on Fullan's (2016) educational change model, Harvey's (2001) standardized Checklist and interviews were utilized to acquire data. A mixed method approach and convergent parallel design were used to conduct the study. Deans, Heads of

Departments and Faculty members of social sciences working in public and private sector HEIs of Punjab Pakistan, were the study participants. The research was geographically delimited to Public and Private sector HEIs of Punjab province and Universities dealing with recent educational reforms (e.g., new study programs, instructional processes, administrative processes, curriculum reforms, research initiatives, etc.). Harvey's (2001) standardized Checklist was used to take the perceptions of Deans of social science faculty. A self-developed questionnaire, based on a 5-point Likert scale, later called Educational Change Management Scale was used to gather the opinions of faculty members. Heads of departments were probed through an interview protocol. Reliability and validity of the instrument were tested through suitable tests. Population included heads and teachers of public and private sector HEIs of Punjab, Pakistan. Based on the criteria of delimiting the study, the researcher selected 52 public and private sector HEIs of Punjab. The study population consisted of 52 Deans, 315 Heads of departments and 2685 Faculty members of social sciences. Two major strata were made to divide the population i.e. private and public HEIs. Stratified random sampling is used to divide the population into two subgroups. The research applied proportionate stratified random sampling to select the sample for the study. For obtaining a quantitative sample, 20% of total faculty members were selected as a quantitative sample of the study. The sample of the study was 536 faculty members which led to 315 public sectors and 221 private sector faculty members. To meet the saturation point of qualitative part of the study and to consider the criteria presented by Creswell & Creswell (2017), from each stratum 12 deans (6 public and 6 private) and 12 heads (14 public and 10 private) were selected as qualitative sample for the study. After the reasonable time frame and follow-up criteria, only 514 faculty members filled the online questionnaire. Hence the return rate was approximately 96%. Statistical test including descriptive statistics, inferential statistics and thematic analysis were used.

5.2 Findings

Findings of Demographic Analysis

1. There were total 12 Deans, 24 Heads, and 514 Faculty members of social sciences as a sample of the study. Equal participation of Deans was sampled for the study (six from each sector). Most of the Department Heads 58% (n=14) were from public sector, while 42% (n=10) heads were from private sector. Most of the faculty 59% (n=304), were from public sector, while 41% (n=210) were from private sector institutions (Table 4.1).
2. Male Deans were 83% (n=10) were male, while 17% (n=2) Deans were female. Analysis further shows that 63% (n=15) heads of departments were male, and 38% (n=9) were female. Results further mention that 57% (n=292) teachers were male and 43% (n=222) were female (Table 4.2).
3. Most of the Deans 67% (n =8) were Ph.D. and 33% (n=4) were Post Doc. Results further mention that 79% of heads of the departments were Ph.D. and 21% (n=5) were Post Doc. Analysis further indicates that 35% (n=179) were M.Phil. qualified, 57% (n=292) were Ph.D. while 8% (n=43) were Post Doc (Table 4.3).
4. Analysis showed that all Deans have more than 10 years of academic experience. Most heads 67% (16) have more than 10 years of experience, 29% (n=7) have experience ranging from 7 to 10 years and only 4% (n=1) have experience from 3 to 6 years. The analysis further reveals that Most of the faculty members 38% (n=195) have experience from 7 to 10 years, 30% (n=153) have experience more than 10 years, 24% (n=121) have experience ranging from 3 to 6 years. Only 9% (n=45) have experience up to 3 years (Table 4.4).
5. Study found that all Deans were Professors, and Most of the heads 67% (n=16), were associate professors. Furthermore, 21% (n=5) heads were Professors and only 13%

- (n=3) were assistant professors. Faculty data indicate that 54% (n=278) faculty members were associate professors, 22% (n=115) were assistant professors, 14% (n=71) were Professors and 10% (n=50) were lecturers (Table 4.5).
6. Analysis related to age mentioned that 58% (n=7) of Deans had their ages more than 50 and 42% (n=7) ranging from 41 to 50 years. Analysis further depicts that Most of the heads 54% (n=13), had their ages ranging from 41 to 50 years, 33% (n=8) more than 50 years, and only 13% (n=3) ranging from 31 to 40 years. Results further mention that 47% (n=241) faculty were from age range 41 to 50 years, 29% (n=147) were from age range 31 to 40 years, 18% (n=95) were from age range 21 to 30 years and only 6% (n=31) having age more than 50 (Table 4.6).
 7. Analysis of faculty demographics indicated that most faculty members were from public sector institutions (Table 4.7).

Objective: To investigate level of change management in the light of Fullan's Educational Change Model.

8. Scores of faculty members regarding educational change management indicated that the first phase of Fullan's model of educational change i.e. Initiation depicts high mean scores (M=4.71). The second phase of the model i.e. Implementation, shows high-level mean scores (M=4.60). The third phase of Fullan's model i.e. Continuation also reveals medium mean scores (M=3.95). Results of the analysis specify that higher education institutions are adequately coping with educational change and institutions place their focus on all three phases of the model (Table 4.8).
9. The first phase of Harvey's Checklist of change, i.e., analysis, depicts high scores (*percentage=46%*). The second phase of Harvey's Checklist i.e. planning shows medium scores (*percentage=35%*). The third phase of Harvey's Checklist i.e. implementation also reveals low scores (*percentage=19%*). Results of the analysis

specify that higher education institutions are adequately coping with educational change and institutions place their focus on the first two phases of the change management (Table 4.9).

10. Interview analysis indicated that while describing the initiation of educational reforms heads of departments identified different aspects. Themes emerged from interview were increased learning outcome, positive impact, aesthetics and morale, peer-to-peer learning, Support from HEC, change is inevitable, relevance of change, change readiness, resources, collaboration, shared decision making and leadership, problem solving process, involvement of stakeholders funding, communication, preparedness and self-efficacy and external factors.

Objective: To compare phases of Fullan’s Educational Change Model among Public and Private Sector Universities.

H₀₁ There are no statistical differences regarding change management processes within public and private sector universities.

11. Results were significant at $t(512)=3.81$. There exists a significant difference in change management between private (M=4.69) and public (M=4.38) institutions. Private sector (M=4.69) institutions hold greater capability for change management than the public sector (M=4.38). Cohen’s d 0.56 indicated a Medium effect size. Hence, H₀₁ ‘There are no statistical differences regarding change management processes within public and private sector universities’ is rejected (Table 4.10).

H_{01a} There are no statistical differences regarding change initiation processes used in Public and Private Sector Universities.

12. The comparative analysis of Fullan’s first phase i.e. change initiation resulted in $t(512)=2.54$. There exists a significant difference in change management between private (M=4.57) and public (M=4.40) institutions. Private sector (M=4.57) institutions hold greater capability for change management than the public sector

($M=4.40$) perceived by the faculty. Cohen's d 0.47 indicated a Medium effect size. Hence, H_{01a} 'There are no statistical differences regarding Change Initiation processes used in Public and Private Sector Universities' is rejected (Table 4.11).

$H_{01a(i)}$ There are no statistical differences regarding the availability of Innovations in Public and Private Sector Universities.

13. The comparative analysis of *Change Initiation and Availability of Innovations* mentioned that Results were significant at $t(512)=3.02$. There exists a significant difference in change management between private ($M=4.10$) and public ($M=3.95$) institutions. Private sector ($M=4.10$) institutions hold greater capability for change management than the public sector ($M=3.95$). Cohen's d 0.33 indicated a Medium effect size. Hence, $H_{01a(i)}$ 'There are no statistical differences regarding Availability of Innovations in Public and Private Sector Universities' is rejected (Table 4.12).
14. Private sector institutions hold greater capability than the public sector. Faculty from public sector merely agreed with the statement that "Policy standards and targets are regularly followed in the institution. Results were significant at $t(512)=3.75$. There is a significant difference between private and public sector institutions (Table 4.13).
15. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that "Monitoring and assessment criteria are reviewed on a regular basis." The results were insignificant at $t(512)=1.81$, where $p=.211$. There is no significant difference between private and public sector institutions (Table 4.14).
16. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that "Classroom teaching programs are also the prior concern of administrators." The results were insignificant at $t(512)=1.77$, where $p=.310$. There is no significant difference between private and public sector

- institutions (Table 4.15).
17. Public sector institutions hold greater capability than private sector. Faculty from private sector merely agreed with the statement that “Professional development seminars and workshops are encouraged by administrators.” Results were significant at $t(512)=4.35$. There is a significant difference between private and public sector institutions (Table 4.16).
 18. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Class management strategies are strictly being practiced in the institution.” Results were significant at $t(512)=6.51$. There is a significant difference between private and public sector institutions (Table 4.17).
 19. Public sector institutions hold greater capability than private sector. Faculty from both sectors agreed with the statement that “Intervention and special assistance are regular practices of administrators.” The results were insignificant at $t(512)=1.74$, where $p=.131$. There is no significant difference between private and public sector institutions (Table 4.18).

H_{01a(ii)} There are no statistical differences regarding Access of Information in Public and Private Sector Universities.

20. The comparative analysis of *Change Initiation and Access of Information* resulted at $t(512)=5.19$ where $p=.000$. There exists a significant difference in change management between private (M=4.12) and public (M=3.75) institutions. Results showed that private sector (M=4.12) institutions hold greater capability for change management than the public sector (M=3.75) perceived by the faculty. Cohen’s d 0.34 indicated a Medium effect size. Hence, H_{01a(ii)} ‘There are no statistical differences regarding Access of Information in Public and Private Sector Universities’ is rejected (Table 4.19).

21. Public sector institutions hold greater capability than the public sector. Faculty from both sectors agreed with the statement that “Administrators and coordinators spend enough time to organize workshops and seminars.” Results were significant at $t(512)=4.42$ where $p=.001$. There is a significant difference between private and public sector institutions (Table 4.20).
22. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Partnerships and collaborations of professional networks (training providers etc.) are encouraged by administrators.” Results were significant at $t(512)=7.60$ where $p=.001$. There is a significant difference between private and public sector institutions (Table 4.21).
23. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Development of innovations is encouraged by administrators.” Results were significant at $t(512)=3.22$ where $p=.001$. There is a significant difference between private and public sector institutions (Table 4.22).
24. Private sector institutions hold greater capability than public sector. Faculty from public sector merely agreed with the statement that “Administrators spend time and energy to build communication infrastructure to create central administration.” The results were insignificant at $t(512)=1.91$, where $p=.061$. There is no significant difference between private and public sector institutions (Table 4.23).
25. Private sector institutions hold greater capability than public sector. Faculty from public sector merely agreed with the statement that “Access to innovations and resources is encouraged in my institution.” The results were insignificant at $t(512)=1.62$ where $p=.074$. There is no significant difference between private and public sector institutions (Table 4.24).

26. Public sector institutions hold greater capability than private sector. Faculty from private sector merely agreed with the statement that “Administrators can effectively operate while initiating new standards.” Results were significant at $t(512)=4.17$. There is a significant difference between private and public sector institutions (Table 4.25).

H_{01a(iii)} There are no statistical differences regarding the Role of Stakeholders in Public and Private Sector Universities.

27. The comparative analysis of *Change Initiation and Role of Stakeholders* resulted in $t(512)=5.77$. There exists a significant difference in change management between private (M=4.20) and public (M=3.91) institutions. Results showed that private sector (M=4.20) institutions hold greater capability for change management than public sector (M=3.91) perceived by the faculty. Cohen’s $d=0.49$ indicated a Medium effect size. Hence, H_{01a(iii)} ‘There are no statistical differences regarding Role of Stakeholders in Public and Private Sector Universities’ is rejected (Table 4.26).

28. Private sector institutions hold greater capability than the public sector. Faculty from both sectors agreed with the statement that “Central administrators (Top level Management) are considered locus of decision making.” Results were significant at $t(512)=6.23$. A significant difference between private and public HEIs was observed (Table 4.27).

29. Public sector institutions hold greater capability than private sector. Faculty from both sectors agreed with the statement that “Administrators are capable of maintaining focus on innovative directions.” Results were significant at $t(512)=3.09$ where $p=.001$. A significant difference between private and public HEIs was observed (Table 4.28).

30. Private sector institutions hold greater capability than public sector. Faculty from public sector merely agreed with the statement that “Heads act as “gatekeepers” of change, often determining the fate of innovations.” Results were significant at $t(512)=5.24$ where $p=.001$. A significant difference between private and public HEIs was observed (Table 4.29).
31. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Heads and coordinators lead the change and act as a critical source of initiation.” The results were insignificant at $t(512)=1.89$, where $p=.088$. There is no significant difference between private and public sector institutions (Table 4.30).
32. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Faculty is considered as the preferred source of ideas for other colleagues.” The results were insignificant at $t(512)=1.92$ where $p=.067$. There is no significant difference between private and public sector institutions (Table 4.31).
33. Private sector institutions hold greater capability than public sector. Faculty from public sector merely agreed and private sector agreed with the statement that “Community partnerships are encouraged where necessary.” The results were insignificant at $t(512)=1.74$, where $p=.261$. There is no significant difference between private and public sector institutions (Table 4.32).
34. Public sector institutions hold greater capability than private sector. Faculty from private sector disagreed with the statement that the “Government is ready to release funds for capacity building and educational reforms.” Results were significant at $t(512)=4.68$ where $p=.004$. There is a significant difference between private and public sector institutions (Table 4.33).

35. Public sector institutions hold greater capability than private sector. Faculty from private sector were neutral with the statement that “Government acts in a problem-solving rather than a bureaucratic manner while initiating reforms.” Results were significant at $t(512)=4.99$ where $p=.04$. There is a significant difference between private and public sector institutions (Table 4.34).

H_{01b} There are no statistical differences regarding Change Implementation processes used in Public and Private Sector Universities.

36. The comparative analysis of Fullan’s second phase, i.e., change Implementation resulted at $t(512)=3.14$ where $p=.000$. There exists a significant difference in change management between private (M=4.64) and public (M=4.53) institutions. Private sector (M=4.64) institutions hold greater capability for change management than the public sector (M=4.53). Cohen’s $d=0.52$ indicated a Medium effect size. Hence, H_{01b} ‘There are no statistical differences regarding Change Implementation processes used in Public and Private Sector Universities’ is rejected (Table 4.35).

H_{01b(i)} There are no statistical differences regarding Change Characteristics in Public and Private Sector Universities.

37. The comparative analysis of *Change Implementation and Change Characteristics* resulted in $t(512)=7.42$. Therefore, there exists a significant difference in change management between private (M=4.40) and public (M=3.59) institutions. Private sector (M=4.40) institutions hold greater capability for change management than public sector (M=3.59). Cohen’s $d=0.31$, shows a Medium effect size. Hence, H_{01b(i)} ‘There are no statistical differences regarding Change Characteristics in Public and Private Sector Universities’ is rejected (Table 4.36).

38. Private sector institutions hold greater capability than the public sector. Faculty from public sector merely agreed with the statement that “Changes or innovations are attempted according to perceived priority needs.” Results were significant at

- $t(512)=6.81$. A significant difference between private and public HEIs was observed (Table 4.37).
39. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Administrators are clear about goals and resources before implementing innovation.” Results were significant at $t(512)=3.12$ where $p=.002$. A significant difference between private and public HEIs was observed (Table 4.38).
40. Public sector institutions hold greater capability than private sector. Faculty from both sectors agreed with the statement that “Initiation of the new educational program is strictly based on needs.” The results were insignificant at $t(512)=1.91$ where $p=.081$. There is no significant difference between private and public sector institutions (Table 4.39).
41. Public sector institutions hold greater capability than private sector. Faculty from both sectors agreed with the statement that “Administrators do a critical inquiry into current practices before suggesting innovation.” The results were insignificant at $t(512)=1.72$ where $p=.409$. There is no significant difference between private and public sector institutions (Table 4.40).
42. Private sector institutions hold greater capability than public sector. Faculty from public sector merely agreed with the statement that “Administrators provide formal recognition regarding unmet needs.” Results were significant at $t(512)=5.14$ where $p=.002$. A significant difference between private and public HEIs was observed (Table 4.41).
43. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Faculty members effectively deal with innovations and change directions.” Results were significant at $t(512)=4.21$ where

$p=.002$. A significant difference between private and public HEIs was observed (Table 4.42).

H_{01b(ii)} There are no statistical differences regarding Local Factors in Public and Private Sector Universities.

44. The comparative analysis of *Change Implementation and Local Factors* resulted in $t(512)=3.06$ where $p=.000$. There exists a significant difference in change management between private ($M=4.65$) and public ($M=4.49$) institutions. Private sector ($M=4.65$) institutions hold greater capability for change management than public sector ($M=3.49$). Cohen's $d=0.55$, shows a Medium effect size. Hence, H_{0ab(ii)} 'There are no statistical differences regarding Local Factors in Public and Private Sector Universities' is rejected (Table 4.43).
45. Private sector institutions hold greater capability than the public sector. Faculty from both sectors agreed with the statement that "Adoption decisions for change are made with adequate follow-through considering subjective realities." Results were significant at $t(512)=5.64$ where $p=.006$. A significant difference between private and public HEIs was observed (Table 4.44).
46. Private sector institutions hold greater capability than public sector. Faculty from public sector merely agreed with the statement that "Track record of the change process is viewed before taking next initiative." The results were insignificant at $t(512)=1.88$, where $p=.077$. There is no significant difference between private and public sector institutions (Table 4.45).
47. Public sector institutions hold greater capability than private sector. Faculty from both sectors agreed with the statement that "Heads are effectively performing instructional or change leadership roles." The results were insignificant at $t(512)=1.91$, where $p=.120$. There is no significant difference between private and

- public sector institutions (Table 4.46).
48. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Teachers are always exchanging ideas, support, and positive feelings about their work.” The results were insignificant at $t(512)=1.84$ where $p=.085$. There is no significant difference between private and public sector institutions (Table 4.47).
49. Public sector institutions hold greater capability than private sector. Faculty from both sectors agreed with the statement that “Teachers and administrators plan, design, research, evaluate and prepare teaching materials together.” Results were significant at $t(512)=4.47$. A significant difference between private and public sector institutions (Table 4.48).
50. Private sector institutions hold greater capability than public sector. Faculty from public sector was neutral and private merely agreed with the statement that “Community seems cooperative and supports change-related decisions of administrators.” Results were significant at $t(512)=9.21$. A significant difference between private and public HEIs was observed (Table 4.49).

H_{01b(iii)} There are no statistical differences regarding External Factors in Public and Private Sector Universities.

51. The comparative analysis of *Change Implementation and External Factors* resulted in $t(512)=6.99$. A significant difference in change management within private (M=4.49) and public (M=3.93) institutions were found. Private sector (M=4.49) institutions hold greater capability for change management than the public sector (M=3.93). Cohen’s $d=0.69$ indicated a Medium effect size. Hence, H_{01b(iii)} ‘There are no statistical differences regarding External Factors in Public and Private Sector Universities’ is rejected (Table 4.50).

52. Private sector institutions hold greater capability than the public sector. Faculty from both sectors agreed with the statement that “National priorities for education are set according to government policies.” The results were insignificant at $t(512)=1.40$, where $p=.078$. There is no significant difference between private and public sector institutions (Table 4.51).
53. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “New policies and new program initiatives arise from public concern.” Results were significant at $t(512)=9.45$. A significant difference between private and public sector institutions (Table 4.52).
54. Public sector institutions hold greater capability than private sector. Faculty from both sectors agreed with the statement that “Education system is doing an adequate job in developing career-relevant skills and providing highly interactive infrastructure of support.” Results were significant at $t(512)=7.45$. A significant difference between private and public sector institutions was found (Table 4.53).
55. Public sector institutions hold greater capability than private sector regarding “Government agencies are aware of problems and process of change implementation.” Results were significant at $t(512)=12.1$. A significant difference between private and public HEIs was observed (Table 4.54).
56. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “HEC and university administrators provide high-quality teaching and training materials.” The results were insignificant at $t(512)=1.74$, where $p=.211$. There is no significant difference between private and public sector institutions (Table 4.55).
57. Public sector institutions hold greater capability than private sector. Faculty from private sector merely agreed with the statement that “Policy makers prefer university

practitioners to identify change-related gaps.” The results were insignificant at $t(512)=1.69$, where $p=.071$. There is no significant difference between private and public sector institutions (Table 4.56).

H_{01c} There are no statistical differences regarding Continuation processes used in Public and Private Sector Universities.

58. The comparative analysis of Fullan’s third phase i.e. change continuation, resulted in $t(512)=4.67$ where $p=.000$. A significant difference in change management between private (M=4.13) and public (M=3.73) institutions was observed. Private sector (M=4.13) institutions hold greater capability for change management than public sector (M=3.73). Cohen’s $d=0.64$ showed a Medium effect size. Hence, the Null hypothesis H_{01c} ‘There are no statistical differences regarding Continuation processes used in Public and Private Sector Universities’ is rejected (Table 4.57).

H_{01c(i)} There are no statistical differences regarding Embedding New Structures in Public and Private Sector Universities.

59. The comparative analysis of *Change Continuation and Embedding New Structures* resulted in $t(512)=5.30$ where $p=.001$. A significant difference in change management between private (M=4.20) and public (M=3.61) institutions. Private sector (M=4.20) institutions hold greater capability for change management than public sector (M=3.61). Cohen’s $d =0.71$ indicated a Medium effect size. Hence H_{01c(i)} ‘There are no statistical differences regarding Embedding New Structures in Public and Private Sector Universities’ is rejected (Table 4.58).

60. Private sector institutions hold greater capability than the public sector. Faculty from both sectors agreed with the statement that “Administration provides moral support in the continuation of initiated reforms.” Results were significant at $t(512)=4.10$ where $p=.004$. A significant difference between private and public HEIs was observed (Table 4.59).

61. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Effective implementation of innovative projects is the main focus of administrators.” Results were significant at $t(512)=9.31$ where $p=.001$. A significant difference between private and public HEIs was observed (Table 4.60).
62. Public sector institutions hold greater capability than private sector. Faculty from private sector merely agreed with the statement that “HEC and administrators invest great interest and funding to sustain the innovative projects.” The results were insignificant at $t(512)=1.92$ where $p=.067$. There is no significant difference between private and public sector institutions (Table 4.61).
63. Public sector institutions hold greater capability than private sector. Faculty from both sectors agreed with the statement that “Administrators provide professional development and staff support for both continuing and new teachers for newly implemented programs.” The results were insignificant at $t(512)=1.89$, where $p=.081$. There is no significant difference between private and public sector institutions (Table 4.62).
64. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Heads are performing their role as key to both implementation and continuation for innovations.” Results were significant at $t(512)=7.21$. A significant difference between private and public sector institutions was found (Table 4.63).
65. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Coordinators provide explicit support for innovative project methods or materials.” Results were significant at $t(512)=8.10$. A significant difference between private and public sector HEIs was

found (Table 4.64).

H_{01c(ii)} There are no statistical differences regarding Employees' Commitment in Public and Private Sector Universities.

66. The comparative analysis of *Change Continuation and Employees' Commitment* resulted in $t(512)=9.33$. A significant difference in change management between private (M=4.05) and public (M=3.82) institutions were found. Private sector (M=4.05) institutions hold greater capability for change management than public sector (M=3.82). Cohen's $d=0.75$, shows a Medium effect size. Hence, H_{01c(ii)} 'There are no statistical differences regarding Employees' Commitment in Public and Private Sector Universities' is rejected (Table 4.65).
67. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that "Administrators pay early attention to mobilizing broad-based support for the innovation." Results were significant at $t(512)=7.44$ where $p=.002$. A significant difference between private and public HEIs was observed (Table 4.66).
68. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that "Administration always establish procedures for continuing assistance (such as a trained cadre of assisters)." Results were significant at $t(512)=6.56$ where $p=.001$. A significant difference between private and public HEIs was observed (Table 4.67).
69. Public sector institutions hold greater capability than private sector. Faculty from both sectors agreed with the statement that "Researchers are putting great effort in finding gaps to propose new initiatives." The results were insignificant at $t(512)=1.90$, where $p=.064$. There is no significant difference between private and public sector institutions (Table 4.68).

70. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Administrators introduce alternate initiatives that clashed or were misaligned with reform designs.” The results were insignificant at $t(512)=1.77$, where $p=.221$. There is no significant difference between private and public sector institutions (Table 4.69).
71. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Community partnerships are encouraged where necessary.” The results were insignificant at $t(512)=1.62$, where $p=.081$. There is no significant difference between private and public sector institutions (Table 4.70).
72. Private sector institutions hold greater capability than public sector. Faculty from public sector merely agreed with the statement that “Heads and teachers are skilled and committed to the change.” Results were significant at $t(512)=9.44$ where $p=.001$. A significant difference between private and public HEIs was observed (Table 4.71).

H_{01c(iii)} There are no statistical differences regarding Employees’ Assistance in Public and Private Sector Universities.

73. The comparative analysis of *Change Continuation and Employees’ Assistance* resulted in $t(512)=12.81$. A significant difference in change management between private ($M=3.95$) and public ($M=3.77$) institutions were found. The results depicted that private sector ($M=3.95$) institutions hold greater capability for change management than public sector ($M=3.77$). Cohen’s $d=0.76$ shows a Medium effect. The Null hypothesis H_{01c(iii)} ‘There are no statistical differences regarding Employees’ Assistance in Public and Private Sector Universities’ is rejected (Table 4.72).

74. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Change factors effectively build into the structure (through policy, budget, timetable, etc.).” Results were significant at $t(512)=5.11$. A significant difference between private and public sector institutions was found (Table 4.73).
75. Faculty from both sectors merely agreed with the statement that “Administrators are effectively guiding and coping with implementation at a level consistent with the designers of change models.” Results were significant at $t(512)=3.98$. A significant difference between private and public sector institutions was found (Table 4.74).
76. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Administrators organize seminars and workshops for professional developments of the teachers regarding new reforms.” Results were significant at $t(512)=6.78$. A significant difference between private and public sector HEIs was found (Table 4.75).
77. Public sector institutions hold greater capability than private sector. Faculty from both sectors agreed with the statement that “Heads and coordinators provide desired leadership for faculty focusing on instruction and learning.” The results were insignificant at $t(512)=1.73$, where $p=.218$. There is no significant difference between private and public sector institutions (Table 4.76).
78. Private sector institutions hold greater capability than public sector. Faculty from both sectors agreed with the statement that “Teachers are frequently receiving assistance and support for any new program or reform/initiative.” The results were insignificant at $t(512)=1.51$, where $p=.075$. There is no significant difference between private and public sector institutions (Table 4.77).
79. Private sector institutions hold greater capability than public sector. Faculty from

public sector merely agreed with the statement that “To deal with staff turnover, administrators have already planned for the orientation and in-service support for new members who arrive after the program is started.” Results were significant at $t(512)=6.46$. Hence, a significant difference between private and public sector institutions was found (Table 4.78).

80. Interview analysis indicated the collective challenges of change implementation faced by the public and private faculty, heads mentioned various aspects including scale of change, power obstacles, pedagogy and examination, institutional strategies, enabling and disabling the system, decision making, gaps in reform process, political unpredictability, resource limitations and transparency.

Objective: To explore the views of heads regarding change management in Public and Private HEIs.

81. Interview analysis indicated that while describing the initiation of educational reforms heads of departments identified different aspects. Themes emerged from interview were increased learning outcome, positive impact, aesthetics and morale, peer-to-peer learning, Support from HEC, change is inevitable, relevance of change, change readiness, resources, collaboration, shared decision making and leadership, problem solving process, involvement of stakeholders funding, communication, preparedness and self-efficacy and external factors.
82. While enquiring about establishing vision during communication of change initiative, heads of departments mentioned several aspects. Themes emerged from second interview were collective and shared vision, change as evolution, leaders’ beliefs and actions, assumption of operations, change magnitude, managing uncertainty, building networks, embodying transition, confounding autonomy, motivate and inspire progress, urgency of initiatives, self-sustaining change and

- reforms and social justice.
83. However, while describing the support, challenges and barriers of change implementation, heads mentioned various aspects including scale of change, power obstacles, pedagogy and examination, institutional strategies, enabling and disabling the system, decision making, gaps in reform process, political unpredictability, resource limitations and transparency.
84. However, while enquiring about the types of resources and professional development opportunities were given to teachers during the implementation of changes. Several themes emerged from views of heads including program satisfaction, self-efficacy to change, willingness to change, effectiveness of professional development, trust new ideas and teaching methods, self-inventive and creative in teaching, seek new ideas and ways of teaching, assurance to implement changes, institutional environment and overall flexibility of reforms.
85. Mentioning the effects of recent changes on institutional culture, heads mentioned different aspects. Themes emerged from interview transcripts included improved curriculum, collaborations, peer tutoring, student-centered learning, transformational leadership, innovative practices, workshops for teachers, research opportunities, policy regularity, and green campus.
86. While describing the required adjustments to fully implement any educational reforms, different themes emerged from interview data. Themes such as technology integration, leadership and communication, organizational structure, teams and collaboration, policies and procedures, conflicts, management practices, transition and decision making, work climate, new direction, inspiring progress and motivating, and curriculum reforms.

Section V:

Comparison of Results

87. Change management processes were observed both in public and private sector institutions in Pakistan. Change management in higher education has addressed several reforms including new study programs, infrastructure, administrative processes, instructional processes, curriculum reforms, technological changes, organizational structure and learning environment etc. The analysis showed that the contribution of change management processes in higher education was adequate. Emphasis on HEIs was on all three phases of Fullan's (2016) educational change model but mainly on upper two phases i.e. implementation and continuation. Results further revealed that reforms related to research initiatives, and new programs including instructional and administrative processes, were clear and understandable for change agents and stakeholders. Additionally, results showed that there existed statistical difference among public and private HEIs based on contribution toward change management, and private sector HEIs in change processes were comparatively higher than the public sector institutions. In contrast, a medium effect size was found while comparing the sectors (Table 4.79).

5.3 Discussions

First section of the study investigated the implementation of change initiatives in higher education by focusing on three major phases of educational change originating from Fullan's (2007, 2016) theoretical framework of educational change, which is widely adopted throughout educational research studies. Phase one, which is called initiation, comprises the processes that involve change-related decision-making in educational settings. Phase two, often called implementation, includes the practices of endeavoring to implement the change. The implementation phase covers the first two or three years of a

new practice or program. This phase is considered critical to change success because the intensity of the implementation has strictly been linked to the degree of educational outcomes (Datnow & Stringfield, 2000). The third phase, continuation, involves continuing and sustaining the program or practice over time. Despite the best efforts, many educational change-related processes rarely reach the continuation phase. Fullan has mentioned that the time from phase one to three could range from 2 to 3 years for moderately complex changes (for instance, technological changes related to online teaching and learning due to the COVID pandemic) and five to ten years for large-scale change initiatives. This study was delimited to moderately complex technological changes at the higher educational level in Pakistan.

Results of the present study indicated that the administrators and faculty of public and private HEIs had observed the effective planning and implementation of change-related processes. A study by Hassan (2016) attempted to assess the recent educational changes in higher education in Pakistan. Hassan found that faculty members were aware of the reforms such as enhanced autonomy of teachers in educational practices. Improvement of research culture, ranging the Bachelors program from 2 to 4 years through implementing Semester system. Hassan observed the positive attitude of faculty members towards educational reforms. Hassan further mentioned that faculty members were more concerned about the operational effectiveness of educational reforms for enriching teaching and learning in Pakistani higher education institutions. The challenges indicated by faculty members included fewer opportunities for professional development, inconsistency of educational policy and educational system, and the inadequacy of training, resources and assessment system. Hassan mentioned that although HEC has invested in faculty members, Most faculty members did not receive professional training in recent years. At the same time, some of them were able to attain these chances multiple times. Most faculty members mentioned

that HEC empowered teachers over time. However, this empowerment is limited to the teaching process, with their minimal involvement in decision-making at the policy level.

Fullan (2016) informed that this lack of involvement of teachers in policy making generates a lack of ownership among them. Hassan further indicated that, however, Quality Enhancement Cells had been established in institutions to assess the expected quality. Teachers might need more operational roles to contribute to attaining the expected level of quality in education. Results were also in line with Shah's (2015) study on Pakistani higher education teachers. The study showed that, despite teachers' positive approach towards the educational reforms and belief in the importance of higher education for national progress, there was limited acceptance of the communicative curriculum in semester system. Shah found that teachers' beliefs integrated with external factors such as the absence of training, lack of support and resources, educational culture and student engagement could clarify the planned and deployed curriculum. Shah insisted that the needs of faculty members may be recognized and suitable measures may be taken to create harmony between reform policies, contextual factors (internal and external) and teachers' beliefs.

Present study has shown that reforms related to research initiatives and new programs (e.g., starting M.Phil. or Ph.D.) including instructional and administrative processes were clear and understandable. Respondents believed that there existed clear evidence of need for such reforms. Responsibilities were clearly defined among personnel responsible for implementing the change. Administrators perceived that change implementers possess the responsible capacity to implement the desired reforms. These results are in line with the study conducted by Shaukat (2013) in the Pakistani context. Shaukat found several dimensions of respondents' compliance with respect to reforms in the 21st century when the higher education system in Pakistan was shifting from a local to

the global outlook. Shaukat further mentioned that despite serious challenges, reforms were gradual and most strongly challenged reforms were not even aligned with the existing educational practices. Shaukat mentioned that reform is a complicated process, and the reason of this complexity is derived from internal and external factors such as personal, emotional, structural and political etc.

Study further found that administrators are often aware of the reasons, factors, and degree of change resistance. It was also found that in HEIs have the availability of change supporters in addition to change implementers. Additionally, the respondents mentioned that administrators' and faculty members' approach and attitude toward change was usually positive both in public and private sector institutions. Therefore, change was mainly an acceptable practice within higher education. Razzaq (2012) studied Pakistani educational institutions to assess educational change management. Razzaq found that administrators and teachers were aware of the purpose and needed for the change. They also think it is suitable for student engagement and learning but also face challenges related to poor resourcing and a top-down approach to educational change. Administrators and administrators demanded well-equipped institutions, involvement in the process of reforms and capacity building for change implementers. The participants suggested improved coordination and communication for meaningful reform implementation along with a research-based, consistent, inclusive and comprehensive approach in the decision and policy-making, effective change initiation and implementation strategies, which need to be gradual. Based on the results and suggestions of the respondents, Razzaq (2012) proposed a model for educational change in Pakistan. The model was outlined with research-based, comprehensive, consistent and inclusive strategies. Loor (2021) conducted a comparative case study to explore the technology adaptation during a time of change in a global pandemic. Loor informed that the COVID-19 pandemic had compelled institutions

worldwide to pivot to online learning quickly. This drastic change required a sudden shift in traditional instruction and teaching pedagogy. Loor aimed to conduct an investigation through the lens of critical educational stakeholders (for instance, administrators and teachers). Loor concluded that teachers are the critical agents of change. Administrators must provide a supportive climate for teachers to grow, progress and learn with emerging technologies in this era where technology is evolving rapidly, creating a system that develops teachers' growth with technology.

The quantitative results showed that the administration often identifies and formulated strategies to obtain the desired reforms. Suitable approaches were carefully designed to deal with reform resistors. The change implementers, i.e., administrators, are involved in detailing the desired reform and proposing suitable approaches to implement the reform. Analysis showed that the change process promoted a positive climate within the institutions. Participants believed that the change phenomenon corresponds logically to previously held changes. The study found that change occurred with a reasonable scope and significant magnitude i.e., it was significant enough to comply. Analysis of public and private sector institutions indicated that reforms were accepted and supported. A suitable time frame was often allocated to implement the change. The technological changes during the pandemic required a sudden shift in teacher pedagogy. Campuses have to enable the facilities such as LMS and E-library. El Dallal (2020) found similar results, El Dallal attempted to identify the strategies to manage the change in higher education, especially technological initiatives such as LMS transition, from the viewpoint of IT decision makers. El Dallal utilized LDSA framework (Guerra-López & Hicks, 2017). El Dallal found no significant difference in change management strategies used to manage technological changes across different HEIs. While using explanatory sequential mixed-method (Creswell & Clark, 2017), El Dallal also found that IT leaders tend to involve all stakeholders in the

reform process. IT leaders consider contextual settings and information about their decisions through a systematic data-driven process, which results in meaningful change implementation.

Sherman's (2021) study supported the current study. Sherman sought to explore the change in institutional structures due to the COVID-19 pandemic. Sherman also explored the leadership styles present during the drastic and unexpected change caused by the pandemic. Sherman formed a framework while combining Change Theory and Crisis Theory. Sherman found different themes in the qualitative analysis including, opportunities for collaboration and trust, leadership support, the flexibility of pedagogy, comprehensive and transparent communication, etc.

Survey results of the present study further informed that institutions have committees or monitoring system to assess the change implementation. Administrators agreed that educational change is often followed by an action plan and they observed positive consequences of change. Administrators also informed the strong success of change related efforts in higher education. Respondents were agreed that there exist availability of innovations in their institution. Policy standards and change related targets are regularly followed. Teachers were of the view that monitoring and assessment criteria of new initiatives are reviewed rapidly. Taylor (2019) used change ambivalence theory (Piderit, 2000) to examine the involvements of four leaders as they led technology related change initiatives. Taylor found that change initiatives were deliberately planned and implemented, including aspects such as clear aims, stakeholders' capabilities, professional expertise, procedures for assessing change success and reflections. Change leaders also faced ambivalence and resistance while implementing the initiatives. Ultimately change leaders apply different strategies to overcome change resistance.

The quantitative analysis further depicted that respondents mentioned that during the

reform process, new teaching programs are also the priority for administrators. Administrators also encourage workshops and seminars for training and professional development for teachers to cope with reforms. Faculty members agreed that classroom management strategies are also a significant part of reforms. Administrators used strategies such as special assistance and suitable intervention to deal with the change resistance.

Kamensky (2019) conducted a study based on the organizational performance and change model (Burke & Litwin, 1992), and the results were consistent with the present study. Kamensky found that preliminary aspects significantly affect transactional change procedures within HEIs. Organizational factors such as climate, management practices, policy standards and structures create a climate that enables transactional change. Kamensky mentioned that regional climate favorable to innovations, organizational structure and university autonomy are the crucial factors that play a significant role in the transactional change processes with HEIs.

Mira-Bohigas (2021) used Kotter's 8-Step model to investigate the perspectives of university administrators regarding their change management. Mira-Bohigas mentioned that change comes in many forms in the year 2020 and afterward, universities may be able to innovate, adapt and be resilient to local and external challenges in order to utilize the opportunities. Mira-Bohigas found consistencies among administrators in their capabilities of leading change initiatives, problem-solving, supporting, inspiring and visionary.

Results of the study indicated that respondents have access to relevant information related to the desired innovations. Administrators within public and private sector institutions spend suitable time arranging seminars and workshops. The ORIC departments successfully enable collaborations and partnerships of professional networks. Administrators encourage the development of innovations within the institutions. The study found that administrators give reasonable consideration to formulate communication

infrastructure while implementing the innovation. Faculty members have easy access to the resources related to the desired innovation. Respondents believed that administrators possess the competency to operate while initiating a new procedure of innovation efficiently.

Miller (2019) conducted a study based on Disruptive Innovation Theory to explore the experiences of teachers adapting to online technologies. Miller identified four themes including continued practices and professional development can reduce resistance, administrators may develop a project-based focus on innovations to reduce implementation time and effort, teachers can proceed forward with innovation even if they are frustrated and teachers are not resistant to technological changes. The results were consistent with Harvey (2021) on innovations in HEIs. Harvey informed that historically, change within higher education was based on cyclical patterns that resulted in very few reforms. Harvey found that leadership of administrators is a significant cultural key and it is essential foster innovations and new programs within institutions. While Ahmad (2015) and Lucas (2018) informed that institutions with budget constraints, shortsighted vision and weak leadership often resist innovative practices. Motley (2021) conducted an action research using immunity to change theory. Motley revealed three key findings including, administrators' beliefs are translated into actions and specify effective policies and structures, teachers are engaged in understanding student success and enabling student-centered climate and differentiating problems related to equity required analysis of information.

The second objective of the study dealt with three sub-phases of the study. The present research was mainly linked with sector-based differences in change management in higher education. The sector-based comparison was conducted because it is a very significant area of research in the Pakistani context. The study found clear differences

between public and private sector institutions regarding change management. The second objective was to compare three phases of Fullan's (2016) *Triple I* educational change model among public and private sector universities. The objective dealt with three sub-phases of change management which were initiation, implementation and institutionalization or continuation. The study found significant differences in change management of public and private sector institutions. The findings were consistent with the study conducted by Rainey (2021), in which Rainey used Fullan's notion of educational change and assessed the teachers' perception of factors those influence effectiveness, leadership, quality and sustainability of educational reforms. Rainey found that public and private sector administrators intentionally planned to adapt the reforms. Rainey suggested that learning may be appropriately programmed to achieve specific goals and the knowledge of professionals may be involved to ensure the process of shared learning.

Shoham & Perry (2009) conducted a study considering knowledge management as means for organizational and technological change management, which contradicts the current study. They found that there existed a mechanism for change management at Israeli higher education institutions but the process is not rational. They found a lack of evidence related to pre-service training and the use of traditional methods to deal with innovations. Shoham & Perry proposed a new model to deal with the challenge of transforming institutions from "Knowledge-Based" to "Learning Based." Shoham & Perry claimed that the new model would enable administrators and decision makers to realize the essence of permanent procedures to manage change while adopting this rational model. The current study found a statistical difference between change management processes within public and private HEIs. The mean difference indicated that the private sector is more efficient in adopting change-related processes. The reason behind this finding may be that there are more standardized procedures to sustain the educational reforms. In public universities,

most of the administrators and faculty are permanent which may influence the effectiveness and quality of reforms. Environmental and cultural differences may play a significant role when dealing with educational reforms and changes. Public sector institutions focus on the student outcome through strict rules and regulations which may influence the exposure of faculty members to the change initiatives.

The study found a significant difference in change initiation processes used in public and private universities. This finding was in line with the study conducted by Sansosti & Noltemeyer (2008) which used Fullan's theoretical framework of educational change to assess the response to intervention. They found that despite the potential of administrators and faculty to bring positive change in system and student outcomes, additional planning is required to prepare individuals and the system for proper implementation. Research has proved that the first year of implementing a reform initiative predicts overall implementation success (Vernez *et al.*, 2006). Sansosti & Noltemeyer suggested that it is important to devote proper resources and time to plan initiatives at all three phases of the change process. These findings were found contradictory to the findings of Brown (2014). Brown found common themes while comparing the institutions such as interconnectivity of the university system, production of alternatives, resistance from non-stakeholders, planning requirements, dependency failure as well as staff turnover. Brown concluded that cultural change (e.g., public and private) reinforces effective innovations and cultural change differs from technical innovations. Silva, Avilucea, & Pleasant (2019) also found that faculty members supported the transition to new initiatives i.e. data-driven instruction. Faculty members mentioned that the leadership team effectively communicated change initiatives. The authors presented the linkage of findings with Fullan's (2016) model of educational change. They also found that the leaders took time to establish trust with the faculty, which helped to provide a climate that fosters change. Maintaining trust is a

common denominator in many educational change models (Herold, Fedor, Caldwell, & Liu, 2008). The new building had a positive effect on faculty morale.

A significant difference was found between the role of stakeholders in public and private sector institutions. Stakeholders' role in private sector institutions was found to be better as compared to the stakeholders in public sector institutions. The medium effect size was found in this comparison. The hypothesis that there are no statistical differences regarding the role of Stakeholders in Public and Private Sector Universities was rejected. Results supported the study of Médica-Strother (2021) on change leaders working in private sector higher education institutions. Médica-Strother found that mentoring the new generation is critical. Institutional identities support leaders in building affinity. Researcher suggested that educational administrators need to change management competencies in order to impact student outcomes. Médica-Strother mentioned that successful leaders are knowledgeable about internal and external factors that can impact an institution's culture. A study conducted by Griffio (2021) used Fullan's Change theory and assessed the curriculum change process of physical education within two public and private sector institutions. Griffio found the positive results of integrating literature into physical education. Griffio indicated that student involvement and engagement had been increased through the process. Griffio found various themes related to students such as home environment, learning perceived by students and student engagement. Themes related to teachers included motivation and course resources. Durbin (2013) studied IT managers working in public and private sector institutions regarding managing innovations in project management. Durbin found significant evidence of best practices related to project management. Levene's test was conducted to find the difference in variances between certified and non-certified sector IT managers. Durbin found that certified IT managers reported a higher perceived importance of project management than non-certified IT

managers.

Results indicated a significant difference between public and private sector universities regarding implementing change initiatives. Implementation processes in private sector institutions were found better than the change implementation in public sector institutions. Moderate effect size was found in this comparison. So, the hypothesis that there are no statistical differences regarding Change Implementation processes used in Public and Private Sector Universities was rejected. These findings were consistent with the study by Channon (2018) to evaluate the outcomes of curriculum initiatives as a part of the British Council's strategy of establishing teacher training programs in Myanmar. Channon found that curriculum initiatives and the development of professional groups enabled teachers to decide on new pedagogy, learning strategies and assessment procedures. This deliberate change process provided opportunities for teachers to enhance their professional development in relation to key aspects of the curriculum.

Novogrodsky (2012) studied educational change by finding the relationship between teachers' instructional strategies and students' learning styles. Novogrodsky followed the notion of Marzano (2003), which stated that regardless of any other confounding variable, the instruction process is the significant factor in the change process that teachers have control over. Novogrodsky found that teachers' instructional strategies were coping with various student learning styles. Therefore the null hypothesis that teachers' teaching styles are not coping with various students' learning styles was rejected. Novogrodsky also found a significant relationship between teachers' actual instructional methodologies and students' preferred instructional strategies. The current study's findings contradicted the mixed method study conducted by Henson (2011), in which no evidence of Fullan's (2016) model process was found in the implementation processes of change initiatives. Henson claimed

that the change process did not proceed according to the expected phases of the Fullan change model. Henson mentioned that it was not the intended result of the study. Henson informed that district leaders could have evaluated the change process according to the flow of each phase of the framework. Henson noted that change did occur in the classroom which was the result of the ongoing professional development of the teachers. Henson suggested that administrators can adopt research-based practices to monitor to align the change process with the theoretical frameworks.

Study found a significant difference between public and private sector institutions regarding the existence of change characteristics. Change characteristics in private sector institutions were found better as compared to the change characteristics in public sector institutions. Moderate effect size was found in this comparison. Thus, the hypothesis that there are no statistical differences regarding Change Characteristics in Public and Private Sector Universities was rejected. Thacker (2020) supports the findings of this study by indicating that faculty-led reforms and leadership often address the contemporary challenges in higher education while increasing faculty satisfaction and commitment. Thacker used the Negentropy theory (organizational commitment, innovation and leadership) to address change management and investigated how administrators can sustain a faculty who effectively participate in change and innovations in the universities through new initiatives, ideas and programs. Thacker found that effective faculty innovations depend on supportive academic administrators. Thacker proposed four strategies for administrators including, compelling and communicating vision, systematic hiring structures, encouraging innovations from prospective faculty members and providing early-service support.

Venezia (2015) conducted a study on faculty response to change and factors those

affect change efforts. Venezia investigated the change in curriculum to understand the significance of the educational change. Venezia worked with four participants who were involved in curriculum reforms. In two months, participants were asked to share their experiences with change implementation (Fullan, 2016). Venezia found themes involving relationship, guidance, empowerment, resistance, guidance, standards and beliefs. Venezia mentioned that the main element which is critical for educational change is leadership (Fullan, 2011). A study by Millen (2015) supports the current study's findings. Millen investigated innovative pedagogies supported by instructional technologies. Millen informed that education could exploit the advantages of technological innovations to help make education more personalized for educators. Millen found that change being sought in the 21st century contributes to more intense effects on individualized learning. While in its early adoption stage, innovations may face resistance from faculty and administrators.

A difference between public and private sector institutions regarding the effect of local and external change characteristics. Effect of local and external factors in private sector institutions was found to be more significant as compared to the effects in public sector institutions. A large effect size was found in both comparisons. Hence, the null hypothesis related to both variables was rejected. Dodd (2013) conducted a study to propose a theoretical model of change resistance and decision-making for virtual learning course designers. Dodd focused on the diffusion of innovations in online course design. Dodd found that detailed decision-making processes and rigidity of course designers regarding change initiatives more likely moderate the diffusion of innovations. Dodd found that course designers were diverse in experience and training for designing online curricula and the decision-making styles of course designers rarely contributed to their change resistance. Moreover, the designers responded to change situations with cognitive rigidity and reported lower resistance to innovations. Findings are consistent with Quardokus (2014) who

explored change strategies of STEM stakeholders. A common conclusion of previous research studies is that innovation may be proposed in teaching strategies (Gibbs *et al.*, 2009). STEM on the other hand rarely exposed to broader changes (Kardash & Wallace, 2001; Seymour & Hewitt, 1997). Thus, it requires more effective innovations. Research studies suggested that change strategies may focus on changing the higher education environment.

In contrast, Quardokus used Complexity Leadership Theory and Kotter's eight-stage process to focus on change strategies for individual instructors. Quardokus suggested involving the head of departments in decision-making and change implementation and forming faculty learning communities (FLCs) to promote change vision. Taylor (2015) conducted a study on leading change in private sector higher education institutions situated in Midwest US. Taylor noted that administrators led the successful change through their vision rather than leading change using a theoretical framework. Taylor found that university presidents establish vision and goals and procedures for organizational change. President overcame the hindrances of the status quo and produced effective organizational change which resulted in a sparkling campus climate.

A difference between public and private sector institutions regarding change continuation: change continuation in private sector institutions was found better than in public sector institutions. The medium effect size was found in this comparison. Consequently, the hypothesis that there are no statistical differences regarding Continuation processes used in Public and Private Sector Universities was rejected. Each item in this domain was further tested to assess the effect sizes. These results were in line with the study conducted by Phelps (2018) using a grounded theory approach to assess change in higher education. Phelps investigated how leaders and administrators can effectively implement

innovation in higher education. Phelps obtained various themes from qualitative data including business processes, change management, technology acceleration, change aversion etc. From the themes that emerged from the study, Phelps successfully proposed a model for organizational change and named it as Barycentric Leadership theory. Phelps's model clarified how to lead organizational change while maintaining its focus on the core values, vision and mission of the institution.

A study by Kendrick (2019) on institutional efforts to meet the emerging innovations supports the study's findings. Kendrick used Schwandt's (1994, 1997) theory of the Organizational Learning Model. Kendrick used American Virtual Universities as the research site for the study. Kendrick found that the culture of virtual universities was found to be a culture suitable and adaptive for learning. The collaboration of virtual universities enables collective action and reflection. The ability of virtual universities to operate as ambidextrous institutions enables ongoing knowledge adjustments. The study results were consistent with Evans (2018) which utilized Resource Dependency Theory to assess the institutional changes after the initiation of the Merit Aid Program for public sector universities in the US. Evans investigated whether universities altered the expenditures and faculty recruitment patterns as universities became more resource dependent on student dues. Evans found that after the initiation of the merit aid program, institutions started spending more finances on scholarships, support and hiring visiting faculty compared to universities that did not adopt merit aid programs.

Heads' interviews provided various themes. First question investigated heads about initiating any of the reform/s related to your institution. (New practices/new resources etc.)? Through analysis and coding of responses different themes emerged, which included Increased learning outcome, positive impact, aesthetics and morale, peer-to-peer learning,

change is inevitable, the relevance of change, change readiness, resources, collaboration, shared decision making and leadership, problem-solving process, involvement of stakeholders, funding, communication, retreats are essential and support from HEC. The above themes were found consistent with various studies with similar results (Allaoui, & Benmoussa, 2020; Davis, & Fifolt, 2018; E Akins, *et al.* 2019; Markina, *et al.* 2019; Morales-Martínez, & Rosado-Gómez, 2018).

Second interview question explored heads' views about the question of how was a vision clearly established and articulated when communicating these change initiatives? (Mutual adaptation, contributing roles, development of new practices/ programs/ building etc.). Through analysis and coding of responses, different themes emerged, which included collective and shared vision, leaders' beliefs, leaders' actions, institutional culture, systemic oppression, teaching reforms, researching, managing, advising, engaging, policy implementation, workload and evaluation of work. The above themes were consistent with various studies with similar results (Rieg, Gatersleben, & Christie, 2021; Seyfried & Ansmann 2018; Suraeva & Plaksina, 2018; Vlachopoulos, 2021; Wroblewski, 2019). Moreover, Kennington (2020) informed that managing affective dimensions of reforms can be overwhelming to administrators, which can lead to weak reform efforts.

Third interview question investigated heads' views on the support/ challenges/ barriers voiced when the recent change initiatives were implemented? (Beliefs, Behavioral Action, Curriculum Change, etc.). Through analysis and coding of responses different themes emerged, which included embodying transition, confounding autonomy, legitimizing work, building networks, managing uncertainty, transparency, academic freedom, decision making, publishing of research, preparing students for research, enabling/disabling the system, scale of change (communication and coordination), power

(leadership, resistance to change) and resources (infrastructure, time, funding, priorities, reliance on individuals, personal resources). The above themes were found consistent with various studies with similar results (Brown, 2014; Carter, *et al.* 2013; Grant, & Grant, 2016; Khan, 2016; Kamoche, Siebers, & Mamman, 2015; Nickerson, 2014).

Fourth interview question inspected heads' views on types of resources and/or professional development opportunities given to teachers during the implementation of changes you have indicated? (Beliefs, Behavioral Action, Curriculum Change, etc.). Through analysis and coding of responses different themes emerged, which included program satisfaction, self-efficacy to change, willingness to change, trust new ideas and teaching methods, reluctance to try new ideas or teaching methods, cautious of new ideas and teaching methods, accepts new teaching methods, enjoys new ideas and ways of teaching, considers self-inventive or creative in teaching, seeks new ideas and ways of teaching, assurance to make learning environment changes, assurance to make assessment changes, assurance to make curricular changes, assurance to make instructional changes, assurance to make management changes, contentment with current assessment methods, contentment with current management techniques, contentment with current learning environment, contentment with current instructional strategies, contentment with current curriculum, and overall flexibility of program. The above themes were found consistent with various studies with similar results (Grawe, 2021; Hoque, & Covaleski, 2020; Lodewijks, 2020; Lewis, Conaty, & Lewis, 2012; Noumair, & Shani, 2018).

Fifth interview question queried heads about how the recent changes (Reforms in administrative and instructional processes) affect the culture of the institution? (Mutual adaptation, learning leaders, shared learning, etc.). Through analysis and coding of responses different themes emerged, which included literacy integration, collaborations (community, NGOs, government agencies, membership, companies of practice, industry),

learning through peer tutoring, student-centered learning, transformational leadership, innovative practices, workshops for teachers, research (multidisciplinary, research centers, funding, conferences), policy regularity (SDGs, research, funding, strategy, operations), green campus (water, transport, energy, waste, climate justice). The above themes were found consistent with various studies with similar results (Aziz, 2018; Dejean, 2015; Eichelkraut, 2017; Hazelwood, 2016; Hoel, 2020; Marshall, 2021; McGrath, 2017; Rentsch, 2018; Sacks, 2017).

Sixth interview question inquired heads about the types of things that would have to change for any of the initiatives to become fully implemented? (Adjustment of beliefs, contributing to sustainability and implementation, etc.) Themes included technology integration, leadership and communication, change teams and collaboration, trust, conflicts, transition and decision making, new direction, inspiring progress and urgency, and curriculum reforms (pedagogy, assessment, practical projects, programmes). The above themes were found consistent with various studies with similar results (Burdick, 2021; Griffith, 2021; Johnston, 2013; Khan, 2021; Lyson, 2020; McLaughlin, 2020; Shmul-Cohen, 2016; VanHook-Schrey, 2008).

Comparison of qualitative and quantitative analysis was the condition of convergent parallel design (Creswell, 2018). The comparison depicted a linkage between both sets of analysis. The qualitative data has shown instances similar to the quantitative data. The two sets of data were aligned so that perceptions of all three categories of the participants were paralleled. Deans, Heads and Faculty members agreed that the process of change initiation demands careful consideration of available resources and institutional capacities to accommodate specific changes. Participants mentioned that there must be a proper mechanism to support and embrace new ideas. For 21st-century faculty institutes, teachers can be part of the decision-making process. Participants mentioned that vision for reforms

might differ from a local perspective, but from a global perspective, the external factors may play a significant role in the process. Participants further mentioned that challenges in change initiatives involved managing uncertainty, transparency, academic freedom, decision making etc. Thematic analysis and quantitative analysis emphasized the significance of resources and professional competencies of change agents. Silva, Avilucea, & Pleasant (2019) opined that parallel views of administrators and faculty members are necessary for effective change implementation. The above findings were consistent with various studies with similar results (Blakeley, 2020; Johnson, 2017; McAndrew, 2018; Mienczakowski, 2013; Pulinkala, 2012; White, 2016; Witham, 2014).

5.4 Conclusions

Objective 1- To measure the contribution of change management in higher education in the light of Fullan's Educational Change Model.

While focusing on Harvey's (2001) Checklist, the Deans of social sciences indicated that changes (such as new programs, administrative processes, instructional processes, admission standards, technological changes and research initiatives) were clear and understandable. The need for changes was indicated clearly. The administration has mentioned the personnel for initiating and implementing the change. Institutions identify the benefits of implementing change. Top-level management put stress to implement the change. Change agents possess the desired capability to initiate and implement the change. Management identifies and communicates the value of change processes with stakeholders. The study concluded that HEIs also indicate change resistors and measure the approximate intensity of change resistance. Administration in HEIs also provides desired support for mandating change processes. Change agents and stakeholders possess a positive and acceptable approach. Management in HEIs also devised plans and strategies to cope with changes and resistors. Stakeholders are actively involved in defining the change processes

and planning for implementation. Participants observed that the scope of reform processes is reasonable and create a positive climate within institutions. The study also concluded that management devised a monitoring plan and provided a suitable time frame to implement the reforms in educational settings. Institutions provide clear procedures and any reform process and ensure the positive outcome of the reform process.

Study also concluded that higher education institutions are adequately coping with educational change, and institutions place their focus on first two phases of Fullan's model of educational change. The mean scores of faculty indicated that HEIs deal with educational reforms in a systematic manner at first two phases, while change processes in Fullan's continuation phase depicted low results.

Objective 2- To compare three phases of Fullan's Educational Change Model among Public and Private Sector Universities.

The study found the difference in change management between private and public sector institutions. Private sector institutions hold greater capability for change management than the public sector. The study indicated a Medium effect size. Hence, it was concluded that there are significant differences in change management processes within public and private sector HEIs in Pakistan.

The comparative analysis of Fullan's first phases, i.e., change initiation, implementation and continuation, indicated significant results. A difference in change management between private and public sector institutions. Private sector institutions hold higher capability for change management than the public sector perceived by the faculty. The Analysis further indicated a Medium effect size. Hence, it was concluded that there are statistical differences regarding Change Initiation, implementation and continuation processes used in HEIs.

Objective 3- To explore the views of heads regarding change management in Public and Private HEIs.

The qualitative data analysis was based on the transcripts of interviews conducted with heads of social sciences departments. The purpose was to obtain a more comprehensive understanding of the change processes in the public and private sectors. The first question probed heads of social sciences about factors involved in initiating any reform. The themes that attained from the first interview question included Increased learning outcome, positive impact, aesthetics and morale, peer-to-peer learning, support from HEC, the relevance of change, change readiness, resources, collaboration, shared decision making and leadership, problem-solving process, involvement of stakeholders, funding, communication, preparedness and self-efficacy, external factors. The second interview question probed heads about establishing vision while communicating change initiatives. The themes that acquired from the second interview question included collective and shared vision, change as evolution, leaders' beliefs and actions, assumption of operations, change magnitude, managing uncertainty, building networks, embodying transition, confounding autonomy, motivating and inspiring progress, the urgency of initiatives, self-sustaining change, reforms and social justice.

The interview further probed heads about support/ challenges and barriers during implementation. The themes that achieved from the third interview question included the scale of change, power obstacles, pedagogy and examination, institutional strategies, enabling and disabling the system, decision making, gaps in the reform process, political unpredictability, resource limitations and transparency. The fourth interview question probed heads about types of resources and professional development during the implementation of change. The themes that appeared from the fourth interview question included program satisfaction, self-efficacy to change, willingness to change, the

effectiveness of professional development, trust in new ideas and teaching methods, self-inventive and creativity in teaching, seeking new ideas and ways of teaching, assurance to implement changes, institutional environment, overall flexibility of reforms.

The fifth interview question. The themes attained from the fifth interview question that probed heads about the effect of recent changes on institutional culture; including improved curriculum, collaborations, peer tutoring, student-centered learning, transformational leadership, innovative practices, workshops for teachers, research opportunities, policy regularity, green campus. The sixth interview question probed heads about the types of things to change while fully implementing any reform. The themes that acquired from the sixth interview question included technology integration, leadership and communication, organizational structure, teams and collaboration, policies and procedures, conflicts, management practices, transition and decision making, work climate, new direction, inspiring progress and motivating, curriculum reforms.

Comparison of Results

Change management processes were observed both in public and private sector institutions in Pakistan. Change management in higher education has addressed several reforms including new study programs, infrastructure, administrative processes, instructional processes, curriculum reforms, technological changes, organizational structure and learning environment etc. The analysis showed that the contribution of change management processes in higher education was adequate. The emphasis of HEIs was on all three phases of Fullan's (2016) educational change model but mainly on the upper two levels i.e. implementation and continuation. Results further revealed that reforms related to research initiatives, and new programs including instructional and administrative processes, were clear and understandable for change agents and stakeholders. Additionally, results showed statistical differences among public and private HEIs based on contribution toward

change management, and private sector HEIs in change processes were comparatively higher than the public sector institutions. In contrast, a medium effect size was found while comparing the sectors.

5.5 Recommendations

Recommendations for Public sector Universities are as under:

Based on research findings, it appears that public sector universities are generally lower in their implementation and effectiveness of change management processes compared to private sector institutions or organizations. The following recommendations may play vital role in this context.

1. It was found that Policy standards and targets are rarely followed in the public sector institutions. Study recommended that public sector universities prioritize the development and implementation of effective change management, such as engaging stakeholders in decision-making, clearly communicating the goals and benefits of the change, and providing support and means for change implementation.
2. It was found that Administrators spend less time and energy to build communication infrastructure to create central administration. It's also important to involve all stakeholders, containing faculty, staff, and students, in the process to ensure that the communication infrastructure meets their needs. Furthermore, administrators could also consider implementing communication technologies such as intranet, messaging platforms, and other digital tools that can facilitate communication within the university.
3. It was found that access to innovations and resources are rarely encouraged in public sector universities. University administrators may consider allocating resources for professional trainings for change agent e.g. staff and faculty to be able to better

- utilize the new innovations and resources. Additionally, administrators could also establish partnerships with external organizations to access new innovations and resources that might not be available within the university.
4. The study found less involvement of department heads in guiding innovations. Universities may establish a culture of continuous improvement and change, where the change management process is integrated into the university's culture and operations. Universities may encourage active participation and input from all stakeholders in the identification of unmet needs.
 5. It was found that community partnerships are rarely encouraged in public sector. It is recommended that steps be taken to increase the level of engagement and collaboration between public sector institutions and community organizations. This could include developing specific policies and programs to promote community partnerships, and creating opportunities for community members to provide input and feedback on institutional decision-making.
 6. It was found that educational reforms are rarely attempted according to perceived priority needs. It may be beneficial to conduct ongoing evaluations of educational reform efforts to ensure that they are effectively addressing identified needs and making a meaningful effect on student learning. Furthermore, it might be important to establish a clear framework of priorities, goals and objectives of the reform and a plan of how to accomplish them.
 7. It was found that university administrators rarely provide formal recognition to unmet change needs of university. It is recommended that steps be taken to improve communication and collaboration between university administrators and other stakeholders, such as faculty, staff, and students, to better identify and address unmet change needs. This could include creating opportunities for stakeholders to provide

- input and feedback* on university decision-making, and providing training and resources for administrators to effectively engage with stakeholders.
8. It was found that change agents rarely review the track record of change processes before taking new initiative. It is recommended to improve the process of planning and implementation of change initiatives by incorporating a review of past change efforts. This could include conducting a thorough analysis of past change processes, identifying what worked well and what did not, and using this information to plan design future change initiatives.
 9. It was found that heads and faculty are less skilled and committed to the change. It is recommended to improve the capacity and willingness of these stakeholders to lead and participate in change efforts. This could include providing training and professional development opportunities for heads of departments and faculty on leading and participating in change efforts, as well as creating opportunities for them to learn from successful change initiatives in other HEIs. Furthermore, it's important to communicate clearly and effectively the goals, objectives and the benefits of the change initiative to gain commitment from the heads of departments and faculty.
 10. It was found that, administrators rarely offer in-service support for new faculty who join after the reform initiation, which may lead to staff turnover. It is recommended that steps be taken to improve the onboarding process for new members and ensure providing the necessary orientation and in-service support for their successful roles. This could include developing a comprehensive orientation program for new members that covers the goals, objectives and expectations of the program, as well as the policies, procedures and resources available to support them.
 11. Faculty and heads of departments are being incentivized through monetary rewards but the educational managers are often neglected. Performance-based monetary

rewards may be assigned to educational managers, faculty and heads.

In conclusion, public sector universities may take proactive steps to improve their change management processes in order to effectively navigate and respond to the rapidly changing higher education landscape in 21st century.

Recommendations for Private sector Universities are as under:

Based on research findings, it appears that private sector universities may need improvements in certain areas. The following recommendations may play vital role in that context.

1. It was found that Professional development seminars and workshops are less encouraged by administrators in private sector HEIs. Universities may build a strong case for how specific workshops or seminars align with the university's goals and objectives can also make a convincing improvement. Additionally, finding cost-effective solutions, such as online courses or self-paced learning, could also be helpful in making a case for professional development to administrators.
2. It was found that private sector administrators operate less effectively while initiating new standards. It is recommended to encourage a culture of continuous improvement and responsiveness to changing needs within the university. Provide administrators with the necessary incentives, support and resources to effectively implement new standards.
3. It was found that Government rarely release funds for capacity building and educational reforms in private sector universities. It is recommended that administrators may communicate effectively with the government officials and policy makers about the needs and benefits of capacity building and educational reform in private HEIs.

4. It was found that private sector receive less support from government regarding problem-solving. It is therefore recommended that universities may foster a culture of collaboration and cooperation among the government, private sector universities, and other stakeholders by creating opportunities for interaction and feedback.
5. It was found that Policy makers rarely prefer university practitioners to identify change-related gaps. It is recommended to develop a clear and transparent process for involving university practitioners in the identification of change-related gaps and in the development of policies and strategies to address them.
6. It was found that HEC and administrators invest lesser interest and funding to sustain the innovative projects in private sector. It is recommended to develop a system of accountability, where the university administration is held accountable to HEC, policy makers and stakeholders for the progress and outcome of innovative projects. Develop partnerships with external organizations, such as industry and government, to leverage expertise and resources and to increase the chances of sustainable funding.

General recommendations for both sectors are as under:

1. Universities may provide strategic planning and training for recent educational reforms. Public sector universities may provide intentional mentoring for next-generation leaders. HEIs may deploy mentoring programs to foster leadership skills which may produce skilled change agents.
2. Creating an organizational structure with greater integration and differentiation may support the processes of educational reforms in Public sector HEIs. It is essential to enable horizontal coordination in departments and faculties of Public sector HEIs. It is essential to enable linkage between bottom-up processes and institutional leadership while performing educational reforms.

3. Change Management in HEIs may be improved through making sticky plans (Fullan, 2016), continuous improvement in change management models (advances towards implementation goals, accountability for implementation activities and check-ins with change agents and stakeholders, p. 28), attentiveness (p. 80), culture building (individually and organizationally) and research-based change initiatives.
4. Universities may activate various change agents, such as change teams comprising students, management, and organizational leadership to energize change dynamics.
5. It was found that external factors deploy a noteworthy effect on the change-related processes in HEIs. The study recommended that it is essential to measure the intensity of the external factors before implementing educational reforms.
6. It is recommended that creating an organizational structure with greater integration and differentiation may support the processes of educational reforms in HEIs. It is essential to enable horizontal coordination across departments and faculties. Additionally, it is essential to enable linkage between reform processes and organizational leadership while promoting educational reforms.
7. During the implementation process involving teachers parallel with decision makers could be the more meaningful approach to deploy educational reform. Keeping teachers more active during the reform process may enhance their professional capacities and become more proactively involved in change management. The primary purpose of implementing any reform is to acquire change in the process of learning.
8. Another recommendation for administrators is to consider the stakeholders' input from the planning phase of any educational reform. Enabling stakeholders' input in reform process confirms their investment of time and energy to ensure successful initiation of reforms. Individual needs of stakeholders must be recognized and

- valued in the reform process. The study has recommended engaging stakeholders in collaborative efforts and linking different approaches right from the beginning of reforms till the implementation.
9. Few educational changes (technological change such as an LMS transition), will involve a lengthy process and might cause problems with high costs and issues requiring immediate action. To lead a successful educational change, leaders need to adopt a visionary and performance-driven mindset beyond just fulfilling training requests.
 10. Keeping teachers more active during the reform process may enhance their professional capacities, and they will become more proactively involved in change management. Feedback can play an important role in change-related processes. HEIs may implement the model to guide the change management processes. Administrators and leaders can benefit from the proposed model while implementing change initiatives. The proposed model is open for testing and improvement.
 11. It was found that community seems less cooperative and rarely supports change-related decisions of administrators. Universities may provide training and resources to the staff and faculty to help them comprehend the significance of community engagement and the role they play in it.
 12. It was found that administrators are less effectively guiding and coping with implementation at a level compatible with change models. Universities may provide administrators with the necessary support and resources to effectively implement change models. It can also increase the level of consistency between the planning and implementation of change models which can result in efficient use of resources and better outcomes.

5.5.1 Implications

Few implications (theoretical / practical applications of the findings) derived from the study are mentioned as under

1. Using Fullan's initiation, implementation and continuation model can help higher education institutions to effectively plan and execute change management initiatives.
2. Research on change management in higher education using Fullan's model can inform the development of effective reform strategies and practices in other sectors, such as business and government.
3. Improved communication and collaboration between stakeholders are crucial for successful change management.
4. Strong leadership and visionary approach are necessary to guide the change process and ensure buy-in from faculty, staff, and students.
5. Resistance to change is a common challenge in higher education and must be addressed through effective communication and stakeholder engagement.
6. A thorough understanding of the current system and its strengths and weaknesses is essential for effective change management.
7. A phased and incremental approach to change can help to mitigate risks and ensure that the new system is fully tested and refined before full implementation.
8. Regular monitoring and evaluation of the change process are necessary to make adjustments as needed and ensured the achievement of the desired outcomes.
9. The change should be aligned with the institution's mission and vision and it should be communicated effectively to all the stakeholders.

5.5.2 Future Research

It is clear from previous studies that there exists a research gap in area of change management in Pakistani HEIs. There are numerous possibilities for future research considering regional and cultural diversities. Depending on the conclusions and recommendations of this particular research, following opportunities for future research have been identified:

1. The participants were diverse with regard to demographics such as sector, gender, geographic location, and institution type. It may be helpful to explore whether demographic variables impact a leader's openness to innovation. This would contextualize the lived experiences of participants even further.
2. A longitudinal study is also needed to investigate change management in higher education settings, following up on how change agents or stakeholders implement innovative strategies. A longitudinal investigation would offer other institutions of higher education ideas of how to formulate their professional development strategies based on the results from the investigation.
3. Future research in change management might expand upon this mixed-method research by including more practitioners, each as a unique case, and expanding upon the rich data obtained through triangulation strategies. Future studies should also include creating an interdisciplinary approach where curriculum reforms and innovative strategies are assessed.
4. More studies need to be conducted with the same research questions and possibly the same survey instrument and interview protocol. By including more disciplines such as management sciences etc., more work needs to be done to increase the number of participants involved in the study to get more data and a broader view of the situation.

5. The proposed model is open for future research, testing, and improvement. Further research, on proposed model, will continue to benefit change agents in HEIs by prompting further analysis and examination into the effective implementation of change initiatives. Presentation of the proposed model to the policymakers to provide their views from a system perspective with regards to feasibility and necessary amendments.

5.6 Limitations

The limitations are the features that can influence the findings of the study and the researcher have minimal control over them. Limitations also refer to threats to the internal validity (Creswell, 2013). Creswell (2018) specified that the main limitation that mixed method research can face is the chance of discrepancies among two significant sets of data i.e. qualitative and quantitative. Another limitation mentioned by Creswell (2018) is that mixed method research requires careful considerations and a certain expertise to integrate qualitative and quantitative results. The additional limitation is related to the empirical generalization of the study findings. Since this study was delimited to the faculty of social sciences, the scope of deriving broader conclusions is limited. Accordingly, by excluding other faculties, this study narrows the range of perspectives on educational change management.

Lewis *et al.* (2014) informed that generalizability as including three types of inferences,

- ***Internal or Representational Generalizability***, indicates the findings drawn from the study sample can be generalized for the overall population.
- ***Inferential Generalizability***, shows the findings can be utilized to draw broader conclusions.
- ***Theoretical Generalizability***, which specifies whether theoretical principles

can be derived from the research for wider applications.

Keeping the Lewis *et al.* (2014) view, the study attempted to reduce the limitations of the study by selecting a representative sample (public and private HEIs of Punjab) of respondents. Most of the participants were aware of the phenomenon of educational change management. The study also avoided Inferential Generalizability from this research in other academic contexts and types of HEIs e.g. engineering, natural sciences and medical sciences etc. The study tried to gather significant qualitative inferences that could provide the potential for broader applications of the study findings (Ormston *et al.*, 2014). To achieve theoretical generalizability, the study tried to find generalizable instances that can widen the scope of the research (Yin, 2015). The generalizability of the findings is also reliant on the honesty of the respondents while responding to the Checklist, survey semi-structured interview.

5.7 Products of the Study

5.7.1 Harmony among Change Management Models

Kurt Lewin (1942) initially presented field theory. The field theory suggests that behavior is associated with individuals and the climate. Lewin's theory focused on the characteristics of the individual and the surroundings and their impact on human behavior (Cherry, 2016). Additionally, Lewin (1942) presented a three-phase process of change. Lewin's unfreeze-change-refreeze method is still operative in this era (Radford, 2014). Kotter presented an eight-phased organizational change model, later updated in 2016 and known as Process for Leading Change. Hiatt (2006) presented a five-phase model for change i.e. awareness, desire, knowledge, ability, and reinforcement also called ADKAR model for change. Fullan (2016) presented a three-phase model of education change, which has recently reshaped the research on educational change and provided directions to educators, policymakers and researchers.

Lewin's (1942) Unfreezing phase is identical to the first five phases of Kotter (1996) which include sense of urgency, form coalition, create vision, communicate vision and empowerment. Lewin's change phase is identical to Kotter's create quick wins. The last phase of Lewin's model i.e. Refreezing corresponds to the last two stages of Kotter's model i.e. build on the change and embed the change. Similarly, the first two phases of Kotter (Create Urgency and Form a Coalition) are identical to Awareness of ADKAR model (2006), Kotter's third and fourth phases (create and communicate vision) correspond to the second phase of ADKAR i.e. Desire. Kotter's empowering others relates to ADKAR's knowledge and ability. The last three phases of Kotter are identical to the reinforcement of ADKAR model. Additionally, the combination of ADKAR's awareness and desire can be observed in the initiation phase of Fullan's (2016) Model. ADKAR's Knowledge and Ability is the requirement of Fullan's Implementation. Lastly, ADKAR's reinforcement

relates to Fullan's continuation. A significant difference between the four models is Fullan's emphasis on policy coherence during the initiation phase, local and external factors during the implementation phase, sustainability during the continuation phase and outcomes in the form of organizational performance and student learning. ADKAR offers needs and abilities; Kotter presents reforms based on vision, and Lewin strictly focuses on the actual change process.

Initially, Meade (2013) and Rupert (2015) presented harmony between Kotter and ADKAR models. Later, Ford (2018) presented harmony between Lewin, Kotter and ADKAR models. This research enhanced the model harmony presented by Ford (2018) by integrating the Fullan (2016) model. Figure 30 presents the harmony among phases of change management models.

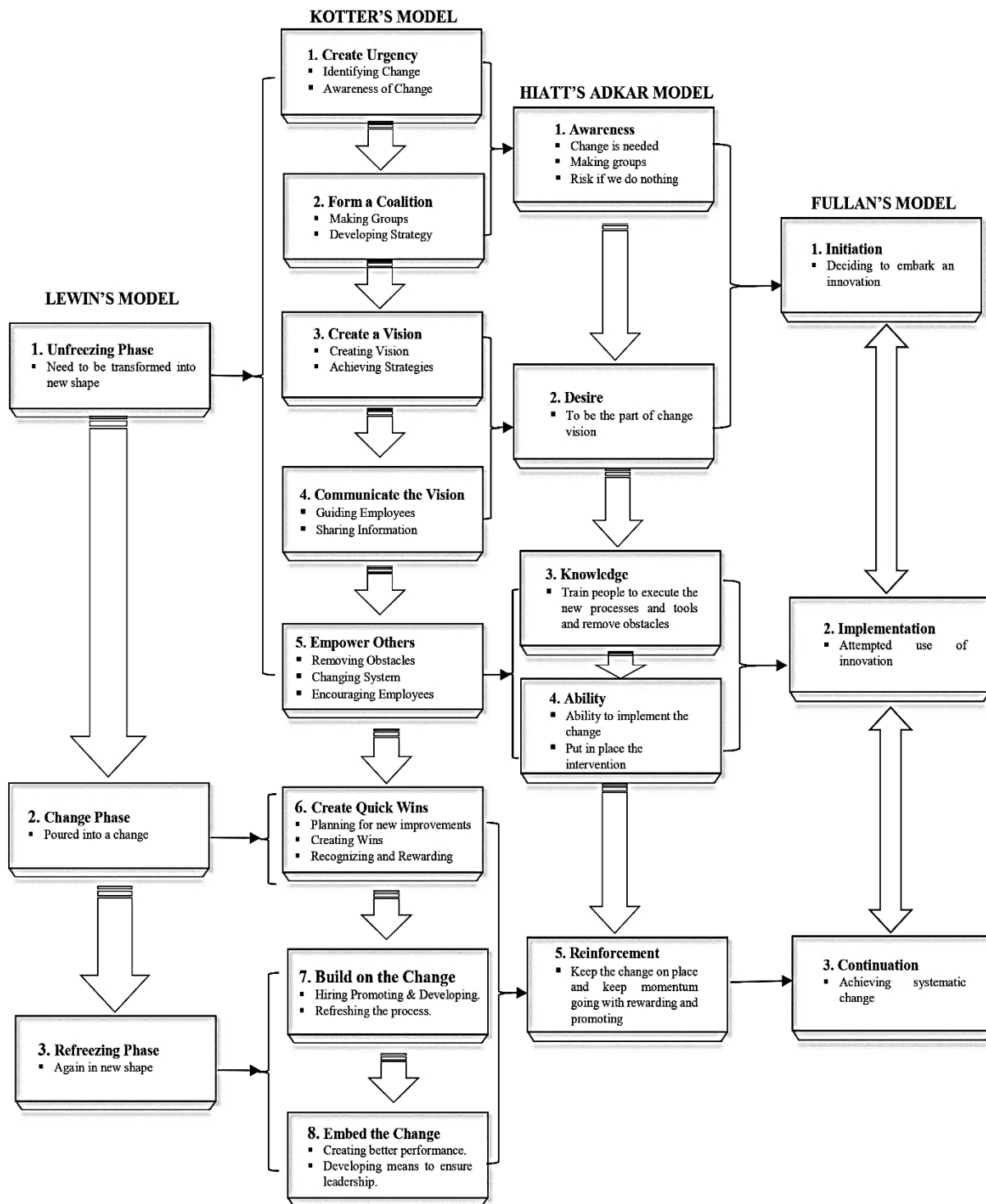


Figure 30: Harmony among Change Management Models

Objective 4 - To propose a model for change management in Pakistani HEIs, based on gaps identified through research.

5.7.2 Proposed Model of Change Management for Pakistani HEIs

The evidence and insights from this study led to the proposal of three dimensional model of change management in higher education. The model is derived from the analysis of the Fullan Model, faculty scores and views of the heads of departments. The proposed model is termed as *Model for Change Management for HEIs in Pakistan*. The model is developed on the bottom-to-top approach. The proposed model is three-dimensional. These three dimensions provide crucial effects on the change processes in HEIs. The dimensions of the model are presented below.

- Student oriented dimension
- Teacher oriented dimension
- Leadership oriented dimension

Step 1: Change Processes

Phase I: Need Analysis

Need analysis includes the processes that include preparations and decisions to proceed with particular educational reform. The phase also highlights the challenges, issues and problems of the reform process.

Phase II: Implementation

Implementations involve the processes, assumptions, sources and experiences of putting a reform into practice.

Phase II: Sustainability

The sustainability phase detects whether the reform becomes part of the system or discarded by decision makers or obsoleted.

Step 2: Feedback Loop

The model extends into a feedback loop to improve the reform process. It involves

teachers who are ready for change, embracing change, supporting change initiatives, communicating, collaborating, being involved in curriculum reform and having a focus on teaching and learning. Whereas the role of leadership includes focusing on vision and mission, keeping the stakeholders engaged, mandating change, enabling shared decision making, policy coherence and accountability of the change process

5.7.2.1 Validation of the Proposed Model

The proposed model was presented to the panel of experts for face and content validity. The recommendations, suggestions and ideas offered by experts were incorporated into the proposed model. The proposed model is open for improvements, testing, and future research.

5.7.2.2 Preferences

The model can be given preferences under but not limited to the following conditions:

1. *A clear focus on the desired change:* The model is centered on the goal of implementing a specific change in the organization, and it is most effective when there is a clear understanding of what this change should be and why it is important.
2. *Strong leadership:* The model requires leadership at all levels of the organization, including from teachers, school leaders, district leaders, and higher education institutions. It is important that there is a shared understanding of the change and a commitment to working together to implement it.
3. *A supportive culture:* The model relies on collaboration and teamwork to drive change, so it is important that the organization has a culture that encourages and supports collaboration.
4. *Professional learning:* The model emphasizes the importance of ongoing

professional learning for educators, and it is most effective when there is a strong focus on professional development and opportunities for staff to learn and grow.

5. *Data-driven decision making*: The model emphasizes the use of data to inform decision making and to track progress towards the goal of implementing the desired change. It is important that the organization has a strong data infrastructure in place to support this.

5.7.2.3 Applications / Implications

The following are the possible applications of the model:

1. *A focus on improving student achievement*: The model is centered on the goal of implementing a specific change in the organization with the ultimate aim of improving student achievement. By focusing on this goal, the model can help to ensure that the changes being made are aligned with the needs and interests of students.
2. *The importance of collaboration*: The model emphasizes the importance of collaboration and teamwork in driving change and improving instruction. By fostering a culture of collaboration, schools and other educational organizations can create a more supportive and effective learning environment for students.
3. *Professional learning and development*: The model recognizes the importance of ongoing professional learning for educators, and it encourages the use of professional development opportunities to help staff learn and grow.
4. *Data-driven decision making*: The model emphasizes the use of data to inform decision making and track progress towards the goal of implementing the desired change.
5. *Leadership at all levels*: The model requires leadership at all levels of the organization, including from teachers, school leaders, district leaders, and higher

education institutions.

6. The model can be used to analyze the effectiveness of change initiatives in higher education and identify areas for improvement.
7. The model can be used as an evaluation framework for the change initiatives and it can also be used as a guide for future change management initiatives in higher education.
8. The model can help institutions to identify key factors that are necessary for successful change management and to develop a roadmap for achieving desired outcomes in higher education change initiatives.

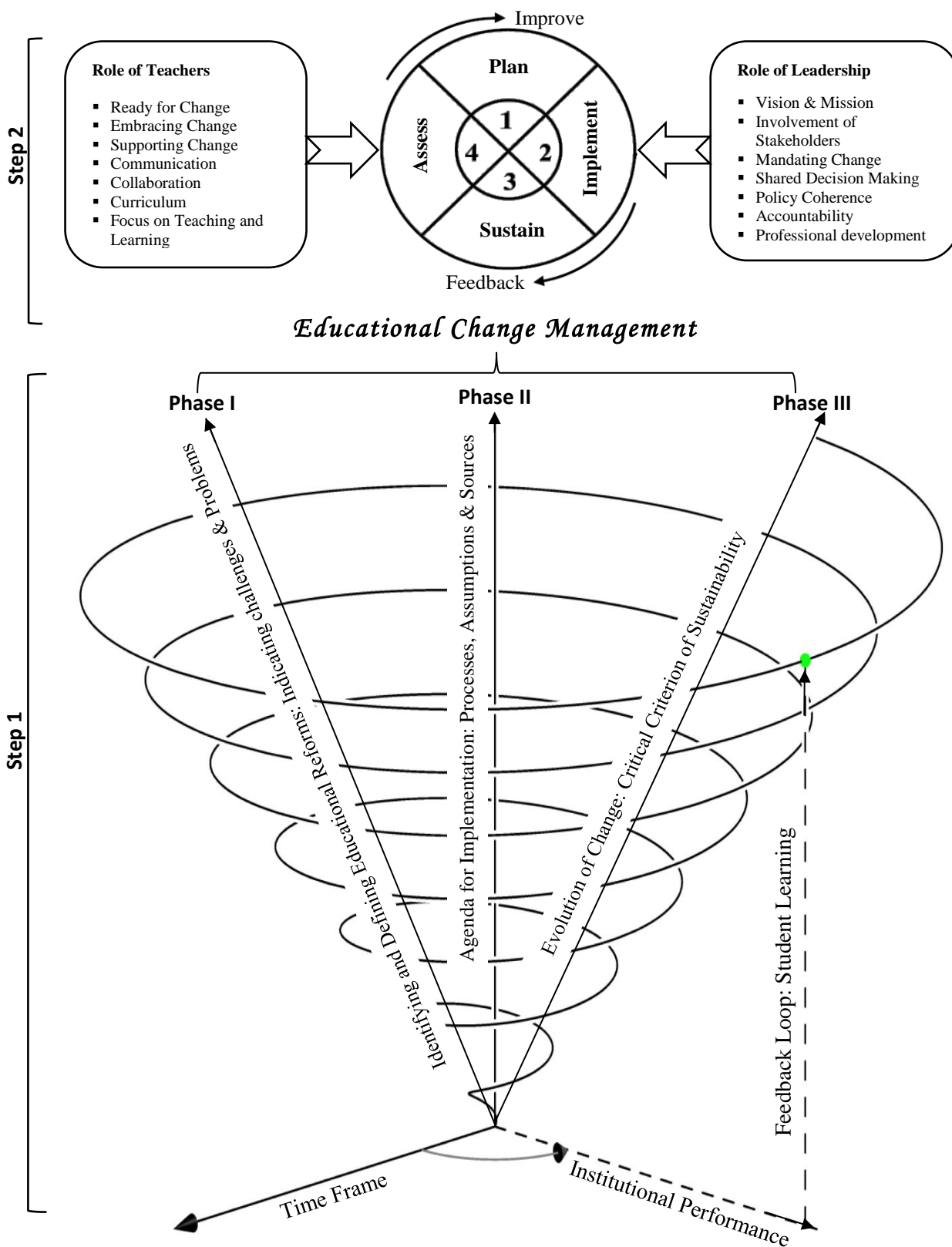


Figure 31: Proposed Model for Change Management for HEIs in Pakistan

Table 5.1a

Detailed review of the Study (n₁, Deans=12, n₂, Heads =24, n₃, Faculty=514)

Sr#	Objective	Findings	Conclusions	Recommendations
1	To investigate level of change management in the light of Fullan's Educational Change Model.	Perception of faculty members regarding educational change management indicated that the first phase of Fullan's model of educational change, i.e., Initiation depicts high mean scores (M=4.71). The second phase of the model, i.e., Implementation shows high-level mean scores (M=4.60). The third phase of Fullan's model, i.e., Continuation also reveals medium mean scores (M=3.95). Results of the analysis specify that higher education institutions are adequately coping with educational change and institutions place their focus on all three phases of the model.	While focusing on Harvey's (2001) Checklist, the Deans of social sciences indicated that changes (such as new programs, administrative processes, instructional processes, admission standards, technological changes, and research initiatives) were clear and understandable. The need for changes was indicated clearly. The study also concluded that higher education institutions are adequately coping with educational change and institutions place their focus on the first two phases of Fullan's (2016) Model of educational change. The mean scores of faculty indicated that HEIs deal with educational reforms in a systematic manner and change processes are also aligned with Fullan's initiation, implementation and continuation.	Universities may provide strategic planning and training for recent educational reforms. Public sector universities may provide intentional mentoring for next-generation leaders. HEIs may deploy mentoring programs to foster leadership skills which may produce skilled change agents. Public sector universities may provide intentional mentoring for next-generation leaders. HEIs may deploy mentoring programs to foster leadership skills which may produce skilled change agents.

Table 5.1b

Detailed analysis (N_1 , Deans=12, N_2 , Heads =24, N_3 , Faculty=514)

S#	Objective and Hypothesis	Findings	Conclusions	Recommendations
2	<p>To compare phases of Fullan's Educational Change Model among Public and Private Sector Universities.</p> <p>H₀₁: There are no differences regarding change management processes within public and private sector universities.</p>	<p>Results were significant at $t(512)=3.81$. There exists a significant difference in change management between private (M=4.69) and public (M=3.38) institutions. Private sector (M=4.69) institutions hold greater capability for change management than the public sector (M=3.38). Cohen's d 0.56 indicated a Medium effect size.</p> <p>Null Hypotheses H_{01a}, H_{01b} & H_{01c} were rejected.</p>	<p>The comparative analysis of Fullan's phases, i.e., change initiation, implementation and continuation, indicated that the results were significant. A significant difference in change management between private and public sector institutions was found. Private sector institutions hold greater capability for change management than the public sector perceived by the faculty. The Analysis further indicated a Medium effect size. It was concluded that statistical differences exist regarding Change Initiation, implementation and continuation processes used in Public and Private Sector Universities.</p>	<p>Creating an organizational structure with greater integration and differentiation may support the processes of educational reforms in Public sector HEIs.</p> <p>It is essential to enable horizontal coordination in departments and within faculties of Public sector HEIs.</p> <p>It is essential to enable linkage between bottom-up processes and institutional leadership while performing educational reforms.</p> <p>During the implementation process involving teachers in collaborative processes with the decision makers could be the more meaningful strategy to implement educational reform.</p>

Table 5.1c

Detailed analysis (N₁, Deans=12, N₂, Heads =24, N₃, Faculty=514)

S#	Objective	Findings	Conclusions	Recommendations
3	To explore the views of heads regarding change management in Public and Private HEIs.	<p>Themes that emerged from first interview were increased learning outcome, positive impact, aesthetics and morale, external factors etc.</p> <p>Themes that emerged from second interview were collective and shared vision, change as evolution, leaders' beliefs and actions, assumption of operations, change magnitude etc.</p> <p>Themes obtained from the third question were scale of change, power obstacles, resource limitations, institutional strategies, enabling and disabling the system, decision making, political unpredictability etc.</p> <p>Themes that emerged from the fourth question were program satisfaction, self-efficacy to change, willingness to change, the effectiveness of professional development, trust in new ideas and teaching methods etc.</p> <p>The themes from fifth interview transcripts included improved curriculum, collaborations, peer tutoring, student-centered learning, transformational leadership, etc.</p> <p>The themes from question six were technology integration, leadership and communication, organizational structure, teams, collaboration etc.</p>	<p>The interview probed heads about support/ challenges and barriers during implementation. The themes that emerged from the interview included the scale of change, power obstacles, pedagogy and examination, institutional strategies, enabling and disabling the system, decision making, gaps in the reform process, political unpredictability, resource limitations and transparency.</p> <p>The fourth interview question probed heads about types of resources and professional development during the implementation of change.</p>	<p>Keeping teachers more active during the reform process may enhance their professional capacities, and they will become more proactively involved in change management.</p> <p>Allowing stakeholders to participate in the reform process is an efficient way to make the initiative succeed. Feedback can play an important role in change-related processes.</p> <p>Institutions may implement the proposed model to assist the change management processes. Administrators and leaders can benefit from the proposed model while implementing change initiatives. The proposed model is open for testing and improvement.</p>

Table 5.1d

Detailed analysis (N₁, Deans=12, N₂, Heads =24, N₃, Faculty=514)

S#	Objective	Findings	Conclusions	Recommendations
4	To propose a model for change management in Pakistani HEIs, based on gaps identified through research.	The study found several gaps in the existing scenario of change management in HEIs. The major results indicated that change management is mainly focused on the first two phases i.e. initiation and implementation and low focus on continuation phase. The third and fourth interview question highlighted several barriers, challenges and needs for professional development during change management. The challenges involved scale of change, power obstacles, resource limitations, institutional strategies, enabling and disabling the system, decision making, gaps in reform processes, political unpredictability, resource limitations and transparency. Professional developments during implementation (Q:4 themes) may focus on Program Satisfaction, Self-efficacy to change, Effectiveness of Professional Development, Trust new ideas and teaching methods, Self-inventive and creative in teaching, Seek new ideas and ways of teaching, Assurance to implement changes, Institutional environment, Overall flexibility of Reforms.	While comparing the difference in results on the basis of sectors. It can be concluded that there was a significant difference in change management of public and private HEIs. Both sector HEIs were accommodating change, higher at first two levels of the model. The private sector HEIs found more versed with the process of change management. The said difference can mainly be observed in initiation and implementation phases of the model.	It is recommended that universities may implement the proposed model to assist any reform process for effective change management. Additionally, administrators or program leaders will benefit from the proposed model while performing instructional observations to ascertain the extent and effectiveness of change management. The proposed model is open for future research, testing, and improvement.

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APPENDICES

Appendix A

Approval Letter



NATIONAL UNIVERSITY OF MODERN LANGUAGES
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF EDUCATION

ML.1-4/2017/Edu

Dated: 09-02-2021

To: **Sehrish Kashan,**
784-Ph.D/Edu/F18

Subject: **APPROVAL OF Ph.D THESIS TOPIC AND SUPERVISOR**

1. Reference to Letter No, ML.1/2/2020-Edu, dated 25-01-2020, the Higher Authority has approved the topic and supervisor on the recommendation of Faculty Board of Studies vide its meeting held on 16th Oct 2020.

a. **Supervisor's Name & Designation**

Dr. Wajeeha Shahid,
Assistant Professor,
Department of Education NUML, Islamabad.

b. **Topic of Thesis**

“Change Management at Higher Education Level: A Comparative Study of Public and Private Sector.”

2. You may carry out research on the given topic under the guidance of your Supervisor and submit the thesis for further evaluation within the stipulated time. It is inform you that your thesis should be submit within described period by **31 July 2023** positively for further necessary action please.

3. As per policy of NUML, all MPhil/PhD thesis are to be run on turnitin by QEC of NUML before being sent for evaluation. The university shall not take any responsibility for high similarity resulting due to thesis run from own sources.

4. Thesis are to be prepared strictly on NUML's format that can be had from (Coordinator, Department of Education)

Telephone No: 051-9265100-110 Ext: 2094

E-mail: ftabassum@numl.edu.pk

Dr. Mariam Din
A/Head,
Department of Education

Distribution: Ms. Sehrish Kashan (Ph.D Scholar)

Dr. Wajeeha Shahid (Thesis Supervisor)

Appendix B**Permission for Data Collection**

DEPARTMENT OF EDUCATION
FACULTY OF SOCIAL SCIENCES
National University of Modern Languages
Sector H-9, Islamabad
Tel.No: 051-9265100 Ext: 2090

ML.1-3/2021-Edu

Dated: 23-02-2021

WHOM SO EVER IT MAY CONCERN

Ms. Sehrish Kashan D/O Zulfiqar Ahmed Kashan, students of PhD (Edu) Department of Education of National University of Modern Languages is engaged in project of Research Work.

She may please be allowed to visit your Institution / Library to obtain the required information for her Research Work.

This information shall not be divulged to any unauthorized person or agency. It shall be kept confidential.



Mariam D
23/02/2021
Dr Mariam Din
A/Head,
Department of Education.

Appendix C

Permission to Use Checklist for Change

RE: [EXTERNAL] Permission for Checklist

From: Tom Harvey (tharvey@laverne.edu)

To: sehrishedu@yahoo.com

You have my permission to use it.

Sent from my Verizon, Samsung Galaxy smartphone

----- Original message -----

From: Sehrish Kashan <sehrishedu@yahoo.com>

To: Tom Harvey <tharvey@laverne.edu>

Subject: [EXTERNAL] Permission for Checklist

Dear Thomas R. Harvey:

I hope this email finds you well.

I am a doctoral scholar in the field of Education from NUML University Pakistan.

I would like your permission to use the Checklist (*Checklist for Change*) in my research study which you have presented in your book titled "Harvey, T. R. (2001). Checklist for change: A Pragmatic Approach to Creating and Controlling Change. Lanham, MD: The Scarecrow Press."

Your checklist is the most appropriate tool for my research.

I would like to use and print your checklist under the following conditions:

- I will use the checklist only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.

If these are acceptable terms and conditions, I humbly request you to permit me to use your checklist. Please indicate so by replying to me through this email.

Sincerely,
Sehrish Kashan
PhD Scholar
National University of Modern Languages,
H-9 Islamabad, Pakistan.

Appendix D**Panel of Experts for Tool Validation**

- 1. Dr. Muhammad Imran Yousuf**
Professor/Chairman, Department of Education
PMAS, Arid Agriculture University Rawalpindi
- 2. Dr. Safia Saeed**
Associate Professor/Principal
Government Associate College for Women, Taxila
- 3. Dr. Tehseen Tahir**
Assistant Professor, Department of Education
The University of Haripur
- 4. Dr. Wajeaha Kanwal**
Assistant Professor, Department of Education
University of Wah, Wah Cantt
- 5. Dr. Shazia Zamir**
Assistant Professor, Department of Educational Sciences
National University of Modern Languages, Islamabad



CERTIFICATE OF VALIDITY

CHANGE MANAGEMENT AT HIGHER EDUCATION LEVEL: A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR

By: Ms. Sehrish Kashan

Ph.D. Scholar, Department of Education, Faculty of Social Sciences
National University of Modern Languages, H-9, Islamabad, Pakistan.

It is certified that the questionnaire/s & interview developed by the aforementioned Ph.D. Scholar for her thesis has been assessed by me and I find it to have been designed adequately to analyze Change Management at Higher Education Level: A Comparative Study of Public and Private Sector.

The instruments of the study are the Educational Change Checklist for the Deans, a Semi-structured interview for the heads of departments, and a questionnaire for the faculty members. It is considered that the research instruments developed for the aforementioned Ph.D. thesis title are according to the objectives and hypotheses of the research. It assures adequate construct and content validity according to the purpose of the research and can be used for data collection by the researcher with a fair amount of confidence.

Name: *Prof. Dr. M. Imran Yousuf*
 Designation: *Professor*
 Institute: *MA*
 Signature: *[Signature]* **Dr. M. Imran YOUSUF**
 Associate Professor
 Education
 Date: *9/3/21* **PIR-MENR ALI SHAH**
 Arid Agriculture University
 RAWALPINDI



CERTIFICATE OF VALIDITY

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Name: *Dr. Safia Saeed*
 Designation: *Associate Prof.*
 Institute: *Govt. Associate College for Women Taxila*
 Signature: *Safia*
 Date: *06-03-2021*
 Principal, Govt. Associate College (W) Taxila



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By: Ms. Sehrish Kashan

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Name: DR. TEHSEEN TAHIR.
 Designation: ASSISTANT PROFESSOR.
 Institute: THE UNIVERSITY OF HARIPUR.
 Signature: [Signature]
 Date: 05.03.2021

Assistant Professor
Department of Education
University of Haripur



CERTIFICATE OF VALIDITY

CHANGE MANAGEMENT AT HIGHER EDUCATION LEVEL: A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR

By: Ms. Sehrish Kashan

Ph.D. Scholar, Department of Education, Faculty of Social Sciences
National University of Modern Languages, H-9, Islamabad, Pakistan.

It is certified that the questionnaire/s & interview developed by the aforementioned Ph.D. Scholar for her thesis has been assessed by me and I find it to have been designed adequately to analyze Change Management at Higher Education Level: A Comparative Study of Public and Private Sector.

The instruments of the study are the Educational Change Checklist for the Deans, a Semi-structured interview for the heads of departments, and a questionnaire for the faculty members. It is considered that the research instruments developed for the aforementioned Ph.D. thesis title are according to the objectives and hypotheses of the research. It assures adequate construct and content validity according to the purpose of the research and can be used for data collection by the researcher with a fair amount of confidence.

Name: Dr. Wajcha Kanwal
 Designation: Chairperson / H.O.D. / Assistant Professor
 Institute: University of Wah
 Signature: [Signature]
 Date: 12-03-2021





CERTIFICATE OF VALIDITY

CHANGE MANAGEMENT AT HIGHER EDUCATION LEVEL: A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR

By: Ms. Sehrish Kashan

Ph.D. Scholar, Department of Education, Faculty of Social Sciences
National University of Modern Languages, H-9, Islamabad, Pakistan.

It is certified that the questionnaire/s & interview developed by the aforementioned Ph.D. Scholar for her thesis has been assessed by me and I find it to have been designed adequately to analyze Change Management at Higher Education Level: A Comparative Study of Public and Private Sector.

The instruments of the study are the Educational Change Checklist for the Deans, a Semi-structured interview for the heads of departments, and a questionnaire for the faculty members. It is considered that the research instruments developed for the aforementioned Ph.D. thesis title are according to the objectives and hypotheses of the research. It assures adequate construct and content validity according to the purpose of the research and can be used for data collection by the researcher with a fair amount of confidence.

Name: DR. SHAZIA ZAMIR
 Designation: Assistant Professor
 Institute: NUML
 Signature: Shazia
 Date: 10/03/21

Appendix E

Web Page for HEC Recognized Universities



Higher Education Commission, Pakistan

HEC (/PAGES/VARIATIONROOT.ASPX) / UNIVERSITIES (/ENGLISH/UNIVERSITIES/PAGES/AJK/DEFAULT.ASPX) / RECOGNISED UNIVERSITIES

RECOGNISED UNIVERSITIES

HEC Recognised Universities and Degree Awarding Institutions

Filter View

Sector	Public	Chartered By	Select All
Discipline	Select All	Province	Punjab
City	Select All		

49 results

Name	Sector	Chartered By	Discipline
Bahauddin Zakariya University (BZU), Multan (https://hec.gov.pk/english/universities/Pages/Punjab/Bahauddin-Zakariya-University.aspx)	Public	Government of Punjab	General
Cholistan University of Veterinary and Animal Sciences, Bahawalpur (https://hec.gov.pk/english/universities/Pages/Punjab/Cholistan-University-of-Veterinary-and-Animal-Sciences,-Bahawalpur.aspx)	Public	Government of Punjab	Agriculture & Veterinary
Faisalabad Medical University, Faisalabad (https://hec.gov.pk/english/universities/Pages/Punjab/Faisalabad-Medical-University,-Faisalabad.aspx)	Public	Government of Punjab	Medical
Fatima Jinnah Medical University, Lahore (https://hec.gov.pk/english/universities/Pages/Punjab/Fatima-Jinnah-medical-University,-Lahore.aspx)	Public	Government of Punjab	Medical

Appendix F

List of Universities and Population Distribution

S#	University Name	Sector	Year	Faculty of SS	Heads of SS
1	Bahauddin Zakariya University (BZU), Multan	Public	2021	87	13
2	Beaconhouse National University, Lahore	Private	2021	72	6
3	Fatima Jinnah Women University, Rawalpindi	Public	2021	79	9
4	Ghazi University, Dera Ghazi Khan	Public	2021	29	4
5	GIFT University, Gujranwala	Private	2021	38	9
6	Government College for Women University (GCWU), Faisalabad	Public	2021	69	8
7	Government College for Women University, Sialkot	Public	2021	53	8
8	Government College University (GCU), Faisalabad	Public	2021	81	7
9	Government College University, Lahore	Public	2021	59	10
10	Government Sadiq College Women University, Bahawalpur	Public	2021	13	3
11	Hajvery University, Lahore	Private	2021	19	4
12	HITEC University, Taxila	Private	2021	21	2
13	Imperial College of Business Studies, Lahore	Private	2021	17	1
14	Institute of Southern Punjab, Multan	Private	2021	46	5
15	Islamia University, Bahawalpur	Public	2021	122	17
16	Khawaja Freed University of Engineering & Information Technology, Rahim Yar Khan	Public	2021	25	1
17	Kinnaird College for Women, Lahore	Public	2021	59	10
18	Kohsar University, Murree	Public	2021	18	3
19	Lahore College for Women University, Lahore	Public	2021	166	19
20	Lahore Garrison University, Lahore	Private	2021	39	4
21	Lahore Leads University, Lahore	Private	2021	41	8
22	Lahore School of Economics, Lahore	Private	2021	64	5
23	Lahore University of Management Sciences, Lahore	Private	2021	147	2
24	Minhaj University, Lahore	Private	2021	72	2
25	Muhammad Nawaz Shareef University of Agriculture, Multan	Public	2021	35	6
26	National College of Business Administration & Economics, Lahore	Private	2021	66	1
27	Nur International University, Lahore	Private	2021	24	2
28	Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi	Public	2021	36	5
29	Rawalpindi Women University, Rawalpindi	Public	2021	49	6
30	Superior University, Lahore	Private	2021	65	6
31	The University of Faisalabad, Faisalabad	Private	2021	25	2
32	The Women University, Multan	Public	2021	74	8
33	Times Institute, Multan	Private	2021	45	3
34	University of Agriculture, Faisalabad	Public	2021	49	5
35	University of Central Punjab, Lahore	Private	2021	72	5
36	University of Chakwal, Chakwal	Public	2021	33	4
37	University of Education, Lahore	Public	2021	30	3
38	University of Engineering & Technology,	Public	2021	26	2

	Lahore				
39	University of Engineering & Technology, Taxila	Public	2021	29	1
40	University of Gujrat, Gujrat	Public	2021	48	6
41	University of Jhang.	Public	2021	31	7
42	University of Lahore, Lahore	Private	2021	56	4
43	University of Management & Technology, Lahore	Private	2021	47	4
44	University of Mianwali.	Public	2021	13	2
45	University of Narowal.	Public	2021	17	3
46	University of Okara.	Public	2021	45	19
47	University of Sahiwal.	Public	2021	16	2
48	University of Sargodha, Sargodha.	Public	2021	82	7
49	University of Sialkot, Sialkot	Private	2021	29	4
50	University of South Asia, Lahore	Private	2021	57	7
51	University of the Punjab, Lahore.	Public	2021	105	25
52	University of Wah	Private	2021	45	6
Total				2685	315

Appendix G

Checklist for Change (Harvey, 2001)

Harvey, T. R. (2001). *Checklist for Change: A Pragmatic Approach to Creating and Controlling Change*. Lanham, MD; Scarecrow Press.

Using the scale illustrated below, circle the number 1 through 9, which most closely fits the degree of occurrence in your institution for each change factor.

Did not Occur			Occurred to a Moderate Degree				Occur to a Large Degree	
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PART 1: CHANGE CHARACTERISTICS:

In any change process, these characteristics will occur in varying degrees.

Considering the change components utilized during your Institution's planning year, identify the degree to which each characteristic was present during this change process.

S#	Educational Change Factors	Tick Your Response
1	The change was clear and understandable.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
2	There was evidence of a need for some kind of change.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
3	Those responsible for mandating the change were identified.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
4	Those responsible for implementing the change were identified.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
5	There were identified benefits for those responsible for implementing the change.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
6	There was pressure or stress to implement the change.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
7	Those responsible for implementing the change believed in their capability to make the change.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
8	The value of the change effort was clearly identified.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
9	Resistors to the change, the degree of resistance, and the reasons for resistance were clearly identified.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
10	There were supporters of the change in addition to those mandating it.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
11	Change was generally an accepted practice for the organization, and receptivity to change was generally positive.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
12	A strategy for obtaining the desired change was identified.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
13	A strategy for dealing with resistors was consciously designed.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

14	Those responsible for making the change were involved both in defining the desired change and in planning for its implementation.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
15	The change process created positive excitement within the organization.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
16	The change fit logically into the patterns created by other changes made by the organization; i.e., this change was not foreign to other past change practices.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
17	The scope of the change was reasonable; i.e., it was not so small as to be insignificant, nor so large as to be impossible.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
18	There was strong support within the organization for making the identified change.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
19	A reasonable time frame was established for implementing the change.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
20	A monitoring system for implementing the change was created. Responsibilities as to who was responsible for what were understood.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
21	An action plan was created in which there was a clear order of procedures to be followed.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
22	The positive consequences of the change outweighed the negative consequences.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

RANKING THE TOP THREE CHANGE CHARACTERISTICS

23	Of the 22 change characteristics above, choose the 3 you consider most significant to your change process and rank them in the space provided with #1 being the most significant.	① ② ③
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Part 2: Item #24 deals with the **Overall Success of the Change Effort at Your Institution.** For purposes of answering #24 below, success is holistically defined as the degree to which the following elements are evident in your Institution's action plan.

The Institution's action plan focuses on the following:

- Improving students' academic performance.
- Improving the involvement of parents and guardians.
- Improving the effective and efficient allocation of resources.
- Improving the effective and efficient management of the Institution.
- Identifying and developing solutions that take into account the underlying causes for low performance by students.

S#	Overall Success	No or little Success	Moderate Success	Strong Success
24	Assess the overall success of your change effort.	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨		

Appendix H

Educational Change Management Questionnaire for Faculty

Section A (Demographics)

<p>1: Name (Optional) _____</p> <p>2: Sector:</p> <p>a) Public <input type="checkbox"/></p> <p>b) Private <input type="checkbox"/></p> <p>3: Gender:</p> <p>a) Male <input type="checkbox"/></p> <p>b) Female <input type="checkbox"/></p> <p>4: Qualification:</p> <p>a) M.Phil. / MS <input type="checkbox"/></p> <p>b) Ph.D. <input type="checkbox"/></p> <p>c) Post Doc. <input type="checkbox"/></p>	<p>5: Designation:</p> <p>a) Lecturer <input type="checkbox"/></p> <p>b) Assistant Professor <input type="checkbox"/></p> <p>c) Associate Professor <input type="checkbox"/></p> <p>d) Professor <input type="checkbox"/></p> <p>6: Experience:</p> <p>a) Less than 3 years <input type="checkbox"/></p> <p>b) 3-6 years <input type="checkbox"/></p> <p>c) 7-10 years <input type="checkbox"/></p> <p>d) More than 10 years <input type="checkbox"/></p> <p>7: Age:</p> <p>a) Less than 30 years <input type="checkbox"/></p> <p>b) 31-40 years <input type="checkbox"/></p> <p>c) 41-50 years <input type="checkbox"/></p> <p>d) More than 50 years <input type="checkbox"/></p>
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Section B

Educational Change Management Scale for Faculty

Given below are the statements, please ✓ to the appropriate level of your agreement.
(5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree and 1=Strongly Disagree)

S#	Initiation (<i>Availability of Innovations</i>)	SA(5)	A(4)	N(3)	D(2)	SD(1)
1	Policy standards and targets are regularly followed in my institution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Monitoring and assessment criteria are reviewed on a regular basis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Classroom teaching programs are also the prior concern of administrators.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Professional development seminars and workshops are encouraged by administrators.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Class management strategies are strictly being practiced in my institution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Intervention and special assistance are regular practices of administrators in my institution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

S#	Initiation (<i>Access of Information</i>)	SA(5)	A(4)	N(3)	D(2)	SD(1)
7	Administrators and coordinators spend enough time organizing workshops and seminars.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Partnerships and collaborations of professional networks (training providers etc.) are encouraged by administrators.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	The development of innovations is encouraged by administrators.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Administrators spend time and energy building communication infrastructure to create central administration.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Access to innovations and resources is encouraged in my institution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Administrators have the capacity to effectively operate while initiating new standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

S#	Initiation (<i>Role of Stakeholders</i>)	SA(5)	A(4)	N(3)	D(2)	SD(1)
13	Central administrators (Top level Management) are considered the locus of decision-making.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Administrators are capable of maintaining focus on innovative directions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Heads act as “gatekeepers” of change, often determining the fate of innovations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Heads and coordinators lead the change and act as critical sources of change initiation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Faculty is considered a preferred source of ideas for other colleagues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Community partnerships are encouraged where necessary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Government is ready to release funds for capacity building and educational reforms.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	Government act in a problem-solving rather than a bureaucratic manner while initiating reforms.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

S#	Implementation (<i>Change Characteristics</i>)	SA(5)	A(4)	N(3)	D(2)	SD(1)
21	Changes or innovations are attempted according to perceived priority needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	Administrators are clear about goals and means (resources) before implementing innovation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	Initiation of a new educational program is strictly based on needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Administrators make critical inquiries into current practices before suggesting innovation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	Administrators provide formal recognition regarding unmet needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	Faculty members effectively deal with innovations and change directions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

S#	Implementation (<i>Local Factors</i>)	SA(5)	A(4)	N(3)	D(2)	SD(1)
27	Adoption decisions for change are made with adequate follow-through considering subjective realities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	A track record of the change process is viewed before taking the next initiative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	Heads effectively perform instructional or change leadership roles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	Teachers always exchange ideas, support, and positive feelings about their work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	Teachers and administrators plan, design, research, evaluate and prepare teaching materials together.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	The community seems cooperative and supports the change-related decisions of administrators.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

S#	Implementation (<i>External Factors</i>)	SA(5)	A(4)	N(3)	D(2)	SD(1)
33	National priorities for education are set according to government policies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	New policies and new program initiatives arise from public concern.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

35	Education system is excellently developing career-relevant skills and provides a highly interactive support infrastructure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	Government agencies are aware of problems and the process of change implementation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37	HEC and university administrators provide high-quality teaching and training materials.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38	Policy makers prefer university practitioners to identify change-related gaps.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

S#	Continuation (<i>Embedding New Structures</i>)	SA(5)	A(4)	N(3)	D(2)	SD(1)
39	Administration provides moral support in the continuation of initiated reforms.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40	Effective implementation of innovative projects is the main focus of administrators.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41	HEC and administrators invest great interest and funding to sustain the innovative projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42	Administrators provide professional development and staff support for both continuing and new teachers for newly implemented programs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43	Heads are performing their role as key to both implementation and continuation of innovations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44	Coordinators provide explicit support for innovative project methods or materials.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

S#	Continuation (<i>Employees' Commitment</i>)	SA(5)	A(4)	N(3)	D(2)	SD(1)
45	Administrators pay early attention to mobilizing broad-based support for the innovation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46	Administration always establishes procedures for continuing assistance (such as a trained cadre of assisters).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47	Researchers are putting great effort into finding gaps to propose new initiatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

48	Administrators introduce alternates for initiatives those clashed or were misaligned with reform designs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49	Heads effectively implement the chosen reform designs (pertaining to the quality of implementation and impact on student learning).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50	Heads and teachers are skilled and committed to the change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S#	Continuation (<i>Employees' Assistance</i>)	SA(5)	A(4)	N(3)	D(2)	SD(1)
51	Change factors effectively build into the structure (through policy, budget, timetable, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52	Administrators are effectively guiding and coping with implementation at a level consistent with the designers of change models.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53	Administrators organize seminars and workshops for the professional development of the teachers regarding new reforms.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54	Heads and coordinators provide desired leadership for faculty, focusing on instruction and learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55	Teachers frequently receive assistance and support for any new program or reform/initiative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56	To deal with staff turnover, administrators have already planned the orientation and in-service support for new faculty members who joined after the program started.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix I

Semi-Structured Interview for Heads of Departments

Initiation Phase

1. How would you describe the initiation of any of the reform/s related to your institution?
(*New practices/new resources etc.*)
2. How was a vision clearly established and articulated when communicating these change initiatives?
(*Mutual adaptation, contributing roles, development of new practices/ programs/ building etc.*)

Implementation Phase

3. What support/challenges/barriers were voiced when the recent change initiatives were implemented?
(*Beliefs, Behavioural Action, Curriculum Change, etc.*)
4. What types of resources and/or professional development opportunities were given to teachers during the implementation of changes you have indicated?
(*Beliefs, Behavioural Action, Curriculum Change, etc.*)

Continuation Phase

5. How will the recent changes (Reforms in administrative and instructional processes) affect the culture of the institution?
(*Mutual adaptation, Learning leaders, Shared Learning, etc.*)
6. What types of things would have to change for any of the initiatives to become fully implemented?
(*Adjustment of beliefs, contributing to sustainability and implementation, etc.*)

Interview protocol addresses the Reforms/Changes based on:

Restructuring (New study programs, New buildings, Administrative processes, Instructional processes, Admissions Standards, Research Centre etc.) and Technological Changes (ICT infrastructure, ICT directorates etc.)

Appendix J

TABLE FOR DETERMINING THE SAMPLE SIZE

Sample size, confidence levels and confidence intervals for random samples

Population	Confidence level 90 per cent			Confidence level 95 per cent			Confidence level 99 per cent		
	5% CI	4% CI	3% CI	5% CI	4% CI	3% CI	5% CI	4% CI	3% CI
30	27	28	29	28	29	29	29	29	30
50	42	45	47	44	46	48	46	48	49
75	59	64	68	63	67	70	67	70	72
100	73	81	88	79	86	91	87	91	95
120	83	94	104	91	100	108	102	108	113
150	97	111	125	108	120	132	122	131	139
200	115	136	158	132	150	168	154	168	180
250	130	157	188	151	176	203	182	201	220
300	143	176	215	168	200	234	207	233	258
350	153	192	239	183	221	264	229	262	294
400	162	206	262	196	240	291	250	289	329
450	170	219	282	207	257	317	268	314	362
500	176	230	301	217	273	340	285	337	393
600	187	249	335	234	300	384	315	380	453
650	192	257	350	241	312	404	328	400	481
700	196	265	364	248	323	423	341	418	507
800	203	278	389	260	343	457	363	452	558
900	209	289	411	269	360	468	382	482	605
1,000	214	298	431	278	375	516	399	509	648
1,100	218	307	448	285	388	542	414	534	689
1,200	222	314	464	291	400	565	427	556	727
1,300	225	321	478	297	411	586	439	577	762
1,400	228	326	491	301	420	606	450	596	796
1,500	230	331	503	306	429	624	460	613	827
2,000	240	351	549	322	462	696	498	683	959
2,500	246	364	581	333	484	749	524	733	1,061
5,000	258	392	657	357	536	879	586	859	1,347
7,500	263	403	687	365	556	934	610	911	1,480
10,000	265	408	703	370	566	964	622	939	1,556
20,000	269	417	729	377	583	1,013	642	986	1,688
30,000	270	419	738	379	588	1,030	649	1,002	1,737
40,000	270	421	742	381	591	1,039	653	1,011	1,762
50,000	271	422	745	381	593	1,045	655	1,016	1,778
100,000	272	424	751	383	597	1,056	659	1,026	1,810
150,000	272	424	752	383	598	1,060	661	1,030	1,821
200,000	272	424	753	383	598	1,061	661	1,031	1,826
250,000	272	425	754	384	599	1,063	662	1,033	1,830
500,000	272	425	755	384	600	1,065	663	1,035	1,837
1,000,000	272	425	756	384	600	1,066	663	1,036	1,840

N =Population Size

n =Sample Size

(Cohen, L., Manion, L., & Morrison, K. (2013). Research methods in education. Routledge, p.104)

Appendix K

ITEM-WISE MEAN RESPONSE OF FACULTY MEMBERS

Change Initiation and Availability of Innovations at University Level (n₃=514)

S#	Initiation (Availability of Innovations) (<i>M=3.92, S.D=0.43</i>)	Mean	S.D	Remarks
1	Policy standards and targets are regularly followed in my institution.	3.52	0.24	Agree
2	Monitoring and assessment criteria are reviewed on a regular basis.	4.12	0.67	Agree
3	Classroom teaching programs are also the prior concern of administrators.	3.85	0.78	Agree
4	Professional development seminars and workshops are encouraged by administrators.	3.61	0.56	Agree
5	Class management strategies are strictly being practiced in my institution.	4.29	0.38	Agree
6	Intervention and special assistance are regular practices of administrators in my institution.	3.80	0.72	Agree

Change Initiation and Access of Information at University Level (n₃=514)

S#	Initiation (Access of Information) (<i>M=4.50, S.D=0.68</i>)	Mean	S.D	Remarks
1	Administrators and coordinators spend enough time organizing workshops and seminars.	4.17	0.36	Agree
2	Partnerships and collaborations of professional networks (training providers etc.) are encouraged by administrators.	4.22	0.59	Agree
3	The development of innovations is encouraged by administrators.	4.13	1.06	Agree
4	Administrators spend time and energy building communication infrastructure to create central administration.	3.50	0.26	<i>Merely Agree</i>
5	Access to innovations and resources is encouraged in my institution.	3.65	0.23	Agree
6	Administrators have the capacity to effectively operate while initiating new standards.	4.38	0.32	Agree

Change Initiation and Role of Stakeholders at University Level (n₃=514)

S#	Initiation (Role of Stakeholders) (<i>M=4.62, S.D=0.55</i>)	Mean	S.D	Remarks
1	Central administrators (Top level Management) are considered the locus of decision-making.	3.98	0.28	Agree
2	Administrators are capable of maintaining focus on innovative directions.	4.20	0.34	Agree
3	Heads act as “gatekeepers” of change, often determining the fate of innovations.	3.55	0.30	Agree
4	Heads and coordinators lead the change and act as critical sources of change initiation.	4.29	0.33	Agree
5	Faculty is considered a preferred source of ideas for other colleagues.	4.09	0.51	Agree
6	Community partnerships are encouraged where necessary.	3.50	0.81	Agree
7	Government is ready to release funds for capacity building and educational reforms.	3.47	1.06	Neutral
8	Government act in a problem-solving rather than a bureaucratic manner while initiating reforms.	3.40	0.77	Neutral

Change Implementation and Change Characteristics at University Level (n₃=514)

S#	Implementation (Change Characteristics) (<i>M=4.23, S.D=0.59</i>)	Mean	S.D	Remarks
1	Changes or innovations are attempted according to perceived priority needs.	3.89	0.75	Agree
2	Administrators are clear about goals and means (resources) before implementing innovation.	3.91	0.64	Agree
3	Initiation of a new educational program is strictly based on needs.	3.70	0.38	Agree
4	Administrators make critical inquiries into current practices before suggesting innovation.	3.79	1.01	Agree
5	Administrators provide formal recognition regarding unmet needs.	3.91	0.33	Agree
6	Faculty members effectively deal with innovations and change directions.	3.78	0.29	Agree

Change Implementation and Local Factors at University Level (n₃=514)

S#	Implementation (Local Factors) (<i>M=4.41, S.D=0.39</i>)	Mean	S.D	Remarks
1	Adoption decisions for change are made with adequate follow-through considering subjective realities.	3.91	0.46	Agree
2	A track record of the change process is viewed before taking the next initiative.	3.60	0.13	Agree
3	Heads effectively perform instructional or change leadership roles.	3.61	0.32	Agree
4	Teachers always exchange ideas, support, and positive feelings about their work.	3.90	0.53	Agree
5	Teachers and administrators plan, design, research, evaluate and prepare teaching materials together.	3.85	1.01	Agree
6	The community seems cooperative and supports the change-related decisions of administrators.	3.50	0.40	<i>Merely Agree</i>

Change Implementation and External Factors at University Level (n₃=514)

S#	Implementation (External Factors) (<i>M=4.52, S.D=0.89</i>)	Mean	S.D	Remarks
1	National priorities for education are set according to government policies.	4.05	0.49	Agree
2	New policies and new program initiatives arise from public concern.	4.01	0.35	Agree
3	Education system is excellently developing career-relevant skills and providing a highly interactive support infrastructure.	3.99	0.58	Agree
4	Government agencies are aware of problems and the process of change implementation.	3.90	0.74	Agree
5	HEC and university administrators provide high-quality teaching and training materials.	3.75	0.64	Agree
6	Policy makers prefer university practitioners to identify change-related gaps.	3.61	1.00	Agree

Change Continuation and Embedding New Structures at University Level (n₃=514)

S#	Continuation (Embedding New Structures) (<i>M=4.41, S.D=1.01</i>)	Mean	S.D	Remarks
1	Administration provides moral support in the continuation of initiated reforms.	4.01	1.09	Agree
2	Effective implementation of innovative projects is the main focus of administrators.	4.19	1.08	Agree
3	HEC and administrators invest great interest and funding to sustain the innovative projects.	3.71	0.95	Agree
4	Administrators provide professional development and staff support for both continuing and new teachers for newly implemented programs.	3.86	1.03	Agree
5	Heads are performing their role as key to both implementation and continuation of innovations.	4.09	1.05	Agree
6	Coordinators provide explicit support for innovative project methods or materials.	4.12	1.07	Agree

Change Continuation and Employees' Commitment at University Level (n₃=514)

S#	Continuation (Employees' Commitment) (<i>M=3.89, S.D=0.55</i>)	Mean	S.D	Remarks
1	Administrators pay early attention to mobilizing broad-based support for the innovation.	3.99	1.05	Agree
2	Administration always establishes procedures for continuing assistance (such as a trained cadre of assisters).	4.04	0.71	Agree
3	Researchers are putting great effort into finding gaps to propose new initiatives.	3.70	0.42	Agree
4	Administrators introduce alternates for initiatives those clashed or were misaligned with reform designs.	3.75	0.20	Agree
5	Heads effectively implement the chosen reform designs (pertaining to the quality of implementation and impact on student learning).	3.80	0.35	Agree
6	Heads and teachers are skilled and committed to the change.	3.68	0.69	Agree

Change Continuation and Employees' Assistance at University Level (n₃=514)

S#	Continuation (Employees' Assistance) (<i>M=3.49, S.D=0.56</i>)	Mean	S.D	Remarks
1	Change factors effectively build into the structure (through policy, budget, timetable, etc.).	3.79	0.47	Agree
2	Administrators are effectively guiding and coping with implementation at a level consistent with the designers of change models.	3.50	0.25	<i>Merely Agree</i>
3	Administrators organize seminars and workshops for the professional development of the teachers regarding new reforms.	3.81	0.31	Agree
4	Heads and coordinators provide desired leadership for faculty, focusing on instruction and learning.	3.75	0.84	Agree
5	Teachers frequently receive assistance and support for any new program or reform/initiative.	3.70	0.59	Agree
6	To deal with staff turnover, administrators have already planned the orientation and in-service support for new faculty members who joined after the program started.	3.61	0.78	Agree

Appendix L

Themes & Sub-Themes of Semi-Structured Interview

Themes	Sub-Themes
Initiation of Reforms	<ul style="list-style-type: none"> ▪ Increased learning outcome ▪ Positive impact ▪ Aesthetics and Morale ▪ Peer-to-peer learning ▪ Support from HEC ▪ Change is inevitable ▪ Relevance of change ▪ Change Readiness ▪ Resources ▪ Collaboration ▪ Shared Decision Making and Leadership ▪ Problem Solving process ▪ Involvement of Stakeholders ▪ Funding ▪ Communication ▪ Preparedness and Self-efficacy ▪ External Factors
Clear Vision for Reforms	<ul style="list-style-type: none"> ▪ Collective and Shared Vision ▪ Change as Evolution ▪ Leaders' beliefs and actions ▪ Assumption of Operations ▪ Change Magnitude ▪ Managing Uncertainty ▪ Building Networks ▪ Embodying Transition ▪ Confounding Autonomy ▪ Motivate and Inspire Progress ▪ Urgency of Initiatives ▪ Self-sustaining Change ▪ Reforms and Social Justice
Support, Challenges & Barriers	<ul style="list-style-type: none"> ▪ Scale of change ▪ Power Obstacles ▪ Pedagogy and Examination ▪ Institutional Strategies ▪ Enabling and Disabling the System ▪ Decision Making ▪ Gaps in Reform Process ▪ Political Unpredictability ▪ Resource Limitations ▪ Transparency
Resources & Professional Development	<ul style="list-style-type: none"> ▪ Program Satisfaction ▪ Self-efficacy to change ▪ Willingness to change ▪ Effectiveness of Professional Development ▪ Trust new ideas and teaching methods ▪ Self-inventive and creative in teaching ▪ Seek new ideas and ways of teaching ▪ Assurance to implement changes ▪ Institutional environment ▪ Overall flexibility of Reforms ▪ Willingness to change

	<ul style="list-style-type: none"> ▪ Effectiveness of Professional Development ▪ Trust new ideas and teaching methods ▪ Self-inventive and creative in teaching
Effects on Institutional Culture	<ul style="list-style-type: none"> ▪ Improved Curriculum ▪ Collaborations ▪ Peer tutoring ▪ Student-centered learning ▪ Transformational leadership ▪ Innovative practices ▪ Workshops for teachers ▪ Research Opportunities ▪ Policy Regularity ▪ Green Campus
Implementation of Reforms	<ul style="list-style-type: none"> ▪ Technology integration ▪ Leadership and Communication ▪ Organizational Structure ▪ Teams and Collaboration ▪ Policies and Procedures ▪ Conflicts ▪ Management Practices ▪ Transition and decision making ▪ Work Climate ▪ New direction ▪ Inspiring progress and motivating ▪ Curriculum Reforms