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Implementing Pakistan's National Qualifications Framework in BS Special Education Programs from the Perspectives of Faculty and Academic Leaders

NAJEEBA JAVED

najeeba704@gmail.com

Superior University

Dr. Muhammad Sarwar

Superior University

Mansoor Ahmad

Superior University

Muhammad Arif

Superior University

Dr. Muhammad Siddique

Superior University

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Abstract

National Qualifications Frameworks (NQFs) are increasingly recognized worldwide as key instruments for promoting quality assurance, transparency, and outcome-based education in higher education. Despite the adoption of Pakistan's National Qualifications Framework, limited evidence exists regarding its implementation in Special Education programs and its contribution to achieving internationally comparable educational standards. This study explored faculty members' and academic leaders' perceptions of NQF implementation and examined the institutional practices and challenges affecting the attainment of framework-based learning outcomes. A qualitative research design was employed using semi-structured interviews with ten purposively selected participants from public and private universities in Punjab, Pakistan. Data were analyzed through thematic analysis. The findings revealed four major themes: awareness and understanding of NQF standards, curriculum and learning outcome alignment, institutional support mechanisms, and implementation challenges. Participants reported varying levels of familiarity with outcome-based education principles and qualifications framework requirements. While some institutions demonstrated effective alignment practices, others faced challenges related to professional development, resource constraints, workload pressures, and monitoring systems. The study highlights a gap between policy intentions and educational practice and underscores the importance of faculty capacity building, institutional commitment, and continuous quality enhancement to strengthen alignment with national qualifications frameworks and internationally recognized quality standards in higher education.

Introduction

Higher education institutions worldwide are increasingly emphasizing quality assurance, accountability, graduate employability, and the international recognition of qualifications. In response to these demands, many countries have adopted National Qualifications Frameworks (NQFs) as policy instruments for standardizing educational qualifications and aligning learning outcomes with professional competencies and labor market expectations. NQFs provide a structured framework that defines the knowledge, skills, and competencies expected at different qualification levels, thereby enhancing transparency, comparability, learner mobility, and lifelong learning opportunities (Salazar et al., 2025). As higher education systems continue to undergo reform, qualifications frameworks have become important mechanisms for strengthening curriculum quality, supporting competency-based education, and promoting outcome-oriented approaches to teaching and learning (Mahrishi et al., 2025).

Globally, NQFs have been implemented to bridge the gap between educational outcomes and workforce requirements by ensuring that graduates possess the competencies necessary for professional practice and societal development. Research suggests that qualifications frameworks contribute to curriculum coherence, quality enhancement, and educational accountability by providing clear standards for curriculum design, teaching, assessment, and program evaluation (Velempini & Maruatona, 2025). Consequently, higher education institutions are increasingly expected to demonstrate that their

academic programs produce graduates who can meet both national and international standards of competence and performance.

In line with these global developments, Pakistan introduced the National Qualifications Framework (NQF) through the Higher Education Commission (HEC) to strengthen the quality, relevance, and comparability of higher education qualifications. The framework establishes qualification levels and descriptors that specify expected graduate competencies in terms of knowledge, skills, and professional abilities. It serves as a national reference for curriculum development, learning outcome formulation, assessment practices, and quality assurance processes across higher education institutions (Haider et al., 2020). The introduction of the NQF represents a significant policy initiative aimed at aligning Pakistani higher education with international educational standards while addressing national socioeconomic and workforce development needs.

Recent higher education reforms in Pakistan have further emphasized the implementation of NQF principles through curriculum revision and quality assurance initiatives. Universities are increasingly required to align academic programs with clearly defined learning outcomes and competency standards to ensure consistency and educational effectiveness. The integration of NQF principles into curriculum planning and program evaluation reflects Pakistan's commitment to improving educational quality, enhancing graduate employability, and increasing the international recognition of its qualifications (Haq et al., 2025). However, the successful implementation of NQF requires more than policy adoption; it depends on how effectively institutions, academic leaders, and faculty members translate framework requirements into educational practice.

The implementation of NQF is closely associated with Outcome-Based Education (OBE), which has emerged as a major reform movement in higher education worldwide. OBE emphasizes the achievement of clearly defined learning outcomes and requires alignment among curriculum content, instructional strategies, learning activities, and assessment methods. Unlike traditional approaches that focus primarily on content delivery, OBE prioritizes the competencies, knowledge, and skills that students are expected to demonstrate upon graduation. Through this approach, educational institutions can ensure that learning experiences contribute directly to the attainment of intended outcomes and professional competencies(Afzal et al., 2025).

The successful implementation of OBE depends on effective curriculum alignment, particularly the alignment of Course Learning Outcomes (CLOs), Program Learning Outcomes (PLOs), teaching practices, and assessment procedures. Research indicates that outcome-based approaches improve educational quality when faculty members understand learning outcome frameworks and possess the capacity to integrate them into curriculum design and instructional practice (Rehman, 2025). Consequently, faculty engagement, professional development, and institutional support become critical factors in determining the effectiveness of NQF and OBE implementation within higher education settings (Benavides & Blancas, 2026).

The adoption of NQF and OBE is particularly important in BS Special Education programs because these programs prepare professionals who are responsible for addressing the diverse educational needs of learners with disabilities and special needs. Special Education professionals require a combination of theoretical knowledge, pedagogical expertise, practical competencies, and ethical understanding to support inclusive and specialized educational practices. Therefore, ensuring curriculum alignment, competency development, and learning outcome attainment is essential for preparing graduates who can effectively respond to the complexities of contemporary educational environments (Bhutta et al., 2026).

Furthermore, BS Special Education programs must ensure that graduates possess not only academic knowledge but also professional competencies related to assessment, intervention, classroom management, collaboration, and advocacy for learners with diverse needs. The implementation of NQF principles within these programs can support the development of such competencies by providing clear expectations regarding graduate outcomes and professional standards. Effective implementation may therefore contribute to improved program quality, enhanced graduate preparedness, and better educational services for learners with disabilities (P Hinduja et al., 2023).

Despite growing attention to NQF implementation and outcome-based education in Pakistani higher education, limited empirical research has explored how faculty members and academic leaders perceive and implement NQF requirements within BS Special Education programs. Existing studies have primarily focused on curriculum reforms, accreditation requirements, policy development, and general implementation of outcome-based education in higher education contexts (Holland & Edifor, 2024). Although these studies provide valuable insights into educational reform processes, they offer limited understanding of how NQF principles are operationalized within specialized academic disciplines such as Special Education.

Moreover, little qualitative evidence is available regarding faculty awareness of NQF descriptors, curriculum alignment practices, institutional support mechanisms, and implementation challenges affecting learning outcome attainment in BS Special Education programs. The perspectives of faculty members and academic leaders remain particularly underexplored despite their central role in curriculum implementation, instructional decision-making, assessment design, and quality assurance activities. This gap restricts understanding of how institutional factors facilitate or hinder the effective implementation of NQF and outcome-based education practices (Jain & Padmapriya, 2025).

To address this gap, the present study explored faculty members' and Heads of Department's perceptions regarding the implementation of Pakistan's National Qualifications Framework in BS Special Education programs. The study further examined institutional practices supporting the attainment of NQF learning outcomes and identified challenges affecting effective implementation. By investigating the experiences of academic stakeholders from public and private universities, the study provides empirical evidence that may inform curriculum improvement, faculty capacity building, quality assurance initiatives, and policy implementation in higher education. The findings are expected to contribute to the

growing body of knowledge on NQF implementation and support efforts to strengthen outcome-based education within Special Education programs in Pakistan.(Bosire, 2025).

Literature Review

National Qualifications Frameworks in Higher Education

National Qualifications Frameworks (NQFs) have emerged as significant policy instruments for improving the quality, transparency, and comparability of higher education systems worldwide. NQFs provide structured descriptions of learning achievements by defining the knowledge, skills, competencies, and professional attributes expected at different qualification levels. These frameworks support educational accountability and facilitate the alignment of academic programs with labor market requirements and societal needs. According to Velempini and Maruatona (2025), qualifications frameworks promote lifelong learning, learner mobility, and the recognition of qualifications across national and international contexts.

The adoption of qualifications frameworks has accelerated globally due to increasing demands for quality assurance and graduate employability. Countries across Europe, Asia, Africa, and Oceania have implemented qualifications frameworks to establish clear educational standards and improve curriculum coherence. Research indicates that NQFs contribute to curriculum modernization, competency development, and educational consistency by providing a common reference point for curriculum design, teaching, assessment, and program evaluation (Shakeel et al., 2026). Through clearly defined learning outcomes, qualifications frameworks encourage institutions to focus on measurable educational achievements rather than content coverage alone.

In Pakistan, the Higher Education Commission introduced the National Qualifications Framework to establish a nationally coherent system of qualifications based on learning outcomes and competency development. The framework specifies qualification levels and descriptors that guide curriculum development, assessment practices, and quality assurance activities across higher education institutions. Recent reforms have further emphasized the integration of NQF principles into undergraduate and postgraduate programs to strengthen educational quality and improve graduate competencies. Consequently, the NQF serves as an important mechanism for aligning higher education practices with international educational standards.(Shah & Habib, 2026)

NQFs and International Quality Assurance Standards

The growing importance of qualifications frameworks is closely linked to international quality assurance initiatives in higher education. Globally, universities are increasingly expected to demonstrate accountability, transparency, and graduate competence through measurable learning outcomes. International organizations such as UNESCO and regional quality assurance bodies have emphasized the

role of qualifications frameworks in strengthening educational quality and supporting the international recognition of qualifications (Preeta Hinduja et al., 2023).

One of the most influential models is the European Qualifications Framework (EQF), which provides a common reference system for comparing qualifications across countries. The EQF emphasizes learning outcomes, competency development, and progression pathways, allowing institutions to align educational programs with internationally recognized standards. Similar frameworks have been adopted in Australia, New Zealand, South Africa, and several Asian countries to enhance graduate employability, learner mobility, and educational comparability.

Research suggests that qualifications frameworks contribute significantly to quality assurance by promoting curriculum coherence, assessment validity, and continuous improvement processes. However, achieving alignment with international quality standards requires more than policy adoption. Institutions must ensure that framework requirements are effectively integrated into curriculum planning, teaching practices, assessment systems, and quality assurance mechanisms. Studies indicate that gaps often exist between policy expectations and institutional implementation, highlighting the need for stronger faculty engagement and institutional capacity building(Fazal et al., 2025).

Outcome-Based Education in Higher Education

Outcome-Based Education (OBE) has become one of the most influential approaches to educational reform in contemporary higher education. OBE emphasizes clearly defined learning outcomes and focuses on what students are expected to know, understand, and demonstrate upon completion of a program. Unlike traditional approaches that prioritize content delivery, OBE places learning outcomes at the center of curriculum planning, instructional practices, and assessment procedures(Elfert et al., 2025).

The fundamental principle of OBE is alignment among intended learning outcomes, teaching and learning activities, and assessment methods. Through this alignment, educational institutions can ensure that learning experiences contribute directly to the development of desired competencies. Research has demonstrated that OBE promotes critical thinking, problem-solving abilities, communication skills, professional competence, and graduate employability (Mahrishi, 2025). Consequently, OBE has become a key component of accreditation systems and quality assurance frameworks worldwide.

Despite its advantages, OBE implementation remains challenging in many educational settings. Common barriers include limited faculty understanding of learning outcomes, insufficient training opportunities, increased administrative responsibilities, and difficulties in developing authentic assessment strategies. Research consistently demonstrates that successful OBE implementation requires faculty commitment, institutional support, and ongoing professional development initiatives.

Curriculum Alignment and Learning Outcome Attainment

Curriculum alignment is a fundamental component of both NQFs and OBE. Alignment refers to the systematic coherence among Course Learning Outcomes (CLOs), Program Learning Outcomes (PLOs), instructional activities, assessment methods, and qualification framework requirements. Effective alignment ensures that educational experiences contribute directly to the achievement of intended learning outcomes and graduate competencies.

Studies have shown that curriculum alignment improves educational quality by enhancing instructional effectiveness, strengthening assessment validity, and promoting student learning achievement. Mapping CLOs to PLOs enables institutions to monitor learning outcome attainment and identify areas requiring improvement. Curriculum mapping also supports quality assurance processes by providing evidence of consistency between program objectives and educational practices.(Anjum & Ayaz, 2025)

Within qualifications framework implementation, curriculum alignment serves as the primary mechanism through which policy expectations are translated into educational practice. When alignment is weak, discrepancies may emerge between intended learning outcomes and actual learning experiences, limiting students' ability to develop desired competencies. Therefore, curriculum alignment is considered essential for ensuring educational effectiveness and achieving qualifications framework standards.(Arshad et al., 2024)

Special Education Programs and Competency Development

Special Education programs occupy a unique position within higher education because they prepare professionals responsible for addressing the diverse learning needs of individuals with disabilities and exceptionalities. Contemporary Special Education practice requires professionals to possess a combination of theoretical knowledge, pedagogical expertise, assessment skills, intervention strategies, communication competencies, and ethical understanding.

The increasing emphasis on inclusive education and evidence-based practice has expanded expectations regarding graduate competencies in Special Education. Consequently, universities must ensure that graduates develop the knowledge and skills necessary to work effectively in diverse educational environments. Qualifications frameworks and outcome-based approaches provide valuable mechanisms for defining these competencies and ensuring their systematic development throughout academic programs.(Ayaz & Sharjeel, 2020)

Research suggests that competency-based curriculum design can enhance graduate preparedness by clarifying professional expectations and supporting the development of practical skills. Effective implementation of qualifications framework standards within Special Education programs may therefore contribute to improved educational quality, stronger professional competence, and better outcomes for learners with disabilities.(Bashir et al., 2025)

Faculty Perceptions and Educational Reform

Faculty members play a central role in implementing educational reforms because they are responsible for curriculum delivery, instructional decision-making, assessment design, and student learning. Their perceptions, attitudes, and experiences significantly influence the success of initiatives such as NQF and OBE implementation.(Biggs et al., 2022)

Research consistently indicates that faculty awareness and understanding of educational reforms are essential for successful implementation. Faculty members who understand learning outcome frameworks are more likely to integrate them effectively into curriculum planning and teaching practices. Conversely, limited awareness and inadequate training may hinder implementation efforts and reduce educational effectiveness.

The literature further highlights the importance of leadership support, professional development opportunities, collaborative environments, and organizational culture in shaping faculty perceptions of reform initiatives. Institutions that invest in faculty capacity building and provide ongoing support are more likely to achieve successful implementation of qualifications frameworks and outcome-based education practices.(Afzal et al., 2025)

Institutional Challenges in Implementing NQFs

Although NQFs offer substantial opportunities for improving educational quality, their implementation often encounters significant institutional challenges. Existing research identifies inadequate faculty preparation, limited awareness of framework requirements, insufficient resources, heavy workloads, and weak monitoring systems as major barriers to successful implementation.

Higher education institutions frequently face difficulties in aligning curriculum structures, assessment practices, and quality assurance processes with qualifications framework standards. In some cases, implementation becomes compliance-oriented rather than genuinely transformative. Additional challenges include resistance to change, inconsistent interpretation of framework requirements, limited collaboration among academic departments, and inadequate technological infrastructure.(Alam et al., 2026)

Recent studies emphasize that successful implementation requires sustained leadership commitment, continuous professional development, adequate resource allocation, and systematic monitoring and evaluation mechanisms. Addressing these challenges is essential for strengthening educational quality and ensuring meaningful implementation of qualifications framework principles.

Research Gap

Despite growing international and national interest in qualifications frameworks and outcome-based education, limited empirical research has examined how Pakistan's National Qualifications Framework is implemented within BS Special Education programs. Existing studies have primarily focused on policy reforms, curriculum development, accreditation requirements, and general higher education contexts. Consequently, little is known about how NQF standards are interpreted and operationalized within specialized academic disciplines such as Special Education.(de Waal et al., 2024)

Furthermore, limited qualitative evidence exists regarding faculty awareness of NQF descriptors, curriculum alignment practices, institutional support mechanisms, and challenges affecting learning outcome attainment. The perspectives of faculty members and academic leaders remain underexplored despite their central role in curriculum implementation and quality assurance activities. This gap restricts understanding of the factors that facilitate or hinder effective implementation and the achievement of internationally comparable educational standards. Therefore, the present study explores faculty members' and Heads of Department's perceptions of NQF implementation, examines curriculum alignment and institutional support practices, and identifies challenges influencing the attainment of NQF learning outcomes within BS Special Education programs.

Theoretical Framework

This study is guided by Constructive Alignment Theory developed by Biggs (1996, 2014). The theory posits that effective learning occurs when intended learning outcomes, teaching and learning activities, and assessment methods are systematically aligned. Students construct knowledge through meaningful learning experiences, while educators design curricula and assessments that facilitate achievement of predetermined outcomes.

Constructive Alignment Theory provides a strong foundation for understanding NQF and OBE implementation because both approaches emphasize learning outcome attainment and curriculum coherence. Within BS Special Education programs, the theory offers a useful lens for examining how CLOs, PLOs, instructional strategies, and assessment practices contribute to the attainment of NQF Level 6 descriptors. Furthermore, the theory highlights the importance of faculty engagement, curriculum planning, and institutional support in achieving educational effectiveness and program quality.

Figure 1: Theoretical framework of the study

Conceptual Framework

The conceptual framework proposes that effective implementation of Pakistan's National Qualifications Framework in BS Special Education programs is influenced by the interaction of faculty awareness, curriculum alignment, institutional support, and implementation challenges. Faculty understanding of NQF descriptors affects curriculum planning, instructional practices, assessment design, and learning outcome attainment. Curriculum alignment among CLOs, PLOs, and NQF requirements promotes coherence in educational experiences and supports competency development.

Institutional support mechanisms, including professional development opportunities, leadership commitment, quality assurance systems, and resource availability, facilitate implementation and enhance faculty capacity. Conversely, implementation challenges such as inadequate training, workload pressures, limited resources, and weak monitoring systems may hinder effective implementation. The framework assumes that successful attainment of NQF learning outcomes depends on the combined influence of faculty competence, curriculum alignment, and supportive institutional environments.

Figure 2: conceptual framework of the study

Methodology

Research Paradigm

This study was conducted within the interpretivist paradigm, which assumes that reality is socially constructed and that knowledge is developed through individuals' experiences and interpretations of social phenomena. Interpretivism is particularly appropriate for qualitative research because it enables researchers to explore participants' perspectives within their natural contexts and understand how they make sense of their experiences (Creswell & Poth, 2024). Given the study's focus on faculty members' and academic leaders' perceptions of Pakistan's National Qualifications Framework (NQF) implementation in BS Special Education programs, the interpretivist paradigm provided an appropriate philosophical foundation for understanding institutional practices, challenges, and lived experiences. (Johnson & Christensen, 2024)

Research Design

A qualitative descriptive research design was employed to obtain detailed insights into participants' perceptions and experiences regarding NQF implementation. Qualitative descriptive studies are useful for providing comprehensive descriptions of phenomena while remaining close to participants' perspectives (Kim et al., 2020). This design enabled the exploration of curriculum alignment, outcome-based education practices, institutional support mechanisms, and implementation challenges within BS Special Education programs.(Creswell & Poth, 2016)

The qualitative approach was selected because NQF implementation involves complex educational processes and institutional dynamics that cannot be adequately understood through quantitative methods alone. By engaging directly with participants, the study generated context-specific evidence regarding the implementation of educational reforms in higher education.

Participants and Sampling

The study involved ten participants, including faculty members and Heads of Department (HoDs) from BS Special Education programs in public and private universities in Punjab, Pakistan. Participants were selected because of their direct involvement in curriculum development, teaching, assessment, quality assurance activities, and academic leadership related to NQF implementation.

Purposive sampling was used to recruit information-rich participants with relevant knowledge and experience of NQF and outcome-based education practices (Campbell et al., 2020). The inclusion criteria required participants to be actively engaged in teaching, curriculum planning, assessment, or academic administration within BS Special Education programs. The inclusion of participants from both public and private universities enabled the study to capture diverse institutional perspectives and implementation experiences.(Shah et al., 2026)

Data Collection

Data were collected through semi-structured interviews, a widely used qualitative method that allows researchers to explore participants' experiences while maintaining consistency across interviews (Creswell & Poth, 2016) An interview protocol was developed based on the study objectives, research questions, and relevant literature on NQF and outcome-based education.

The interview questions focused on participants' awareness of NQF Level 6 descriptors, curriculum alignment practices, institutional support mechanisms, implementation challenges, and recommendations for improving NQF implementation. Prior to data collection, informed consent was obtained from all participants. Interviews were conducted individually, audio-recorded with permission, and supplemented by field notes to capture contextual information and observations. Data collection continued until sufficient depth and richness of information were obtained to address the research questions.

Data Analysis

The collected data were analyzed using reflexive thematic analysis following the six-phase framework proposed by (Creswell & Creswell, 2017). Thematic analysis is a flexible and rigorous method for identifying, analyzing, and interpreting patterns of meaning within qualitative data.

The analysis began with verbatim transcription and repeated reading of interview data to achieve familiarity. Initial codes were then generated from meaningful segments of text relevant to the research questions. Similar codes were grouped into preliminary categories and themes. These themes were subsequently reviewed, refined, and defined to ensure coherence and accurate representation of participants' experiences. Finally, the findings were organized and presented using thematic narratives supported by illustrative participant quotations.

Thematic analysis was considered appropriate because it enabled the identification of recurring patterns related to faculty awareness, curriculum alignment, institutional support, implementation challenges, and the attainment of NQF learning outcomes.

Trustworthiness

The trustworthiness of the study was established using the criteria of credibility, dependability, confirmability, and transferability (Lincoln & Guba, 1985; Nowell & Albrecht, 2024).

Credibility was enhanced through member checking, whereby participants reviewed and verified the accuracy of interpretations derived from their interviews. Dependability was ensured through maintaining an audit trail documenting methodological decisions and analytical procedures. Confirmability was strengthened through reflexive journaling and systematic documentation of coding and theme development to minimize researcher bias. Transferability was promoted through detailed descriptions of the research context, participants, and procedures, enabling readers to assess the applicability of the findings to similar educational settings.

Figure 3 Research Design of the study

Findings

Demographic Characteristics of the Participants

Table 1 shows that female participants constituted the majority of the sample (60.0%), while males represented 40.0%. Participants were equally distributed in terms of teaching experience, with 50.0% having 1–5 years and 50.0% having 6–10 years of experience. Most participants held an M.Phil. degree in Education (70.0%), whereas 30.0% possessed a PhD in Education. Regarding age, 60.0% of the participants were between 20–30 years, while 40.0% were aged 31–40 years. These characteristics indicate that the study included participants with diverse demographic and professional backgrounds, providing varied perspectives on the implementation of Pakistan's National Qualifications Framework in BS Special Education programs.

The findings were organized into five major themes: (1) awareness and understanding of NQF, (2) CLO–PLO alignment with NQF, (3) teaching and assessment practices, (4) institutional challenges, and (5) recommendations for strengthening implementation.

Theme 1: Awareness and understanding of NQF

Subtheme 1.1: Comprehensive Understanding of NQF

Several participants demonstrated a strong understanding of the National Qualifications Framework and NQF Level 6 descriptors. They highlighted concepts such as quality assurance, competency development, communication skills, critical thinking, practical learning, and independent learning as central components of the framework.

One participant stated:

“NQF provides a clear framework for ensuring quality and standardization in higher education, particularly through learning outcomes and competency development.” (P7)

Another participant explained:

“The framework helps universities align curriculum, teaching, and assessment with expected graduate competencies.” (P8)

Similarly, a participant noted:

“NQF encourages critical thinking, communication skills, and practical competencies which are essential for professional development.” (P9)

These responses indicate that some participants possessed a comprehensive understanding of the purpose and application of NQF within higher education.

Subtheme 1.2: Limited Awareness of NQF

Several participants demonstrated only a general understanding of NQF and its objectives. Although they recognized NQF as a framework related to quality assurance and learning outcomes, they lacked detailed knowledge of Level 6 descriptors and implementation procedures.

One participant reported:

“I know NQF exists, but I am not fully aware of all its descriptors and requirements.” (P5)

Another participant stated:

“We hear about NQF during meetings, but I have limited knowledge regarding its practical implementation.” (P6)

These findings suggest that awareness of NQF remains uneven among faculty members.

Subtheme 1.3: Lack of Training and Orientation

A recurring issue identified by participants was the absence of formal training and orientation programs related to NQF.

One participant stated:

“I know NQF exists, but I have not received any formal training about its detailed requirements.” (P3)

Another participant explained:

“There have been no workshops or professional development activities related to NQF in our department.” (P2)

Similarly, a participant remarked:

“Most of our understanding comes from personal reading rather than institutional training.” (P10)

These findings indicate that limited training opportunities contribute directly to variations in faculty awareness and understanding of NQF.

Theme 2: CLO–PLO Alignment with NQF

Subtheme 2.1: Systematic Curriculum Mapping and Alignment

Some participants reported structured processes for aligning Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and NQF Level 6 descriptors.

One participant explained:

“We regularly review CLOs and PLOs through curriculum mapping exercises to ensure alignment with NQF requirements.” (P8)

Another participant stated:

“Our department conducts periodic reviews to ensure that course outcomes contribute to overall program outcomes.” (P7)

Similarly, a participant noted:

“Curriculum mapping helps us identify gaps and maintain alignment with quality assurance requirements.” (P9)

These responses indicate the presence of systematic alignment mechanisms in some institutions.

Subtheme 2.2: Limited Faculty Participation in Alignment Processes

Other participants reported that alignment activities were primarily handled by curriculum committees and senior faculty members, limiting their direct involvement.

One participant stated:

“The curriculum committee manages most alignment activities, and teachers are mainly responsible for delivering course content.” (P4)

Another participant explained:

“We follow the prescribed CLOs and PLOs, but we are not directly involved in designing or mapping them.” (P3)

Similarly, a participant remarked:

“Alignment is usually done by senior faculty members, while junior faculty focus mainly on teaching.” (P6)

Theme 3: Teaching and Assessment Practices

Subtheme 3.1: Student-Centered Teaching Approaches

Participants reported using a variety of teaching methods, including discussions, presentations, case studies, practical activities, and fieldwork. These approaches were viewed as effective in promoting active learning and competency development.

One participant noted:

“Case studies and fieldwork help students apply theoretical concepts in real educational settings.” (P9)

Another participant explained:

“Group discussions and presentations encourage students to participate actively and develop communication skills.” (P8)

Similarly, a participant stated:

“Practical activities are essential because students learn better when they can connect theory with practice.” (P7)

These findings suggest that student-centered teaching approaches support the development of competencies emphasized within NQF Level 6 descriptors.

Subtheme 3.2: Reliance on Traditional Teaching Methods

Despite the adoption of interactive strategies by some participants, others continued to rely mainly on lectures and assignments.

One participant stated:

“Lectures remain the primary teaching method because they allow us to cover the required course content.” (P4)

Another participant explained:

“Most teaching is focused on content delivery rather than competency development.” (P6)

Similarly, a participant remarked:

“Time limitations often prevent us from using more practical and interactive teaching strategies.” (P10)

These responses indicate that traditional teaching practices continue to influence instructional approaches in some institutions.

Subtheme 3.3: Outcome-Based Assessment Practices

Participants reported using various assessment tools, including quizzes, assignments, presentations, projects, and examinations. Some participants demonstrated stronger alignment with outcome-based education through assessment mapping and rubric use.

One participant explained:

“We use rubrics to evaluate student performance against specific learning outcomes.” (P1)

Another participant stated:

“Assessment results are reviewed to determine whether CLOs and PLOs have been achieved.” (P8)

Similarly, a participant remarked:

“Continuous assessment helps us monitor students’ progress throughout the semester.” (P9)

These findings indicate that some institutions have adopted assessment practices aligned with outcome-based education principles.

Subtheme 3.4: Limited Alignment of Assessment with NQF

Several participants acknowledged that assessment practices mainly focused on measuring content knowledge rather than broader competencies.

One participant stated:

“Most assessments focus on students’ understanding of course content rather than NQF competencies.” (P5)

Another participant explained:

“There is limited formal mapping between assessment results and program outcomes.” (P3)

These responses suggest that assessment alignment with NQF requirements remains inconsistent.

Summary of Theme 3

Overall, the findings indicate variation in teaching and assessment practices across institutions. While some participants demonstrated strong alignment with competency-based and outcome-based education principles, others relied primarily on traditional instructional and assessment approaches. Consequently, implementation of NQF within teaching and assessment practices remains uneven.

Theme 4: Institutional Challenges

Subtheme 4.1: Limited Faculty Awareness and Training

Participants consistently identified limited awareness and inadequate training as major barriers to NQF implementation.

One participant explained:

“The biggest challenge is that many faculty members have not received proper training regarding NQF and outcome-based education.” (P2)

Another participant stated:

“Many teachers are unfamiliar with NQF descriptors and how they should be applied.” (P5)

Similarly, a participant remarked:

“There is a need for regular workshops and professional development programs.” (P10)

These findings suggest that faculty preparedness remains a major challenge affecting implementation efforts.

Subtheme 4.2: Resource and Infrastructure Constraints

Participants reported shortages of resources, teaching materials, and institutional support.

One participant stated:

“Limited resources make it difficult to implement practical and competency-based learning activities.” (P7)

Another participant explained:

“Infrastructure constraints affect the quality of teaching and assessment practices.” (P8)

These findings indicate that resource availability influences the effectiveness of NQF implementation.

Subtheme 4.3: Heavy Workload and Large Class Sizes

Several participants highlighted workload pressures and increasing student numbers as barriers.

One participant stated:

“Heavy teaching loads leave little time for curriculum review, assessment mapping, and monitoring.” (P7)

Another participant explained:

“Large class sizes make it difficult to provide individual feedback and assess learning outcomes effectively.” (P9)

Similarly, a participant remarked:

“Administrative responsibilities reduce the time available for quality improvement activities.” (P4)

These findings demonstrate that workload pressures can hinder effective implementation of NQF requirements.

Subtheme 4.4: Weak Monitoring and Evaluation Systems

Participants emphasized weaknesses in monitoring and accountability mechanisms.

One participant stated:

“There should be stronger monitoring systems to ensure consistent implementation of NQF.” (P3)

Another participant explained:

“Implementation is often discussed, but there is limited follow-up regarding actual practices.” (P8)

These findings suggest that monitoring and evaluation systems require strengthening.

Summary of Theme 4

The findings reveal that limited training, resource shortages, workload pressures, and weak monitoring mechanisms collectively hinder the effective implementation of NQF within BS Special Education programs.

Theme 5: Recommendations for Strengthening NQF Implementation

Subtheme 5.1: Faculty Capacity Building

Participants strongly emphasized the need for faculty training and professional development.

One participant remarked:

“Regular workshops and professional development programs are essential for effective NQF implementation.” (P1)

Another participant stated:

“Faculty members need training in curriculum alignment, assessment mapping, and outcome-based education.” (P6)

Similarly, a participant explained:

“Capacity-building initiatives would improve faculty confidence and implementation skills.” (P9)

Subtheme 5.2: Strengthening Quality Assurance and Monitoring

Participants recommended stronger quality assurance systems and accountability mechanisms.

One participant stated:

“Regular monitoring and evaluation would help ensure that NQF requirements are consistently implemented.” (P3)

Another participant explained:

“Departments should conduct periodic reviews of curriculum alignment and learning outcomes.” (P8)

Subtheme 5.3: Improving Resources and Practical Learning Opportunities

Participants highlighted the importance of institutional support, infrastructure, and practical learning experiences.

One participant stated:

“Students need more fieldwork opportunities to connect theory with practice.” (P4)

Another participant explained:

“Partnerships with schools and Special Education institutions would strengthen professional preparation.” (P7)

Similarly, a participant remarked:

“Adequate resources and infrastructure are essential for successful implementation.” (P1)

Discussion

The present study explored faculty members’ and academic leaders’ perceptions regarding the implementation of Pakistan’s National Qualifications Framework (NQF) within BS Special Education programs. The findings contribute to the growing international literature on qualifications frameworks, outcome-based education, and quality assurance by highlighting how policy reforms are translated into educational practice within higher education institutions. Consistent with international research, the study revealed that the effectiveness of qualifications frameworks depends not only on the existence of policy standards but also on faculty awareness, curriculum alignment, institutional capacity, and

organizational support. These findings support global evidence suggesting that higher education systems often experience a gap between policy expectations and implementation realities, particularly during educational reform initiatives.

A major finding of the study was the variation in participants' awareness and understanding of NQF standards. Similar challenges have been reported in higher education systems across Europe, Asia, Africa, and the Middle East, where qualifications framework implementation has frequently been influenced by differences in faculty knowledge, institutional communication, and professional development opportunities. International studies indicate that faculty awareness is a critical prerequisite for achieving curriculum coherence, competency development, and learning outcome attainment because faculty members serve as the primary agents responsible for translating policy requirements into classroom practice. The findings therefore reinforce international concerns that qualifications frameworks may have limited impact when faculty members lack sufficient understanding of framework descriptors and outcome-based education principles.

The findings also revealed that inadequate professional development opportunities constrained faculty understanding and implementation of NQF requirements. This finding aligns with international research demonstrating that educational reforms often fail to achieve their intended outcomes when institutions do not invest adequately in faculty capacity building. Across many countries implementing qualifications frameworks and competency-based education systems, continuous professional development has been identified as a key factor in strengthening curriculum design, assessment literacy, and outcome-based teaching practices. The present study therefore supports the view that qualifications frameworks should be accompanied by sustained training initiatives rather than relying solely on policy directives and compliance requirements.

Another important finding concerned curriculum alignment practices. Participants reported varying levels of involvement in curriculum mapping and alignment of Course Learning Outcomes, Program Learning Outcomes, and NQF descriptors. This finding reflects broader international discussions regarding constructive alignment and curriculum coherence in higher education. Research conducted in countries implementing qualifications frameworks has consistently emphasized that effective alignment among learning outcomes, instructional activities, and assessment procedures is essential for achieving educational quality and graduate competence. The findings suggest that institutions with stronger curriculum alignment practices are better positioned to support learning outcome attainment and competency development, whereas limited faculty engagement in alignment processes may weaken the effectiveness of outcome-based education initiatives.

The study further identified variations in teaching practices that mirror international concerns regarding the transition from traditional content-focused instruction to competency-based and student-centered learning approaches. Participants who incorporated discussions, presentations, practical activities, field experiences, and collaborative learning opportunities demonstrated stronger alignment with contemporary educational approaches that emphasize critical thinking, problem-solving, and

professional competence. These findings are consistent with international quality assurance standards that encourage active learning and authentic educational experiences. However, the continued reliance on lecture-based instruction in some contexts suggests that the shift toward outcome-based education remains incomplete, a challenge that has also been reported in higher education systems worldwide.

Assessment practices emerged as another area where implementation challenges were evident. Although participants reported using multiple assessment methods, systematic alignment between assessment strategies, learning outcomes, and NQF descriptors was inconsistent. This finding corresponds with international literature identifying assessment alignment as one of the most difficult aspects of qualifications framework and outcome-based education implementation. Globally, higher education institutions are increasingly encouraged to adopt authentic assessments that measure higher-order thinking, professional competencies, and real-world performance rather than relying solely on traditional examinations. The findings suggest that strengthening assessment literacy and outcome-based evaluation practices may improve institutions' ability to measure graduate competencies and demonstrate educational effectiveness.

The institutional challenges identified in this study are also consistent with international evidence regarding educational reform implementation. Participants highlighted limited awareness, insufficient training, inadequate resources, workload pressures, large class sizes, weak monitoring mechanisms, and unclear implementation guidelines as significant barriers. Similar challenges have been documented across diverse higher education systems where qualifications frameworks have been introduced as part of quality assurance reforms. These findings suggest that successful implementation requires comprehensive institutional readiness, including leadership commitment, resource allocation, quality assurance structures, and ongoing monitoring and evaluation processes. Without such support, qualifications frameworks risk becoming administrative requirements rather than transformative instruments for educational improvement.

The recommendations proposed by participants further align with international best practices for strengthening qualifications framework implementation. The emphasis on faculty training, curriculum review, assessment alignment, quality assurance enhancement, and stronger university-industry partnerships reflects global efforts to improve graduate employability and competency development. International evidence suggests that collaboration among universities, professional organizations, employers, and accreditation agencies enhances the relevance of learning outcomes and supports alignment between higher education and workforce expectations. Such partnerships are particularly important in Special Education programs, where graduates must demonstrate specialized competencies required for inclusive and evidence-based professional practice.

Overall, the findings support international perspectives on quality assurance and outcome-based education by demonstrating that effective implementation of qualifications frameworks requires coherence among curriculum design, teaching practices, assessment systems, faculty development, and institutional support structures. The study highlights that achieving internationally comparable

educational standards depends not only on policy adoption but also on the capacity of institutions to operationalize qualifications framework requirements within everyday educational practice. By identifying factors that facilitate and hinder implementation, the study contributes to international discussions on qualifications frameworks, educational quality, and higher education reform while providing evidence for strengthening Special Education programs in Pakistan and similar developing higher education contexts.

Conclusion

This study explored faculty members' and academic leaders' perceptions regarding the implementation of Pakistan's National Qualifications Framework (NQF) within BS Special Education programs. The findings contribute to the broader discourse on qualifications frameworks, quality assurance, and outcome-based education by revealing significant variations in faculty awareness, curriculum alignment, teaching practices, and assessment approaches. While some institutions demonstrated systematic implementation through curriculum mapping, outcome-based instructional strategies, and assessment practices aligned with Program Learning Outcomes and NQF descriptors, others exhibited limited faculty engagement and inconsistent application of framework requirements.

The study identified a notable policy-practice gap in the implementation of NQF standards. Although the framework provides a comprehensive structure for promoting educational quality, competency development, and learning outcome attainment, its translation into institutional practice remains uneven. Participants highlighted several barriers, including inadequate professional development opportunities, limited institutional resources, heavy teaching and administrative workloads, weak monitoring and evaluation mechanisms, and insufficient institutional support. These challenges restricted the effective integration of NQF principles into curriculum planning, teaching, assessment, and quality assurance processes.

Despite these constraints, participants widely acknowledged the potential of NQF to strengthen educational quality, standardization, accountability, and graduate competencies. The findings suggest that successful implementation of qualifications framework standards requires more than policy adoption; it depends on faculty capacity building, effective curriculum alignment, outcome-based teaching and assessment practices, and supportive institutional environments. Strengthening these areas may help bridge the gap between policy expectations and educational practice, enhance learning outcome attainment, and support the development of graduates who meet nationally and internationally recognized standards of professional competence.

Limitations of the Study

This study has several limitations that should be considered when interpreting the findings. First, the study was conducted with a relatively small sample of ten faculty members and Heads of Department from public and private universities in Punjab, Pakistan. While the qualitative design provided rich and in-

depth insights into participants' experiences, the findings may not be representative of all higher education institutions within Pakistan or other national contexts. Consequently, the transferability of the findings should be considered in relation to institutional, disciplinary, and contextual differences.

Second, the study focused exclusively on BS Special Education programs and therefore may not reflect implementation practices in other academic disciplines where qualifications framework requirements, curriculum structures, and professional competency expectations may differ. Third, the study explored only the perspectives of faculty members and academic leaders. The views of students, quality assurance personnel, accreditation bodies, employers, and policymakers were not included, despite their important roles in qualifications framework implementation, quality assurance, and graduate competency development.

Finally, as a qualitative inquiry, the study emphasized understanding participants' perceptions and experiences rather than measuring the effectiveness of National Qualifications Framework implementation or learning outcome attainment. Future research may employ mixed-methods or comparative approaches involving larger samples, multiple stakeholder groups, and institutions from different regions or countries. Such studies could provide a broader understanding of policy-practice gaps, quality assurance processes, outcome-based education implementation, and the achievement of nationally and internationally comparable graduate competencies.

Implications

Policy Implications

The findings highlight the need for the Higher Education Commission (HEC) to strengthen the implementation of Pakistan's National Qualifications Framework through comprehensive operational guidelines, systematic monitoring mechanisms, and regular professional development initiatives. Policymakers should promote greater alignment between NQF standards, quality assurance processes, and outcome-based education practices to ensure that higher education programs produce graduates with competencies that are comparable to national and international expectations. Furthermore, national quality assurance policies should emphasize continuous evaluation of learning outcome attainment and institutional readiness for qualifications framework implementation.

Institutional Implications

Higher education institutions should strengthen internal quality assurance systems to support effective implementation of NQF standards. Universities should establish systematic curriculum review processes, learning outcome monitoring mechanisms, and evidence-based program evaluation practices. Institutional leadership should foster a culture of continuous quality enhancement by ensuring that curriculum design, teaching practices, assessment systems, and quality assurance procedures are

aligned with qualifications framework requirements and internationally recognized educational standards.

Faculty Development Implications

The findings underscore the importance of sustained faculty capacity building for successful implementation of qualifications frameworks and outcome-based education. Universities should provide continuous professional development opportunities focused on curriculum alignment, learning outcome formulation, outcome-based teaching strategies, assessment mapping, authentic assessment practices, and competency-based education. Strengthening faculty understanding of NQF principles may help bridge the gap between policy expectations and classroom practice while enhancing educational quality and graduate competency development.

Practice Implications

BS Special Education programs should strengthen the integration of theoretical knowledge with practical and professional competencies through fieldwork, internships, school-based experiences, and stakeholder engagement. Greater collaboration with schools, professional organizations, employers, and community partners can help ensure that learning outcomes remain relevant to professional practice and societal needs. Such initiatives may contribute to improved graduate preparedness, employability, and alignment with internationally recognized standards for Special Education professionals.

Future Research Directions

Future research should examine the implementation of Pakistan's National Qualifications Framework across different academic disciplines, institutional types, and geographical regions to provide a broader understanding of implementation practices and challenges. Comparative studies involving public and private universities, as well as cross-national investigations, may offer valuable insights into how qualifications frameworks are operationalized in different higher education contexts. Additionally, future studies should explore the relationship between NQF implementation, learning outcome attainment, graduate competencies, employability, and educational quality. Mixed-methods and longitudinal research designs may further enhance understanding of how qualifications frameworks contribute to continuous quality improvement and alignment with internationally comparable higher education standards.

Declarations

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Ethics declaration

The study was conducted in accordance with institutional ethical guidelines and standards for educational research. Ethical approval was obtained from the relevant institutional authorities.

Consent to Participate

Informed consent was obtained from all individual participants included in the study.

Consent for Publication

The authors consent to the publication of this manuscript.

Competing Interests

The authors declare that they have no competing interests.

Author Contribution

Author ContributionsNajeeba Javed: Conceptualization, methodology, investigation, data collection, formal analysis, writing of the original draft.Dr. Muhammad Sarwar: Supervision, validation, critical review, and editing.Mansoor Ahmad: Literature review, manuscript editing, and review.Muhammad Arif: Methodological support, interpretation of findings, and manuscript review. Dr. Muhammad Siddique: Proofreading, formatting, and final review. All authors read and approved the final manuscript.

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Code Availability

Not applicable.

Data Availability

The qualitative data generated and analyzed during the current study are not publicly available due to participant confidentiality but are available from the corresponding author upon reasonable request.

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Figures

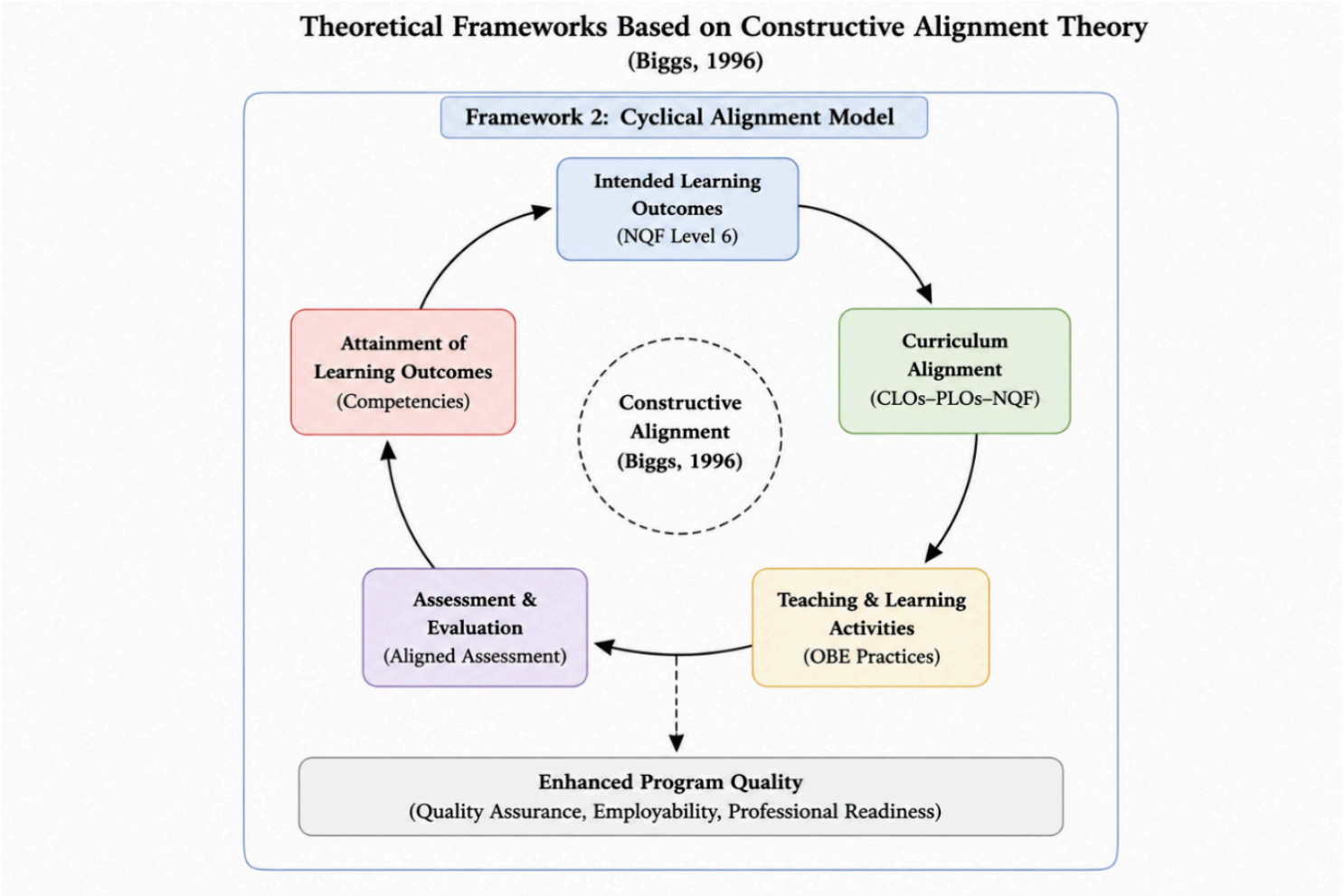

Figure 1

Theoretical framework of the study

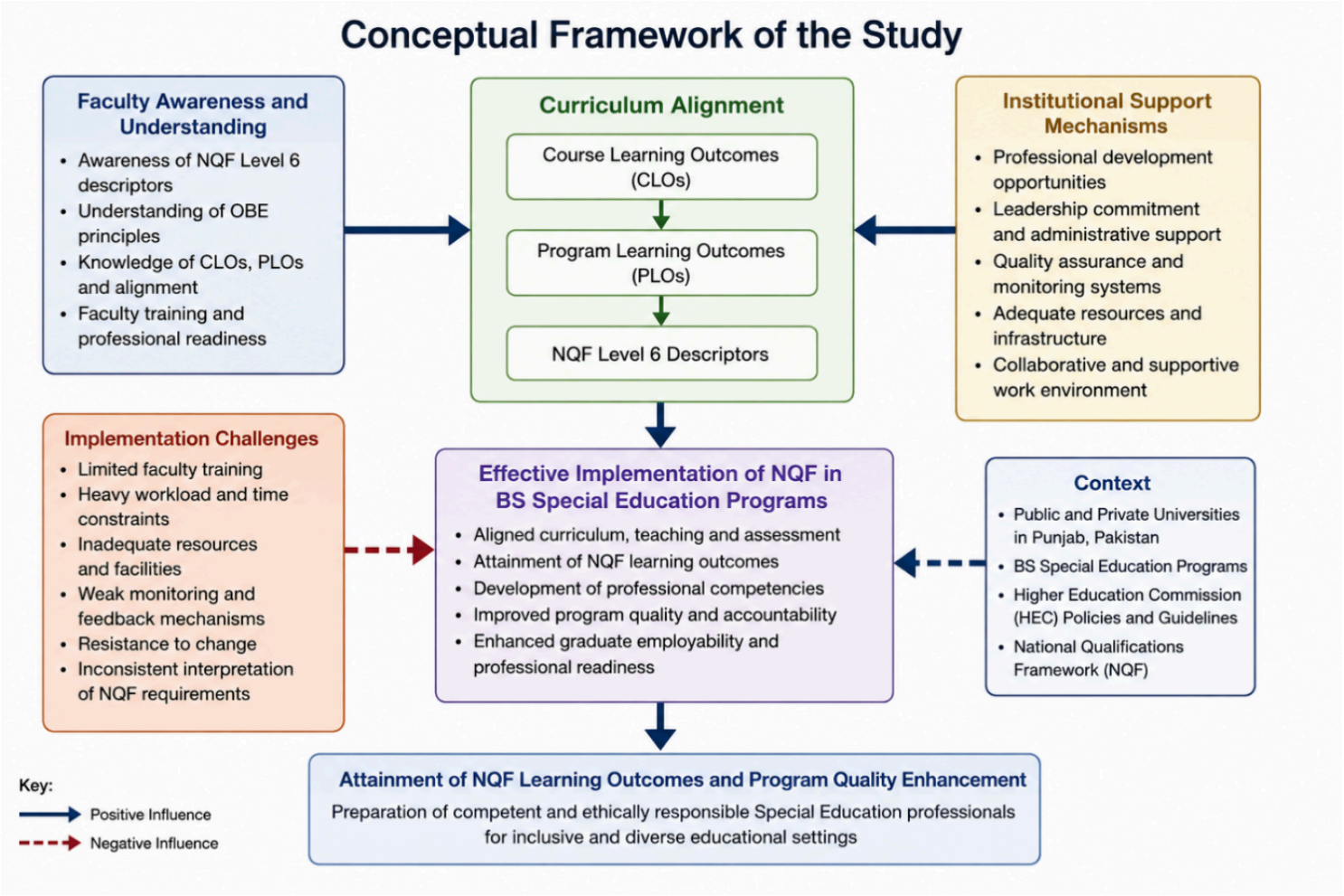

Figure 2

conceptual framework of the study

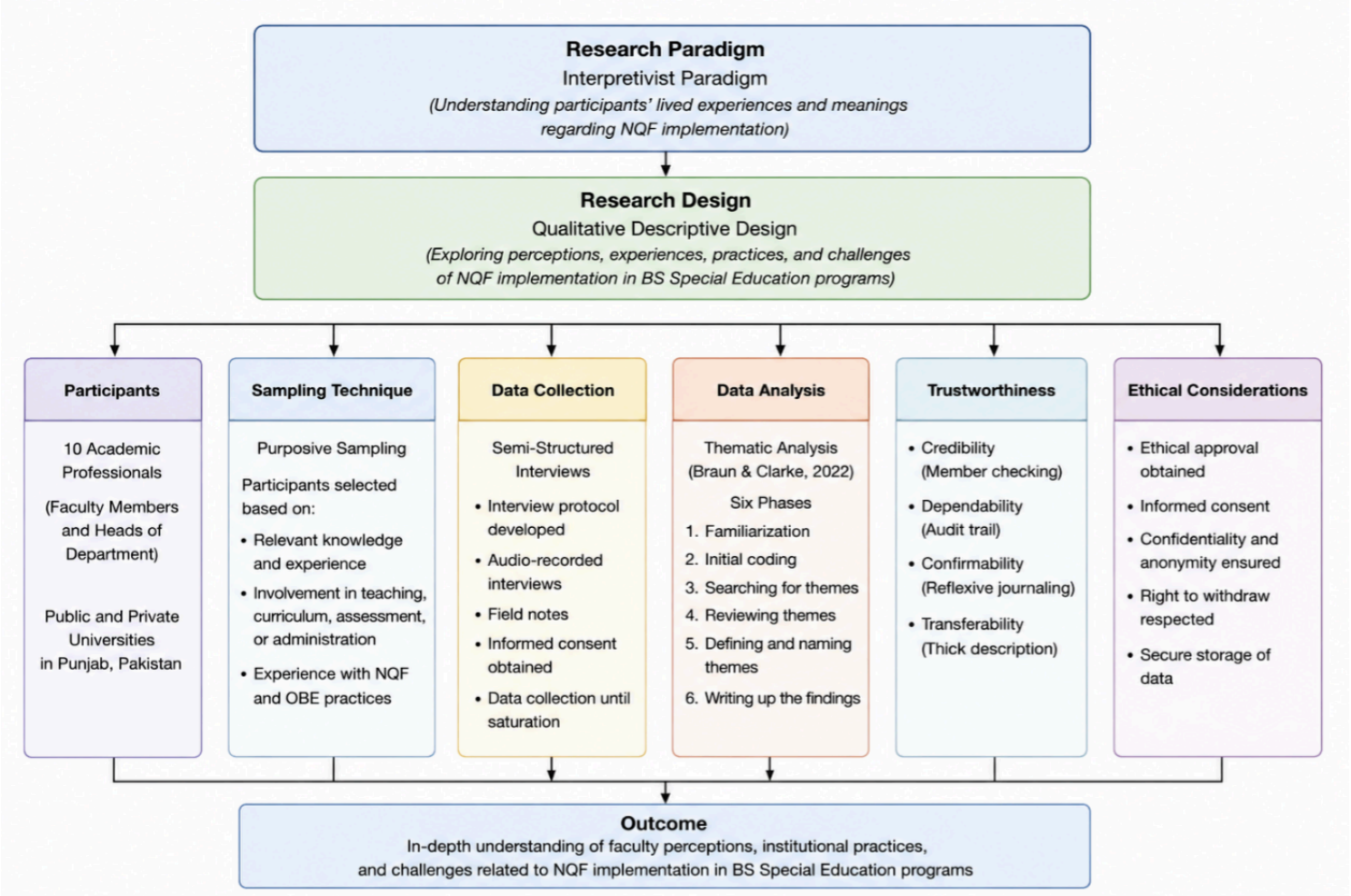

Figure 3

Research Design of the study