



Vol. 31 | Post COVID-19 Recovery and Sustainable development

Vol. 31 Article 10 | June, 11 2026

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## Relevance of Mixed Methods Research on Higher Education Institutional Programs' Development in Kenya

**Author:** Ruth Karimi Charo

The Catholic University of Eastern Africa. Website: [www.cuea.edu](http://www.cuea.edu)

**Correspondance:** Ruth Karimi Charo. Email: [ruthk.charo@gmail.com](mailto:ruthk.charo@gmail.com)

*Cite as:* Charo, R. K. (2026). Relevance of Mixed Methods Research on Higher Education Institutional Programs' Development in Kenya. *International Journal of Social and Development Concerns*, 31(10), 142–159.

<https://doi.org/10.5281/zenodo.20645010>

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**Abstract:** Higher learning institutions in Kenya face increasing demands for quality, accountability, innovation, and responsiveness in program development and implementation. Addressing these challenges requires comprehensive evidence that captures both measurable outcomes and stakeholder experiences. This paper examines the relevance of Mixed Methods Research (MMR) in supporting higher learning institutional program development in Kenya. The study adopted a qualitative desk review and conceptual analysis of literature on mixed methods research and higher education development. Guided by Pragmatism Theory, Triangulation Theory, and Methodological Pluralism Theory, the review explored the contribution of MMR to evidence generation, curriculum development, decision-making, program evaluation, stakeholder engagement, research quality, and institutional innovation. The findings indicate that MMR enhances the comprehensiveness, validity, and usefulness of evidence by integrating quantitative and qualitative approaches. This integration supports more informed decision-making, effective program evaluation, stakeholder-centred development, and continuous institutional improvement. The paper concludes that mixed methods research provides a valuable framework for strengthening evidence-based governance and sustainable development within Kenya's higher education sector.

**Keywords:** Mixed Methods Research, Higher Education, Institutional Programs Development, Evidence-Based Decision-Making, Program Evaluation

### 1.1 Background of the Study

Higher education institutions (HEIs) play a critical role in national development through teaching, research, innovation, community engagement, and human capital development. In Kenya, universities and other tertiary institutions have experienced rapid expansion over the last two decades, driven by increasing demand for higher education, technological advancement, globalization, and policy reforms aimed at improving access and quality. As these institutions continue to evolve, there is a growing need for robust research approaches capable of generating comprehensive evidence to support curriculum development, quality assurance, strategic planning, program evaluation, stakeholder engagement, and institutional decision-making.

Traditionally, educational research has relied heavily on either quantitative or qualitative approaches. Quantitative methods have been valued for their ability to generate measurable and generalizable findings through statistical analysis, while qualitative methods have been appreciated for providing rich insights into participants' experiences, perceptions, and social realities. However, many contemporary challenges facing higher education institutions are complex and multifaceted, making it difficult for a single methodological approach to capture their full dimensions. Consequently, Mixed Methods Research (MMR) has emerged as an increasingly important paradigm that combines the strengths of both quantitative and qualitative approaches to provide a more comprehensive understanding of educational phenomena (Creswell & Plano Clark, 2018; Johnson, Onwuegbuzie, & Turner, 2007).

Mixed Methods Research is grounded in pragmatism, a philosophical perspective that emphasizes the practical consequences of inquiry and advocates the use of multiple methods to address research questions effectively. According to Johnson et al. (2007), mixed methods research represents a third major research paradigm alongside quantitative and qualitative approaches, integrating diverse forms of evidence to achieve greater breadth, depth, corroboration, and understanding of research problems. The approach allows researchers to collect, analyse, and integrate numerical and textual data within a single study, thereby enhancing the validity and utility of research findings.

Globally, higher education institutions increasingly utilize mixed methods research to inform curriculum reforms, institutional policy development, student support initiatives, learning analytics, quality assurance mechanisms, and innovation strategies. Evidence suggests that integrating qualitative and quantitative evidence strengthens decision-making processes, enhances program evaluation, improves stakeholder engagement, and promotes evidence-based institutional development (Galvis, 2018; Harrison et al., 2022; Webber, 2018). In Kenya, where universities continue to respond to changing labour market demands, digital transformation, quality assurance requirements, and expanding enrolments, the application of mixed methods research offers significant potential for generating contextually relevant evidence capable of informing sustainable institutional development.

Despite the growing recognition of mixed methods research internationally, its relevance to the development of higher learning institutional programs in Kenya has not been adequately examined. Understanding how mixed methods approaches contribute to program planning, implementation, monitoring, evaluation, and continuous improvement is essential for strengthening the effectiveness and responsiveness of higher education institutions. This paper therefore examines the relevance of mixed methods research in supporting the development of higher learning institutional programs in Kenya and highlights its contribution to evidence-based decision-making, curriculum innovation, stakeholder engagement, and institutional effectiveness.

## **1.2 Statement of the Problem/Justification of the Study**

Higher learning institutions in Kenya operate in an increasingly complex environment characterized by rapid enrolment growth, evolving labour market demands, technological transformation, quality assurance requirements, funding constraints, and growing expectations from students, employers, government agencies, and other stakeholders. Universities and colleges are continually required to review curricula, improve teaching and learning processes, strengthen research capacity, enhance graduate employability, and demonstrate institutional effectiveness. To achieve these goals, institutional

leaders require reliable and comprehensive evidence to guide policy formulation, program development, resource allocation, and strategic decision-making.

Despite the growing demand for evidence-informed decision-making, many institutional programs within higher education continue to rely on findings generated from either quantitative or qualitative studies alone. While quantitative approaches provide measurable indicators of performance, student outcomes, and institutional effectiveness, they often fail to explain the underlying experiences, perceptions, and contextual factors influencing these outcomes. Conversely, qualitative studies offer rich insights into stakeholder experiences but may be limited in their ability to provide generalizable findings across larger populations. Consequently, reliance on a single methodological approach may result in incomplete understanding of complex institutional challenges and lead to interventions that do not adequately address the realities of higher education environments (Johnson et al., 2007; Dawadi et al., 2021). Research demonstrates that integrating quantitative and qualitative evidence enhances the quality of decision-making by providing both statistical trends and contextual explanations, thereby enabling institutions to develop more effective and responsive programs (Beerkens, 2020; Galvis, 2018; Harrison et al., 2022). Mixed methods approach also strengthen the credibility, validity, and practical applicability of research findings by allowing triangulation, corroboration, and deeper interpretation of evidence.

In Kenya, however, limited scholarly attention has been devoted to examining the specific contribution of mixed methods research to higher learning institutional program development. Existing discussions often focus on methodological debates or individual educational studies rather than exploring how mixed methods approaches can systematically support institutional improvement, policy formulation, curriculum innovation, program evaluation, and stakeholder-centred decision-making. This creates a knowledge gap regarding the practical relevance and strategic value of mixed methods research within the Kenyan higher education sector.

Therefore, this paper seeks to examine the relevance of mixed methods research in the development of higher learning institutional programs in Kenya. By synthesizing theoretical and empirical evidence, the study aims to demonstrate how the integration of qualitative and quantitative approaches can enhance evidence-based planning, strengthen program effectiveness, improve stakeholder participation, and support sustainable institutional development. The findings are expected to contribute to both methodological scholarship and higher education practice by providing a framework for utilizing mixed methods research to address complex institutional challenges in Kenya's dynamic higher education landscape.

### **1.3 Objectives of the Study**

#### ***1.3.1 General Objective***

To examine the relevance of Mixed Methods Research in supporting the development of higher learning institutional programs in Kenya.

#### ***1.3.2 Specific Objectives***

To realize the general objective of this study, the following specific objectives will apply.

- a) To assess the contribution of Mixed Methods Research to evidence-based decision-making and institutional planning in higher learning institutions in Kenya.

- b) To examine the role of Mixed Methods Research in enhancing curriculum development, academic program improvement, and quality assurance in Kenyan higher education institutions.
- c) To evaluate how Mixed Methods Research strengthens program evaluation, institutional effectiveness, and continuous improvement within higher learning institutions.
- d) To analyze the contribution of Mixed Methods Research in promoting stakeholder engagement, innovation, and responsiveness in the development of higher learning institutional programs in Kenya.

#### 1.4 Study Methodology

This paper adopted a qualitative desk review and conceptual analysis design to examine the relevance of Mixed Methods Research (MMR) in the development of higher learning institutional programs in Kenya. A desk review approach was considered appropriate because the study sought to synthesize existing theoretical, methodological, and empirical literature on mixed methods research and its application within higher education rather than generate primary data. The approach enabled the integration of evidence from peer-reviewed journal articles, scholarly books, policy documents, institutional reports, and methodological publications related to mixed methods research, higher education management, curriculum development, quality assurance, program evaluation, stakeholder engagement, and institutional innovation.

The review was guided by the principles of narrative literature synthesis, which facilitate the systematic examination, comparison, and interpretation of findings from diverse sources. Particular attention was given to literature discussing the philosophical foundations of mixed methods research, including pragmatism, triangulation, methodological pluralism, and evidence integration, as well as studies demonstrating the practical application of mixed methods approaches in higher education settings. Foundational works by Johnson, Onwuegbuzie, and Turner (2007), Creswell and Plano Clark (2018), and other mixed methods scholars were reviewed to establish the theoretical basis of the paper. The empirical component of the review drew on contemporary literature addressing key dimensions of higher education development, including evidence-based decision-making, curriculum development, program evaluation, quality assurance, stakeholder engagement, innovation, and institutional effectiveness. Preference was given to recent publications from 2015 to 2026 to ensure the inclusion of current developments and emerging trends in higher education research and practice. Additional emphasis was placed on studies conducted within African contexts and developing countries to enhance the contextual relevance of the findings to Kenya's higher education sector.

Data were analysed thematically through a process of identifying, categorising, and synthesising recurring concepts, patterns, and findings across the reviewed literature. The analysis focused on establishing how mixed methods research contributes to institutional program development through the generation of comprehensive evidence, enhancement of decision-making processes, strengthening of quality assurance systems, facilitation of stakeholder participation, and promotion of institutional innovation. Themes emerging from the literature were organised according to the study objectives and subsequently integrated to develop a coherent understanding of the relevance of mixed methods research within higher learning institutions in Kenya.

To enhance the credibility of the review, evidence was triangulated across multiple scholarly sources, enabling the comparison of perspectives and findings from different researchers and contexts. This approach strengthened the validity of the conclusions by reducing reliance on single studies and ensuring that interpretations were grounded in a broad body of evidence. The resulting synthesis provides a comprehensive assessment of how mixed methods research can support the planning, implementation, monitoring, evaluation, and continuous improvement of higher learning institutional programs in Kenya.

### **1.5 Theoretical Foundations of Mixed Methods Research**

The application of Mixed Methods Research (MMR) in higher education is supported by several theoretical and philosophical perspectives that emphasize the value of integrating multiple forms of evidence to understand complex social and institutional phenomena. Higher learning institutions operate within dynamic environments characterized by diverse stakeholders, competing interests, changing policies, and evolving educational needs. Consequently, a single methodological perspective may not adequately capture the complexity of institutional programs and their outcomes. This paper is anchored on three interrelated theoretical foundations: Pragmatism Theory, Triangulation Theory, and Methodological Pluralism Theory. Together, these perspectives provide a strong justification for the use of mixed methods research in the development, implementation, evaluation, and improvement of higher learning institutional programs.

#### ***1.5.1 Pragmatism Theory***

Pragmatism is widely recognized as the primary philosophical foundation of mixed methods research. Originating from the works of Charles Peirce, William James, and John Dewey, pragmatism emphasizes practical problem-solving and the usefulness of knowledge in addressing real-world challenges. Rather than committing exclusively to either quantitative or qualitative approaches, pragmatism advocates the selection of methods based on their ability to answer research questions effectively and generate actionable solutions. Johnson, Onwuegbuzie, and Turner (2007) argue that pragmatism enables researchers to draw on the strengths of both methodological traditions to obtain a more comprehensive understanding of social phenomena. In higher education, institutional leaders frequently confront complex issues such as curriculum relevance, student retention, quality assurance, graduate employability, and stakeholder satisfaction. These issues require evidence that combines measurable outcomes with contextual understanding. Pragmatism therefore provides a suitable foundation for investigating institutional programs because it allows researchers to utilize both numerical data and human experiences in generating evidence for decision-making. Through this flexibility, mixed methods research becomes a practical tool for informing policy development, strategic planning, and program improvement within Kenyan higher learning institutions.

#### ***1.5.2 Triangulation Theory***

Triangulation Theory provides a second important foundation for mixed methods research. The theory emerged from the work of Campbell and Fiske (1959) and was later expanded by Denzin (1978), who proposed that the use of multiple methods, data sources, investigators, and theoretical perspectives enhances the credibility and validity of research findings. According to Denzin, methodological triangulation involves combining quantitative and qualitative approaches to examine the same phenomenon from different perspectives. The central assumption of triangulation is that no single method can fully explain complex social realities. Instead, integrating multiple forms of evidence allows researchers to verify findings, identify inconsistencies, and develop richer explanations of observed

phenomena. In higher education research, triangulation strengthens confidence in institutional assessments by enabling the comparison of findings derived from surveys, interviews, focus groups, administrative records, and document analysis. The relevance of triangulation to higher learning institutional programs lies in its ability to improve the quality and credibility of evidence used for decision-making. For example, student satisfaction surveys may identify trends in learning experiences, while interviews with students and lecturers may explain the factors underlying those trends. By integrating these sources of evidence, institutions are better positioned to design interventions that respond effectively to identified challenges.

### ***1.5.3 Methodological Pluralism Theory***

Methodological Pluralism Theory is founded on the belief that different research methods offer unique but complementary insights into social phenomena. The theory rejects the notion that one methodological approach is inherently superior to another and instead promotes the strategic use of multiple methods to achieve a more comprehensive understanding of research problems. Mixed methods researchers argue that quantitative and qualitative approaches should be viewed as complementary rather than competing traditions. Methodological pluralism recognizes that quantitative methods contribute objectivity, measurement, and generalizability, while qualitative methods provide depth, context, and understanding of human experiences. When combined, these approaches allow researchers to overcome the limitations associated with relying on a single source of evidence. This perspective aligns closely with the realities of higher education institutions, where institutional effectiveness cannot be fully understood through performance indicators alone nor solely through stakeholder narratives. Within the Kenyan higher education sector, methodological pluralism supports the generation of comprehensive evidence for curriculum review, program evaluation, quality assurance, student support services, and institutional innovation. By integrating different forms of evidence, institutions can make more informed decisions, develop responsive programs, and enhance accountability to stakeholders. Consequently, methodological pluralism provides a strong theoretical justification for the growing use of mixed methods research in higher learning institutional development.

### ***1.5.4 Synthesis of the Theoretical Foundations***

The three theoretical foundations collectively demonstrate why mixed methods research is particularly relevant to higher learning institutional programs. Pragmatism emphasizes practical problem-solving and evidence utilization; Triangulation Theory enhances the validity and credibility of findings through multiple sources of evidence; and Methodological Pluralism promotes the integration of diverse methodological approaches to generate comprehensive understanding. Together, these foundations provide a robust framework for examining how mixed methods research contributes to evidence-based decision-making, curriculum development, quality assurance, program evaluation, stakeholder engagement, and innovation within higher education institutions in Kenya.

## **1.6 Empirical Review**

### ***1.6.1 Providing Comprehensive Evidence***

One of the key strengths of Mixed Methods Research (MMR) is its ability to generate comprehensive evidence for higher education planning and development. By integrating quantitative data with qualitative insights, MMR provides a deeper understanding of institutional challenges and opportunities than either approach alone. Puddy and Wilkins (2011), in *Understanding Evidence Part 1: Best Available Research Evidence*, found that combining multiple sources of evidence improves the quality of decision-

making and program development. Similarly, Lunny et al. (2018), through a systematic review, reported that evidence synthesis from diverse sources enhances the reliability and usefulness of research findings.

In developed higher education systems, Tight (2012), in *Researching Higher Education*, observed that complex educational issues require both measurable outcomes and contextual explanations to support effective institutional decisions. Likewise, Beerkens (2020), in *Evidence-Based Policy and Higher Education Quality Assurance*, found that integrating performance indicators with stakeholder perspectives strengthens quality assurance and policy development processes. Further, Preuss et al. (2020), in *Research Development and Its Workforce*, demonstrated through a literature review that comprehensive evidence supports institutional learning, strategic planning, and organizational improvement. Their findings suggest that higher education institutions benefit from evidence that captures both performance outcomes and stakeholder experiences.

In Africa and Kenya, universities increasingly require evidence to support quality improvement, accountability, and institutional effectiveness. However, decision-making often relies on fragmented information generated through single-method studies. The reviewed literature suggests that mixed methods research addresses this limitation by integrating statistical findings with contextual explanations, thereby providing a more holistic basis for institutional planning and program development. Overall, the literature demonstrates that MMR enhances the generation of comprehensive evidence, enabling higher learning institutions to make more informed decisions and develop more effective programs. Despite these benefits, limited research has specifically examined how mixed methods approaches contribute to comprehensive evidence generation within Kenyan higher education institutions, highlighting an important contextual gap.

### **1. 6.2 Enhancing Curriculum Development**

Curriculum development is a critical component of higher education because it influences graduate competencies, employability, and institutional relevance. Globally, research suggests that effective curriculum reform requires evidence that combines measurable learning outcomes with stakeholder perspectives. Khan and Law (2015), in *An Integrative Approach to Curriculum Development in Higher Education in the USA*, used a conceptual analysis approach and found that curriculum development should integrate institutional objectives, labour market demands, and student learning needs. The study highlighted the importance of drawing from multiple sources of evidence during curriculum design. However, its theoretical orientation provides limited empirical evidence on implementation outcomes.

Similarly, Leathwood and Phillips (2000), in *Developing Curriculum Evaluation Research in Higher Education*, employed a qualitative case study methodology and found that curriculum effectiveness is influenced by institutional processes, stakeholder interests, and contextual realities. Their findings demonstrated that curriculum evaluation benefits from both outcome-based indicators and stakeholder experiences. While the study provides valuable insights into curriculum assessment, it focuses primarily on evaluation rather than curriculum development itself.

In developed higher education systems, Carnell and Fung (2017), in *Developing the Higher Education Curriculum: Research-Based Education in Practice*, synthesized evidence from several universities and reported that research-informed curriculum reforms enhance student engagement and learning outcomes. The study emphasized the value of integrating quantitative evidence on academic performance with

qualitative feedback from learners and educators. However, most examples were drawn from well-resourced institutions, limiting applicability to developing-country contexts.

Within Africa, Oksiutycz and Azionya (2017), in *Using Action Research for Curriculum Development and Improving the Learning Experience*, adopted an action research design in a South African university. The study found that curriculum improvement was strengthened through continuous integration of student performance data and participant reflections. The findings demonstrate how mixed forms of evidence can support curriculum innovation and responsiveness. Nevertheless, the study was conducted in a single institution, reducing its generalizability across the continent.

In Kenya, universities continue to review curricula to align with labour market demands, technological advancement, and national development priorities. However, curriculum reforms often rely on fragmented evidence from tracer studies, stakeholder consultations, or performance indicators conducted independently. The reviewed literature suggests that mixed methods research provides a more comprehensive framework for curriculum development by integrating quantitative measures of learning outcomes with qualitative insights from students, employers, and academic staff. Despite these benefits, limited empirical studies have specifically examined the contribution of mixed methods research to curriculum development within Kenyan higher education institutions, thereby presenting a contextual gap that this paper seeks to address.

### ***1.6.3 Supporting Effective Decision-Making***

Effective decision-making is essential for the success of higher learning institutions, particularly in areas such as strategic planning, resource allocation, policy formulation, and academic program management. As universities operate in increasingly complex environments, institutional leaders require comprehensive evidence that not only identifies trends and outcomes but also explains the factors influencing them. Mixed Methods Research (MMR) supports this process by integrating quantitative data with qualitative insights, thereby enabling more informed and context-sensitive decisions.

Globally, Galvis (2018), in *Supporting Decision-Making Processes on Blended Learning in Higher Education: Literature and Good Practices Review*, employed a literature review methodology and found that institutions achieved better implementation outcomes when decision-making incorporated both performance indicators and stakeholder experiences. The study demonstrated that combining different forms of evidence improved institutional responsiveness and reduced implementation challenges. However, the review focused primarily on blended learning initiatives, limiting its broader applicability to institutional program development.

Similarly, Hollands and Escueta (2020), in *How Research Informs Educational Technology Decision-Making in Higher Education*, conducted a review of empirical studies and found that decisions regarding educational technologies were more effective when quantitative learning outcomes were complemented by qualitative feedback from students and faculty. The study highlighted the limitations of relying solely on numerical indicators and emphasized the value of integrated evidence for institutional decision-making. Nevertheless, the research concentrated on technology adoption rather than broader governance and policy issues.

In developed higher education systems, Webber and Calderon (2015), in *Institutional Research and Planning: Its Role in Higher Education Decision Support and Policy Development*, utilized a policy and institutional analysis approach and found that institutional research units play a critical role in supporting evidence-based governance. Their findings indicated that effective decisions emerge when statistical data are interpreted alongside contextual information from stakeholders. The study is relevant because it demonstrates how integrated evidence strengthens institutional planning and policy development. However, it focuses largely on established higher education systems with well-developed institutional research structures.

Within Africa, Elugbaju, Okeke, and Alabi (2024), in *Conceptual Framework for Enhancing Decision-Making in Higher Education Through Data-Driven Governance*, adopted a conceptual framework analysis and found that higher education institutions can improve governance and institutional performance by integrating quantitative institutional data with qualitative stakeholder perspectives. The study emphasized that evidence-based governance enhances accountability, transparency, and strategic effectiveness. However, the study remained conceptual and did not empirically test the proposed framework.

In Kenya, universities increasingly rely on institutional research, tracer studies, quality assurance reports, and stakeholder consultations to guide decision-making. However, much of this evidence is often generated and utilized separately, resulting in fragmented insights. The reviewed literature suggests that mixed methods research can bridge this gap by providing a more comprehensive evidence base that combines measurable outcomes with contextual understanding. Despite its potential, limited studies have specifically examined the role of mixed methods research in strengthening decision-making processes within Kenyan higher education institutions, thereby presenting a contextual gap for further investigation.

#### **1.6.4 Improving Program Evaluation**

Program evaluation is a critical function in higher education because it enables institutions to assess whether academic and administrative programs are achieving their intended objectives. Effective evaluation supports accountability, quality enhancement, resource optimization, and continuous improvement. Mixed Methods Research (MMR) is particularly valuable in program evaluation because it combines quantitative measures of performance with qualitative insights into stakeholder experiences, thereby providing a more comprehensive assessment of program effectiveness.

At the global level, Harrison et al. (2022), in *Evaluating and Enhancing Quality in Higher Education Teaching Practice: A Meta-Review*, employed a meta-review methodology to examine evidence on teaching quality improvement in higher education. The study found that successful program evaluations integrate measurable outcomes, such as student achievement and retention rates, with qualitative evidence from students and educators. The authors concluded that multiple sources of evidence provide a more accurate understanding of program effectiveness. However, the review focused mainly on teaching practices rather than broader institutional programs.

Similarly, McMillan et al. (2020), in *Improving Student Learning Outcomes Through a Collaborative Higher Education Partnership*, utilized a collaborative evaluation approach to assess educational partnerships. Their findings revealed that combining quantitative learning outcomes with participant experiences enhanced understanding of program impacts and informed future improvements. The study

demonstrates the value of integrating different forms of evidence in program evaluation, although it focused on partnership initiatives rather than institution-wide programs.

In developed higher education systems, Ifenthaler and Yau (2020), in *Utilising Learning Analytics to Support Study Success in Higher Education: A Systematic Review*, employed a systematic review methodology and found that learning analytics provide valuable quantitative evidence on student engagement and academic performance. However, the authors emphasized that numerical data alone are insufficient and should be complemented by qualitative investigations to explain student behaviours and learning experiences. The study highlights the importance of mixed methods approaches in producing more meaningful program evaluations.

Another notable study by Belcher et al. (2022), *Evaluating and Improving the Contributions of University Research to Social Innovation*, adopted a mixed-methods evaluation framework and found that institutional impacts are best understood through the integration of measurable outcomes and stakeholder narratives. The study demonstrated that mixed methods evaluation provides a deeper understanding of program effectiveness and societal impact than single-method approaches. Nevertheless, the focus was primarily on research and innovation initiatives rather than academic programs.

In Kenya, universities are increasingly required to demonstrate program effectiveness through quality assurance reviews, accreditation processes, tracer studies, and performance assessments. However, evaluations often emphasize quantitative indicators such as enrolment, completion, and employment rates, with limited attention to stakeholder experiences and contextual factors. The reviewed literature suggests that mixed methods research can strengthen program evaluation by integrating performance metrics with perspectives from students, faculty, employers, and policymakers. Despite its potential, there remains limited empirical evidence on the systematic application of mixed methods research in evaluating higher learning institutional programs in Kenya, highlighting an important gap that this study seeks to address.

### ***1.6.5 Facilitating Stakeholder Engagement***

Stakeholder engagement has become an essential component of higher education governance and program development. Universities operate within complex environments involving students, faculty members, employers, professional bodies, government agencies, alumni, and local communities. Effective engagement of these stakeholders ensures that institutional programs remain relevant, inclusive, and responsive to societal needs. Mixed Methods Research (MMR) supports stakeholder engagement by integrating quantitative evidence on stakeholder perceptions with qualitative insights that explain expectations, experiences, and concerns.

At the global level, Langrafe et al. (2020), in *A Stakeholder Theory Approach to Creating Value in Higher Education Institutions*, employed a conceptual and empirical analysis approach to examine stakeholder relationships in universities. The study found that institutions create greater value when stakeholders are actively involved in decision-making and program development processes. The authors emphasized that understanding stakeholder needs requires both measurable feedback and in-depth engagement. However, the study focused largely on stakeholder theory and provided limited discussion on the role of mixed methods research in facilitating engagement.

Similarly, Moreno and Song (2021), in *Intentional Stakeholder Engagement That Fosters Innovation and Equity*, adopted a case-based research approach and found that meaningful stakeholder involvement improves institutional innovation, inclusivity, and responsiveness. The study revealed that combining survey data with stakeholder narratives enabled institutions to identify challenges and opportunities more effectively. The findings highlight the importance of integrating multiple forms of evidence in stakeholder engagement processes.

In developed higher education systems, Platt (2022), in *A Framework to Improve Higher Education Projects Through Preproject Work, Stakeholder Engagement, and Leadership Support*, employed a project evaluation methodology and found that early and continuous stakeholder participation contributed significantly to project success and institutional effectiveness. The study demonstrated that institutions that utilize both quantitative and qualitative stakeholder feedback are better positioned to develop responsive programs. However, the study focused on project management rather than broader institutional development.

Within the African and global sustainability context, Leal Filho et al. (2025), in *Promoting Sustainable Development via Stakeholder Engagement in Higher Education*, utilized a multidisciplinary review methodology and found that stakeholder participation enhances institutional sustainability initiatives, policy implementation, and program effectiveness. The study emphasized that diverse stakeholder perspectives provide valuable evidence for institutional improvement. Nevertheless, the research focused primarily on sustainability programs and less on wider academic and administrative programs.

In Kenya, universities increasingly engage stakeholders through tracer studies, curriculum reviews, industry partnerships, community outreach programs, and quality assurance processes. However, stakeholder engagement is often conducted through isolated consultations that may not fully capture the complexity of stakeholder experiences and expectations. The reviewed literature suggests that mixed methods research strengthens stakeholder engagement by combining quantitative assessments of stakeholder satisfaction with qualitative exploration of perceptions, needs, and recommendations. Despite its potential, limited studies have specifically examined the contribution of mixed methods research to stakeholder engagement in Kenyan higher education institutions, presenting a contextual gap that warrants further investigation.

#### **1.6.6 Strengthening Validity and Reliability**

Validity and reliability are fundamental indicators of research quality, particularly in higher education where research findings often inform policy decisions, curriculum reforms, and program development. Mixed Methods Research (MMR) strengthens both validity and reliability by integrating quantitative and qualitative evidence, allowing researchers to corroborate findings through multiple data sources, methods, and perspectives. This process enhances confidence in the accuracy and credibility of research outcomes.

At the global level, Dawadi, Shrestha, and Giri (2021), in *Mixed-Methods Research: A Discussion on Its Types, Challenges, and Criticisms*, employed a methodological review approach to examine the strengths and limitations of mixed methods research. The authors found that integrating quantitative and qualitative approaches improves the trustworthiness of findings through triangulation and complementarity. The study concluded that mixed methods research produces more robust conclusions

than relying on a single methodological approach. However, the paper was largely conceptual and provided limited empirical evidence from higher education settings.

Similarly, Quintão, Andrade, and Almeida (2020), in *How to Improve the Validity and Reliability of a Case Study Approach*, utilized a methodological analysis to examine strategies for enhancing research quality. The study found that combining multiple sources of evidence strengthens the credibility of findings and reduces methodological bias. The authors argued that integrating qualitative and quantitative data contributes to a more comprehensive understanding of complex phenomena. While the study provides useful methodological insights, it focused specifically on case study research rather than mixed methods applications in higher education.

In higher education research, Deniz and Erdener (2023), in *Development and Validation of the Trust in Higher Education Scale (THES): A Mixed-Methods Approach*, employed an exploratory sequential mixed-methods design involving qualitative item generation followed by quantitative validation. The study found that combining qualitative and quantitative procedures improved the validity and reliability of the developed scale. The findings demonstrate how mixed methods research can strengthen instrument development and measurement quality. However, the study concentrated on scale development rather than broader institutional program evaluation.

Further evidence is provided by Oyugi, Gibson, and Lamm (2024), in *Assessing the Dimensional Validity and Reliability of the Critical Thinking Inventory in the Kenyan Higher Education System*. Using confirmatory factor analysis, the researchers found that rigorous validation procedures are necessary to ensure accurate measurement of educational constructs. Although the study primarily employed quantitative techniques, it highlighted the importance of incorporating multiple forms of evidence when assessing educational outcomes. The study is particularly relevant because it was conducted within the Kenyan higher education context.

In Kenya, universities increasingly depend on research evidence to inform policy, quality assurance, curriculum reviews, and institutional planning. However, concerns regarding the credibility and applicability of findings often arise when studies rely on a single methodological approach. The reviewed literature suggests that mixed methods research enhances validity and reliability by enabling triangulation, corroboration, and deeper interpretation of findings. Despite these advantages, there remains limited empirical research examining how mixed methods approaches specifically strengthen the quality of evidence used in higher learning institutional program development in Kenya. This gap highlights the need for greater adoption and evaluation of mixed methods research within the sector.

### **1.6.7 Promoting Innovation and Responsiveness**

Innovation and responsiveness have become critical priorities for higher learning institutions as they navigate rapid technological change, evolving labour market demands, globalization, and increasing stakeholder expectations. Universities are expected not only to generate knowledge but also to adapt their academic programs, research agendas, and institutional practices to emerging societal needs. Mixed Methods Research (MMR) supports this objective by providing comprehensive evidence that combines measurable outcomes with stakeholder experiences, thereby informing innovative and responsive institutional interventions.

At the global level, Tassone et al. (2018), in *(Re-)Designing Higher Education Curricula in Times of Systemic Dysfunction: A Responsible Research and Innovation Perspective*, employed a participatory research approach to examine curriculum transformation in higher education. The study found that innovation is strengthened when institutions integrate empirical evidence with stakeholder perspectives during program design and implementation. The authors concluded that responsive educational reforms require continuous engagement with multiple sources of evidence. However, the study focused primarily on curriculum innovation and less on broader institutional programs.

Similarly, Iqbal (2021), in *Innovation Speed and Quality in Higher Education Institutions: The Role of Knowledge Management Enablers and Knowledge Sharing Process*, utilized a quantitative research design to investigate factors influencing innovation in universities. The study found that effective knowledge sharing significantly enhances institutional innovation and adaptability. While the findings highlight important drivers of innovation, the study relied largely on quantitative evidence and provided limited insight into stakeholder experiences that shape innovation processes.

In developed higher education systems, Aithal and Maiya (2023), in *Development of a New Conceptual Model for Improvement of the Quality Services of Higher Education Institutions in Academic, Administrative, and Research Areas*, adopted a conceptual analysis methodology and found that continuous institutional improvement depends on evidence-informed innovation across academic and administrative functions. The study emphasized that comprehensive evidence enables institutions to respond more effectively to emerging challenges and opportunities. However, the proposed model requires further empirical validation in diverse educational contexts.

Recent research by Jayabalan and Dorasamy (2024), in *Revitalizing Higher Education Institutions: Embracing Frugal Innovation for Transformation*, employed a literature review approach and found that innovation enables universities to remain relevant and sustainable despite resource constraints. The study highlighted the importance of evidence-based innovation strategies that incorporate both performance indicators and stakeholder needs. Nevertheless, the research focused primarily on innovation frameworks rather than the methodological approaches used to generate supporting evidence.

In Kenya, higher education institutions are increasingly embracing digital learning, entrepreneurship education, industry partnerships, and research commercialization to remain competitive and responsive to national development priorities. However, successful innovation requires evidence that captures both institutional performance and stakeholder expectations. The reviewed literature suggests that mixed methods research enhances innovation and responsiveness by integrating quantitative measures of institutional outcomes with qualitative insights from students, faculty, employers, and policymakers. Despite its potential, limited empirical studies have examined the specific contribution of mixed methods research to promoting innovation and responsiveness within Kenyan higher education institutions. This contextual gap underscores the need for further research on how integrated evidence can support sustainable institutional transformation and program development.

### **1.7 Discussion of the Findings**

The reviewed literature demonstrates that Mixed Methods Research (MMR) has become an increasingly valuable approach for supporting higher learning institutional program development. Across the seven thematic areas examined, evidence consistently shows that the integration of quantitative and qualitative

methods produces more comprehensive, credible, and actionable findings than the use of either approach independently. These findings support the argument advanced by Johnson, Onwuegbuzie, and Turner (2007) that mixed methods research constitutes a distinct methodological paradigm capable of addressing complex educational and institutional challenges more effectively than single-method approaches.

The first major finding is that mixed methods research enhances the generation of comprehensive evidence for institutional planning and development. Studies reviewed under evidence generation revealed that quantitative indicators such as enrolment trends, graduation rates, student performance, and institutional rankings become more meaningful when complemented by qualitative information explaining stakeholder experiences and contextual realities. This integration enables institutional leaders to move beyond descriptive statistics and develop a deeper understanding of the factors influencing program success or failure. Consequently, mixed methods research provides a stronger foundation for evidence-based policy formulation and strategic planning within higher learning institutions.

The review further demonstrates that mixed methods research contributes significantly to curriculum development and quality enhancement. The literature indicates that effective curriculum reform requires evidence not only on student learning outcomes but also on the perspectives of employers, students, faculty members, and professional bodies. By combining these diverse forms of evidence, institutions are better positioned to develop curricula that are academically rigorous, socially relevant, and responsive to labour market demands. This finding is particularly relevant to Kenyan universities, which continue to face increasing pressure to align academic programs with national development priorities and changing workforce requirements.

Another important finding is the role of mixed methods research in strengthening institutional decision-making and program evaluation. The reviewed studies consistently show that institutions that rely on integrated evidence are more likely to make informed decisions regarding resource allocation, program implementation, quality assurance, and institutional improvement. Quantitative data provide measurable indicators of performance, while qualitative findings explain why certain outcomes occur and how stakeholders perceive institutional interventions. As a result, mixed methods research facilitates more effective evaluation processes and supports continuous institutional improvement.

The findings also highlight the importance of mixed methods research in promoting stakeholder engagement, innovation, and institutional responsiveness. Universities increasingly operate within complex stakeholder environments that require ongoing consultation and collaboration. The reviewed studies suggest that mixed methods approaches enable institutions to capture both broad stakeholder trends and detailed stakeholder experiences, thereby supporting more inclusive and responsive decision-making. Furthermore, integrated evidence contributes to innovation by identifying emerging needs, evaluating new initiatives, and informing adaptive institutional responses to changing educational and societal demands.

A further finding emerging from the review is that mixed methods research strengthens the validity and reliability of evidence used in higher education. Through triangulation, complementarity, and corroboration, mixed methods studies reduce the limitations associated with relying on a single source of data. The integration of quantitative and qualitative findings enhances confidence in research

conclusions and increases their usefulness for institutional decision-making. This is particularly important in higher education settings where policy decisions often have significant implications for students, faculty, and institutional performance.

Despite these benefits, the review also reveals a notable gap within the Kenyan higher education context. While international literature provides substantial evidence regarding the value of mixed methods research, relatively few studies have specifically examined its contribution to higher learning institutional program development in Kenya. Most existing studies focus on methodological discussions or isolated educational interventions rather than institutional development processes. This suggests a need for greater adoption of mixed methods approaches and further empirical investigation into their application within Kenyan universities and colleges.

Overall, the findings suggest that mixed methods research provides a comprehensive framework for understanding, evaluating, and improving higher learning institutional programs. By integrating numerical evidence with contextual explanations, the approach strengthens decision-making, curriculum development, program evaluation, stakeholder engagement, innovation, and institutional effectiveness. Consequently, mixed methods research offers significant potential for supporting sustainable and evidence-based development within Kenya's higher education sector.

### **1.8 Conclusion**

This paper examined the relevance of Mixed Methods Research (MMR) in the development of higher learning institutional programs in Kenya. The review of theoretical and empirical literature demonstrates that mixed methods research provides a robust framework for generating comprehensive evidence capable of addressing the complex and multidimensional challenges facing contemporary higher education institutions. By integrating quantitative and qualitative approaches, MMR enables researchers and institutional leaders to gain both measurable and contextual insights into educational programs, policies, and institutional processes.

The findings reveal that mixed methods research contributes significantly to evidence-based decision-making, curriculum development, program evaluation, stakeholder engagement, and institutional innovation. The integration of statistical data with stakeholder experiences enhances the quality of evidence available for planning, implementation, monitoring, and continuous improvement of institutional programs. Furthermore, the use of mixed methods strengthens the validity and reliability of research findings through triangulation and corroboration, thereby increasing confidence in institutional decisions and policy interventions.

The review also highlights that although the application of mixed methods research has gained considerable recognition internationally, its utilization in higher learning institutional program development within Kenya remains relatively limited. Existing studies have largely focused on methodological discussions or specific educational interventions, leaving a gap in understanding how mixed methods approaches can systematically support institutional development, governance, and program effectiveness in Kenyan higher education institutions. In conclusion, Mixed Methods Research is not merely a methodological alternative but a strategic tool for institutional development. Its ability to provide comprehensive, credible, and actionable evidence makes it particularly relevant for Kenyan higher learning institutions seeking to improve quality, relevance, accountability, and responsiveness in an increasingly dynamic educational environment.

## 1.9 Recommendations

This study recommends a need to carry out empirical study in Kenya to justify the relevance of mixed methods research in Higher Education institutions' program development. Also, the study recommends a greater adoption of mixed methods approaches to strengthen evidence-informed decision-making to contribute to sustainable development within Kenya's higher education sector.

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