BIS EDUCATION

Volume 2 2026 | DOI: 10.31603/bised.648
7th Borobudur International Symposium on Humanities and Social Science (BIS-HSS) 2025

UNIMMA PRESS
Universitas Muhammadiyah Magelang

Measuring work readiness as a sustainable quality assurance tool in higher education: A conceptual framework

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Abstract

This conceptual paper examined the integration of continuous work-readiness assessment into sustainable quality assurance (QA) mechanisms in higher education. Drawing on the Theory of Effective Schools and contemporary employability research, it proposed a conceptual framework that positioned work-readiness metrics as a dynamic feedback loop to enhance institutional responsiveness and long-term sustainability. The framework was informed by a systematic literature review that synthesized foundational theories with 35 high-impact sources, including Scopus-indexed publications on sustainability, quality assurance, and graduate employability. The findings indicated that continuous assessment served as a driver of sustainability by informing curriculum reform, pedagogical innovation, and strategic decision-making. This study contributed theoretically by linking organizational effectiveness theory with sustainability discourse and contributed practically by offering an implementable model for higher education leaders and quality assurance bodies.

Keywords

Work readiness, Sustainable higher education, Quality assurance, Continuous assessment

Introduction

Higher Education Institutions (HEIs) operate in an increasingly volatile global environment characterized by rapid technological change, digital transformation, automation, and shifting labor market structures. These developments significantly altered the competencies required of graduates. Employers demanded not only disciplinary knowledge but also adaptability, digital literacy, and transferable skills (Jackson, 2019; Succi & Canovi, 2020; OECD, 2018). At the same time, universities faced growing accountability pressures from governments, industry, and society to demonstrate the tangible impact of educational outcomes (Taylor, 2014; Harvey, 2021; Ramos, 2020). This dual pressure rapid external change and heightened accountability

Published:
May 04, 2026

Selection and Peer-review under the responsibility of the 7th BIS-HSS 2025 Committee

created a fundamental challenge. Conventional academic quality indicators no longer adequately capture graduates' readiness for sustainable professional participation.

This challenge became more urgent in light of Sustainable Development Goal 4 (SDG 4), which emphasized not only access to education but also the relevance and quality of learning outcomes in promoting employability and lifelong learning (UNESCO, 2017; Leal Filho et al., 2021; Lozano, 2011). Contemporary labor markets increasingly prioritize complex cognitive skills, socio-emotional competencies, and professional adaptability over purely technical knowledge (Caballero & Walker, 2019; Tomlinson, 2017; Aina & Casalone, 2021). However, evidence suggested a persistent mismatch between graduate competencies and employer expectations, particularly in communication, teamwork, and problem-solving skills (Branine, 2018; Succi & Canovi, 2020; Lim & Ling, 2012). This mismatch indicated that many HEIs had not systematically measured or developed multidimensional work readiness within their core quality assurance processes.

Despite the recognized importance of work readiness, existing Quality Assurance (QA) systems in higher education remained predominantly compliance-oriented and episodic (Harvey, 2021; Taylor, 2014; Sallis, 2014). Accreditation cycles often emphasized input-based indicators, such as infrastructure, faculty qualifications, and documentation standards, rather than continuous assessment of graduate competencies (Coates, 2015; Carvalho et al., 2021; Sallis, 1993). Although institutions sometimes conducted tracer studies and employer surveys, they primarily used these instruments for reporting purposes. Consequently, these tools did not function as dynamic feedback mechanisms to inform curriculum redesign and institutional strategy (Coates, 2015; Harvey, 2021; Ramos, 2020). As a result, QA processes risked functioning as administrative exercises rather than adaptive systems capable of responding to evolving workforce demands.

From a theoretical perspective, scholarship on institutional effectiveness, sustainability governance, and graduate employability largely developed in parallel rather than in an integrated manner. The Theory of Effective Schools highlighted leadership, mission clarity, high expectations, and continuous monitoring as foundations of institutional effectiveness (Edmonds, 1979; Cheng, 2022). Sustainability frameworks in higher education emphasized resilience, stakeholder engagement, and long-term adaptability (Lozano, 2011; Filho et al., 2021; Ramos, 2020). Meanwhile, employability research focused on individual competencies and forms of employability capital (Yorke, 2006; Tomlinson, 2017; Caballero & Walker, 2019). However, limited research systematically connected these domains to conceptualize work-readiness assessment as a strategic feedback loop within sustainable QA systems. This fragmentation represented a clear gap in the literature.

Therefore, this study addressed the identified gap by proposing a Sustainable Quality Assurance Work-Readiness Framework that integrated continuous competency assessment with institutional effectiveness principles and sustainability governance models. Drawing on a Systematic Literature Review (Snyder, 2019; Torraco, 2016;

Webster & Watson, 2002), the study conceptualized work readiness not merely as an outcome indicator but as a central mechanism for institutional learning and adaptive improvement. The framework positioned continuous work-readiness assessment as a dynamic feedback loop that informed competency gap analysis, curriculum reform, stakeholder engagement, and strategic decision-making. By integrating theories of institutional effectiveness, sustainability transitions, and employability capital, this study contributed theoretically to bridging fragmented literature and, practically, to advancing data-driven, future-oriented QA systems in higher education (Senge, 2006; Filho et al., 2021; Harvey, 2021).

The study drew on a strong theoretical foundation for developing this model from the Theory of Effective Schools, originally formulated by Edmonds (1979). The framework provided a structured basis for identifying core institutional characteristics associated with educational effectiveness. It identified key features of effective institutions, including strong leadership, a clear mission, high expectations, a safe and orderly environment, and continuous monitoring of student outcomes. Although originally rooted in K–12 education, subsequent research demonstrated that these characteristics remained relevant in higher education, particularly in promoting organizational coherence, institutional capacity for improvement, and systemic alignment (Mortimore, 1995; Cheng, 2022). Moreover, these characteristics aligned closely with sustainability frameworks, which emphasized adaptability, stakeholder involvement, and evidence-based decision-making as essential elements of long-term institutional development.

The convergence of effective school theory, sustainability science, and work readiness research revealed a conceptual gap in existing scholarship. Although scholarship had substantively developed each domain, existing studies rarely integrated these perspectives into a unified Quality Assurance framework. Existing employability models primarily focused on student attributes and employer expectations (Tomlinson, 2017), whereas sustainability models emphasized institutional strategy and governance (Filho et al., 2021). Meanwhile, conventional QA literature remained oriented toward compliance rather than adaptability (Harvey, 2021). There was limited exploration of how continuous measurement of graduate work readiness functioned as a feedback loop that strengthened institutional sustainability, informed curricular enhancement, and improved student support services over time.

To address this gap, this study proposed a Sustainable Quality Assurance Framework that integrated continuous work-readiness assessment with foundational institutional characteristics derived from effective school theory. This model positioned work readiness not merely as an output metric but as a strategic mechanism for long-term institutional improvement. Through a Systematic Literature Review and theoretical synthesis, this paper demonstrated how ongoing competency evaluation provided HEIs with timely feedback to adapt academic programs, strengthen industry partnerships, and build resilient educational ecosystems.

Methods

This section describes the methodological approach employed in this conceptual study. The study aimed to develop a theoretical framework linking work readiness with sustainable Quality Assurance (QA) in higher education. Accordingly, it adopted a Systematic Literature Review (SLR) to ensure a structured, transparent approach to theory development. The SLR enabled systematic exploration and critical synthesis of literature across intersecting domains, including institutional effectiveness, sustainability in higher education, employability, work readiness, and QA. This approach aligned with recommendations for integrative conceptual research requiring cross-disciplinary analysis (Snyder, 2019).

Purpose and rationale of the method

This study selected a Systematic Literature Review (SLR) for three principal reasons. First, it provided a rigorous theoretical foundation for framework development by grounding the model in established and contemporary scholarship (Booth et al., 2025). Second, the literature on work readiness, sustainability, and QA remained fragmented. The SLR, therefore, facilitated systematic mapping of cross-domain relationships and supported the construction of a comprehensive conceptual model. Third, conceptual research required methodological transparency. The review clearly documented the selection, categorization, and synthesis of sources (Tingelhoff, Brugger, & Leimeister, 2025).

Data sources and search strategy

The study sourced literature from five major academic databases: Scopus, Web of Science, ERIC, Google Scholar, and major publisher databases, including Springer, Elsevier, and Taylor & Francis. The search strategy combined keywords and Boolean operators (AND/OR). Key terms included "work readiness," "graduate readiness," "employability skills" AND "higher education," "sustainable higher education," "education sustainability," "quality assurance" AND "higher education," "continuous assessment," "feedback systems," "effective school theory," and "school effectiveness framework." Following established SLR procedures (Kitchenham & Charters, 2007), the initial search identified 612 publications.

Inclusion and exclusion criteria

The review applied explicit inclusion and exclusion criteria to ensure academic rigor. The study included peer-reviewed publications that addressed QA, employability, work readiness, or sustainability (Carvalho et al., 2021; Ramos, 2020). It also included scholarly books on organizational theory and institutional effectiveness (Edmonds, 1979; Cheng, 2022). In addition, the study selected sources that offered clear conceptual or theoretical contributions. All included publications were published between 1979 and 2024 and were written in English. The review excluded sources that lacked clear theoretical contributions, focused exclusively on K–12 settings without transferable relevance, presented purely empirical findings without implications for theory building,

were not peer-reviewed, or demonstrated institutional or descriptive bias. The screening process followed PRISMA guidelines (Moher et al., 2009).

Screening and selection process

The selection process consisted of four stages. During identification, the search produced 612 publications. After removing duplicates and screening titles and abstracts, 195 records remained. A full-text eligibility assessment excluded 140 publications that did not meet the theoretical criteria. The final dataset comprised 35 sources, including 10 international academic books and 25 Scopus-indexed journal articles. This procedure aligned with contemporary SLR standards (Snyder, 2019). PRISMA flow diagram of the study selection process shown in Figure 1.

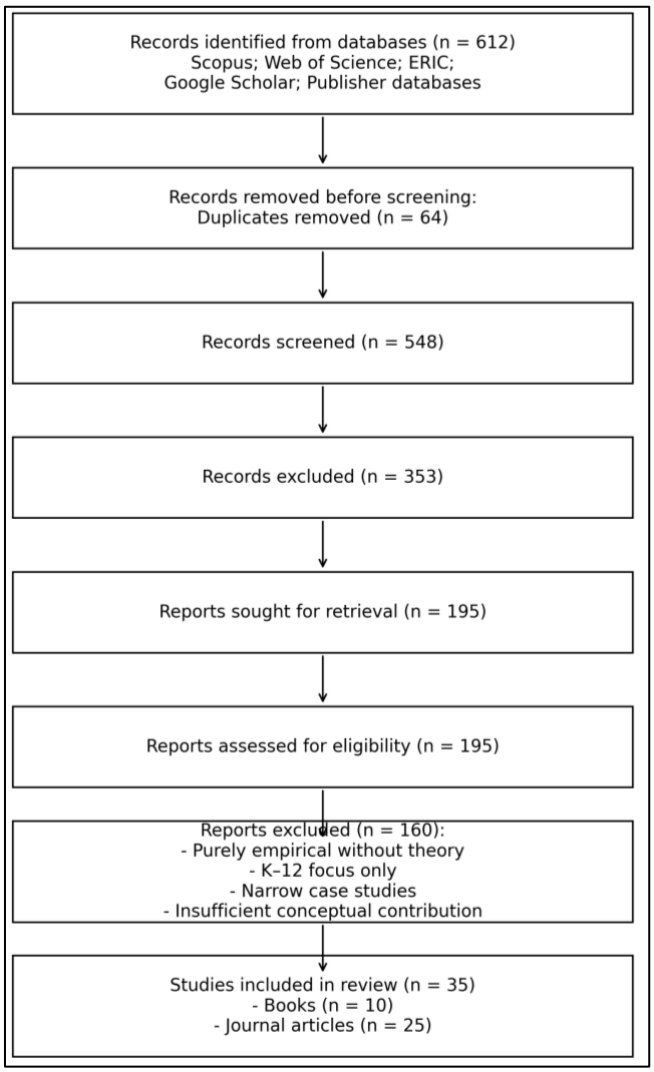

Figure 1. PRISMA flow diagram of the study selection process

Data extraction procedure

The study extracted data from each included publication using a structured approach. Extracted elements included key concepts, definitions, proposed frameworks or models, institutional factors, competency variables, and relevance to QA or sustainability. The review adopted a concept-centric method (Tingelhoff, Brugger, &

Leimeister, 2025). This approach enabled thematic synthesis across studies rather than sequential article summaries.

Analytical approach: Thematic synthesis

The analysis followed a three-stage thematic synthesis process (Thomas & Harden, 2008). First, open coding identified conceptual elements related to institutional effectiveness (Sammons, 2007), employability (Jackson, 2019), work readiness (Caballero & Walker, 2019), sustainability (Ankareddy et al., 2025), and QA mechanisms (Harvey, 2021). Second, the analysis grouped codes into descriptive themes, including continuous improvement, competency-based measurement, adaptive capacity, employer engagement, and feedback responsiveness. Third, the study generated higher-order analytical themes. These themes formed a coherent conceptual model integrating effective school theory, sustainability frameworks (Filho et al., 2021; Ramos, 2020), and employability constructs (Tomlinson, 2017).

Validity and reliability considerations

To ensure conceptual rigor, the study applied several validation strategies. These strategies included theoretical triangulation, cross-model comparison with PDCA, EFQM, and Outcome-Based Education frameworks, peer debriefing, and a methodological audit trail documenting coding and selection decisions.

Methodological limitations

This conceptual SLR had several limitations. The analysis depended on available published literature and may have been affected by publication bias. The study did not include empirical testing of the proposed framework. Interpretive subjectivity remained possible despite triangulation procedures. Nevertheless, the method provided a transparent and systematic foundation for theory development and framework construction.

Results

The Systematic Literature Review (SLR) revealed four interrelated conceptual clusters that formed the foundation of the Sustainable QA Work-Readiness Framework which presents in Figure 2. These clusters demonstrated the relationships among institutional effectiveness, the multidimensional construct of work readiness, structural weaknesses in existing Quality Assurance (QA) systems, and strategic opportunities to integrate continuous competency assessment. Collectively, the findings indicated that Higher Education Institutions (HEIs) strengthened institutional sustainability by aligning internal governance, curriculum systems, and stakeholder engagement with evolving workforce demands.

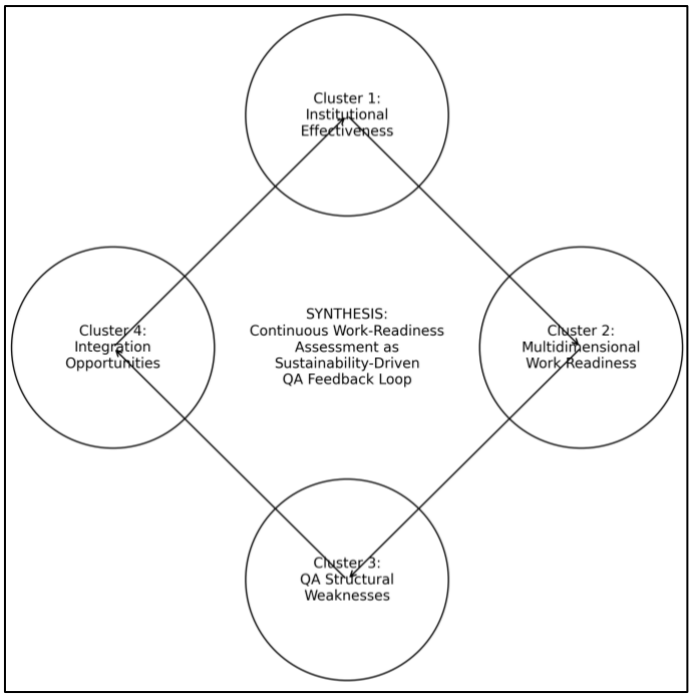

Figure 2. Conceptual synthesis of the sustainable QA work-readiness framework

Cluster 1: Characteristics of effective and sustainable higher education institutions

The first cluster emphasized institutional characteristics consistently associated with educational effectiveness and sustainability. Edmonds (1979) originally developed the Theory of Effective Schools for primary and secondary education; however, subsequent research extended and adapted the theory to the higher education context, confirming its continued relevance. The review identified several core characteristics. Effective institutions demonstrated strong, transformational leadership that articulated a long-term vision, fostered innovation, cultivated a culture of quality, and strengthened organizational resilience. Sustainability research confirmed that visionary leadership facilitated the integration of sustainability principles into curriculum, governance, and institutional culture (Filho et al., 2021).

Institutional coherence further depended on a clear mission and strategic direction aligned with stakeholder expectations, including employability, quality enhancement, and societal relevance. Without such alignment, QA systems tended to operate in fragmented and reactive ways rather than supporting continuous improvement (Harvey, 2021). Continuous monitoring and evidence-based decision-making also emerged as central features. Effective HEIs systematically assessed learning achievement, competency development, student engagement, and graduate labor market performance. Institutions that relied on data-driven governance demonstrated stronger adaptability and innovation capacity (Taylor, 2014).

In addition, high expectations and student-centered support contributed to academic and professional excellence. Active learning strategies, structured career services, mentoring systems, and psychosocial support strengthened graduate employability and

readiness attributes (Jackson, 2019; Jollands & Clarke, 2019). Stakeholder engagement further reinforced sustainability. Structured collaboration with industry partners through curriculum co-design, internships, advisory boards, and employer feedback mechanisms enhanced institutional responsiveness and long-term viability (Fernández-Sánchez & Rodríguez, 2019).

Cluster 2: Dimensions of work readiness

The second cluster confirmed that work readiness constituted a multidimensional construct. The literature consistently described six interrelated dimensions: cognitive competence, interpersonal skills, intrapersonal attributes, professional awareness, digital literacy, and career adaptability. Cognitive competence encompasses critical thinking, analytical reasoning, creativity, and information literacy, which the OECD (2018) identified as foundational workforce capabilities. Interpersonal skills included communication, teamwork, negotiation, and intercultural competence, areas employers frequently identified as insufficiently developed among graduates (Succi & Canovi, 2020).

Intrapersonal attributes referred to resilience, emotional regulation, self-motivation, adaptability, and responsibility, which Lim and Ling (2012) described as psychological work-readiness capital. Professional and organizational awareness required understanding workplace norms, ethics, and industry structures, as limited exposure to real organizational contexts often hindered transition into employment (Cernusca, 2020). Digital and technological literacy represented a baseline requirement for contemporary employability, including competence in digital tools, data analysis, and collaborative platforms (Wang, 2020). Finally, career adaptability and lifelong learning orientation reflected the capacity for sustained professional development, which Tomlinson (2017) identified as central to long-term employability.

Cluster 3: Structural weaknesses in current QA systems

The third cluster highlighted structural weaknesses that constrained the effectiveness and sustainability of existing QA systems. Many QA models operated through episodic and compliance-oriented accreditation cycles. These cycles limited institutional responsiveness to rapid labor market change and often generated administrative burdens that overshadowed substantive competency development. Harvey (2021) argued that such approaches failed to support sustainable educational quality adequately.

QA systems also relied heavily on input indicators, such as facilities and staffing ratios, and output statistics, such as graduation rates. These measures did not adequately capture graduate competency development or institutional relevance (Coates, 2015). Furthermore, feedback systems frequently remained fragmented. Institutions often failed to integrate student learning outcomes, employer evaluations, curriculum redesign, and strategic planning into a coherent feedback architecture. Sustainability scholarship emphasized that adaptive governance required dynamic and iterative

feedback mechanisms (Lozano, 2011). Employability initiatives were also commonly separated from core academic structures and implemented as peripheral workshops or short-term programs, leading to inconsistent outcomes and limited institutional oversight (Tomlinson, 2017).

Cluster 4: Opportunities for integrating work readiness into sustainable QA

Despite these weaknesses, the literature identified significant opportunities to integrate work readiness into sustainable QA systems. Continuous competency monitoring enhanced institutional agility by enabling HEIs to identify emerging skill gaps, adjust pedagogical strategies, and realign curricula with labor market developments. Agile competency systems improved graduate employability and institutional competitiveness (Wang, 2020). When readiness data directly informed curricular decisions, institutions redesigned programs to align with industry needs, embedded experiential learning, and aligned courses with future skills frameworks, thereby improving readiness outcomes (Jollands & Clarke, 2019).

Transparent reporting of graduate readiness outcomes strengthened stakeholder trust, enhanced institutional reputation, and supported long-term sustainability (Ramos, 2020). Embedding readiness assessment within QA processes also fostered a culture of organizational learning consistent with Senge (2006). This integration repositioned QA as a developmental and adaptive system rather than a compliance mechanism.

Synthesis of literature clusters

The synthesis of these four clusters established a coherent theoretical foundation for the proposed framework. Institutional effectiveness principles provided the structural architecture of governance. The multidimensional construct of work readiness provided measurable, strategically relevant indicators. Structural limitations in current QA systems justified the need for systemic innovation, while identified opportunities demonstrated how readiness assessment could function as a sustainability mechanism.

Based on this synthesis, the study advanced the concept of Sustainability-Driven Work-Readiness Quality Assurance (SDWR-QA). SDWR-QA referred to a governance-level QA architecture in which continuous, multidimensional work-readiness measurement served as an institutional feedback mechanism that strengthened adaptive decision-making and long-term sustainability. Unlike traditional employability models that concentrated on individual graduate capital (Yorke, 2006; Tomlinson, 2017), SDWR-QA functioned at the institutional governance level and positioned work readiness as strategic intelligence. It differed from retrospective tracer study approaches (Coates, 2015) by embedding continuous competency monitoring within institutional systems and linking assessment results directly to competency gap analysis and structural adaptation. In contrast to compliance-oriented QA models that prioritized documentation and input indicators (Harvey, 2021; Taylor, 2014), SDWR-QA emphasized competency-based evidence and dynamic feedback loops aligned with sustainability principles (Lozano, 2011; Ramos, 2020). The concept, therefore, reframed QA as a

sustainability-driven institutional learning system in which readiness intelligence systematically informed curriculum reform, stakeholder engagement, and strategic governance.

Conceptual framework and discussion

This study advanced a conceptual shift in understanding sustainable Quality Assurance (QA) in higher education. Sustainable QA required more than periodic compliance evaluation. It required a continuous learning ecosystem in which work-readiness data functioned as strategic intelligence for institutional adaptation. By positioning work readiness as a sustainability-driven feedback loop, the framework offered a structured pathway to align educational quality with long-term societal relevance and workforce transformation.

The concept developed in this study

The central concept positioned work readiness as a strategic and sustainability-driven mechanism within QA systems rather than merely an outcome indicator of graduate performance. The study proposed the Sustainable QA Work-Readiness Framework, a cyclical, feedback-oriented model that integrates continuous competency assessment into institutional governance and long-term quality enhancement processes.

Traditional approaches treated work readiness as an output variable measured through employment rates, employer satisfaction, or graduate surveys (Coates, 2015; Harvey, 2021). Such approaches limited readiness to retrospective evaluation. The proposed framework reconceptualized work readiness as a continuous diagnostic instrument that informed curriculum redesign, pedagogical innovation, stakeholder engagement, and strategic planning (Jackson, 2019; Tomlinson, 2017). By embedding readiness assessment within a structured feedback loop, QA functioned as an adaptive institutional system rather than a compliance-based audit mechanism (Taylor, 2014; Sallis, 2014; Ramos, 2020).

The framework rested on three integrative foundations. First, it adopted principles from the Theory of Effective Schools, particularly leadership, mission clarity, and continuous outcome monitoring as drivers of institutional effectiveness (Edmonds, 1979; Cheng, 2022). Second, it aligned with sustainability frameworks in higher education that emphasized adaptability, stakeholder integration, and long-term resilience (Lozano, 2011; Filho et al., 2021; Ramos, 2020). Third, it incorporated multidimensional models of work readiness and employability capital that extended beyond technical competence to include cognitive, interpersonal, intrapersonal, digital, and adaptive skills (Caballero & Walker, 2019; Succi & Canovi, 2020; Wang, 2020).

The resulting model comprised five interrelated components: (1) foundational inputs, including leadership, governance, institutional culture, and QA infrastructure; (2) continuous work-readiness assessment; (3) competency gap analysis; (4) adaptive institutional response; and (5) sustainability and QA outcomes. The novelty of this

framework lies in reframing work readiness as a continuous sustainability feedback loop that strengthens institutional agility and strategic alignment with evolving labor market demands (Harvey, 2021; Filho et al., 2021). In doing so, the study bridged institutional effectiveness theory, sustainability governance, and employability research.

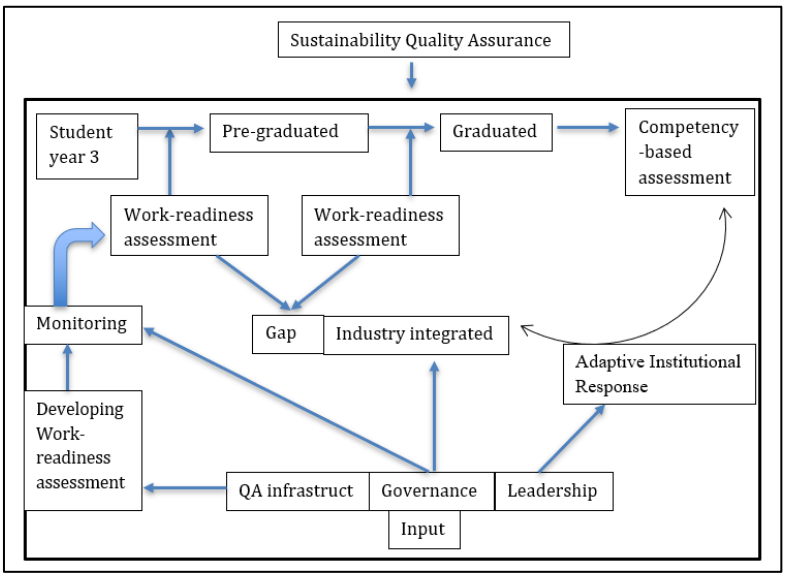

Figure 3. Sustainable QA work-readiness conceptual model

Figure 3 illustrates a continuous cycle that embeds work-readiness assessment within the institutional QA system. The cycle began with foundational inputs, including visionary leadership, supportive governance, and adequate QA infrastructure. These elements enabled effective system operation. Continuous work-readiness assessment then functioned as the core process. Institutions assessed student competencies across cognitive, interpersonal, intrapersonal, professional, digital, and adaptability dimensions throughout the academic lifecycle.

Assessment results informed competency gap analysis, which identified discrepancies between achieved competencies and industry expectations. Institutions then implemented adaptive responses in three principal areas: curriculum reform, pedagogical innovation, and strengthened stakeholder engagement. These adjustments enhanced agility, resilience, and institutional reputation. The model operated as a feedback loop. Outcomes and lessons from each cycle informed subsequent planning, thereby transforming QA into a dynamic learning system rather than an administrative requirement.

Theoretical implications

The framework contributed to theory in three main ways. First, it extended institutional effectiveness theory into the domain of higher education sustainability. While the Theory of Effective Schools emphasized leadership and monitoring as determinants of effectiveness (Edmonds, 1979; Cheng, 2022), this study embedded competency-based monitoring as a strategic sustainability instrument. This adaptation expanded the theory beyond traditional academic performance indicators.

Second, the framework integrated sustainability science with QA literature. Sustainability scholarship often focuses on environmental initiatives or governance reform (Lozano, 2011; Filho et al., 2021), whereas QA research emphasizes accountability and compliance (Harvey, 2021). By conceptualizing work readiness as a dynamic feedback mechanism, the study synthesized these domains into a unified improvement model driven by continuous data analysis and adaptive governance (Ramos, 2020; Senge, 2006).

Third, the study advanced employability research by shifting attention from individual graduate attributes to institutional system capacity. Much of the employability literature has focused on individual employability capital (Tomlinson, 2017; Yorke, 2006). In contrast, the proposed framework conceptualized work readiness as an institutional performance signal capable of triggering systemic transformation. The contribution, therefore, introduced a macro-level perspective to a field often dominated by micro-level analysis.

Overall, the theoretical advancement lay in establishing an integrated cross-domain model that positioned work readiness as a structural mechanism of sustainable QA rather than a peripheral graduate outcome.

Practical implications for higher education institutions

The framework offered several practical implications for HEI leaders and QA bodies. Institutions could institutionalize continuous competency monitoring systems and integrate readiness indicators into digital QA platforms. Rather than relying exclusively on periodic tracer studies, HEIs could embed assessment within courses, internships, and work-integrated learning environments (Coates, 2015; Jollands & Clarke, 2019). This approach improved responsiveness to labor-market changes.

Competency gap analysis could directly inform curriculum reform. By aligning assessment data with industry expectations, institutions could redesign learning outcomes, strengthen experiential learning components, and enhance digital and transferable skills (Caballero & Walker, 2019; Succi & Canovi, 2020; Wang, 2020). Stakeholder engagement also became more systematic and evidence-based. Structured employer feedback could feed directly into academic planning cycles, thereby reinforcing trust and the sustainability of reputational capital (Fernández-Sánchez & Rodríguez, 2019; Ramos, 2020).

Embedding work readiness into QA processes further cultivated a culture of continuous improvement. Faculty and administrators shifted from reactive compliance toward proactive innovation over time (Senge, 2006; Sallis, 2014). QA thus evolved into an adaptive governance mechanism that supported institutional learning and long-term sustainability.

Policy implications

The framework also carried implications at the system and policy levels. Accreditation agencies could integrate competency-based readiness indicators into evaluation

standards rather than emphasizing input measures alone (Harvey, 2021). Governments could develop national digital tracer systems that enable longitudinal monitoring of graduate competencies and career adaptability (Coates, 2015; Ramos, 2020) such initiatives align with Sustainable Development Goal 4 on educational quality and relevance.

Funding models could further incorporate sustainability-oriented QA outcomes. Institutions demonstrating adaptive capacity and strong graduate readiness could receive incentive-based funding, thereby encouraging systemic transformation toward data-driven improvement (Filho et al., 2021; Lozano, 2011). The framework, therefore, informed broader educational governance reform beyond individual institutional application.

Limitations and future research directions

As a conceptual study based on an SLR, this research presented several limitations. The study has not yet empirically validated the proposed framework. Although the analysis grounded the model in rigorous theoretical integration (Snyder, 2019), future research must test its operational effectiveness through case studies or pilot implementation. The review also relied primarily on peer-reviewed literature and may have been influenced by publication bias. In addition, while the framework identified core readiness dimensions, it did not specify standardized measurement instruments.

Future research could address these limitations by conducting multi-case empirical studies across diverse HEIs, developing quantitative models to examine relationships between readiness monitoring and institutional performance outcomes, designing digital readiness dashboards integrated within QA systems, and undertaking comparative policy analyses of national QA reforms incorporating competency-based indicators (Caballero & Walker, 2019; Tomlinson, 2017).

Conclusion

The Sustainable QA Work-Readiness Framework articulated five interrelated components: foundational inputs, continuous work-readiness assessment, competency gap analysis, adaptive institutional response, and sustainability outcomes. The model demonstrated that continuous evaluation of graduate competencies generated a dynamic feedback loop that informed evidence-based decision-making, curriculum enhancement, pedagogical reform, and stakeholder engagement. Through this mechanism, Quality Assurance (QA) evolved into an adaptive governance system that strengthened institutional agility and long-term resilience.

In a context marked by rapid technological change, shifting labor-market demands, and heightened accountability pressures, Higher Education Institutions (HEIs) needed to move beyond compliance-oriented, episodic QA models. Sustainable QA requires continuous, data-driven, and improvement-focused processes. The study conceptualized work readiness as a multidimensional and forward-looking indicator

aligned with this transformation. By embedding work-readiness metrics within QA systems, HEIs enhanced academic quality while contributing to broader societal sustainability goals. The study also integrated educational effectiveness theory, sustainability science, employability research, and QA literature into a coherent conceptual framework that positioned competency monitoring as a structural mechanism of institutional development.

Despite its contributions, this conceptual study had limitations. The research did not empirically validate the proposed framework, and future studies should examine its operationalization through case studies, quantitative readiness measurement models, mixed-method designs, or pilot implementation across diverse HEIs. Such investigations would provide empirical evidence of the model's effectiveness in varied institutional contexts. Overall, sustainable QA in higher education requires a continuous learning ecosystem in which graduate competency data systematically guide institutional improvement, and the proposed framework offers a structured foundation for advancing this objective.

Acknowledgments

The author expressed sincere appreciation to colleagues, academic peers, and higher education practitioners who contributed valuable insights during the development of this conceptual study. Their constructive feedback and professional dialogue strengthened the refinement of the proposed framework. The author also acknowledged institutional support that facilitated access to relevant scholarly resources. This research received no external funding.

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