A Conceptual Framework for the Impact of Total Quality Management and IT Alignment on Human Resource Development: The Mediating Role of Learning Agility in Saudi Educational Institutions

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Abstract

This paper proposes an extended conceptual framework that investigates the mediating role of learning agility in the relationship between Total Quality Management (TQM), IT alignment, and Human Resource Development (HRD) within Saudi educational institutions. With Saudi Arabia's Vision 2030 aiming to elevate the education sector into a globally competitive, knowledge-driven industry, the emphasis on integrating advanced management practices such as TQM and IT alignment has become paramount. Both TQM and IT alignment are recognized as critical enablers of HRD, yet there is limited understanding of how these elements interact synergistically. This study also highlights the role of employee learning agility as a key mediator, which amplifies the effectiveness of TQM and IT alignment on HR outcomes by fostering adaptability and continuous learning. By addressing the unique challenges faced by Saudi educational institutions particularly in aligning technological strategies with quality management practices this framework provides valuable insights for educational policymakers, administrators, and HR practitioners. Recommendations are made for fostering learning agility and aligning organizational strategies to improve HRD outcomes, thereby supporting the overarching goals of Saudi Vision 2030.

1. Introduction

Human Resource Development (HRD) plays an essential role in the overall performance and sustainability of the education sector, where the effective development and management of human capital are critical drivers of institutional success. In Saudi Arabia, HRD has gained unprecedented attention as the education system undergoes a profound transformation aligned with the Kingdom's Vision 2030. This strategic initiative aims to elevate the nation's education sector into a globally competitive, knowledge-driven industry, focusing on fostering human capital that can support this ambitious shift. The integration of advanced management practices, particularly Total Quality Management (TQM) and IT alignment, is pivotal to achieving these objectives. TQM, which emphasizes continuous improvement and process optimization, and IT alignment, which ensures that technological strategies are in harmony with institutional goals, are central to enhancing HRD outcomes. Together, they offer a comprehensive approach to improving institutional performance by aligning human resource capabilities with the broader educational objectives set out by Vision 2030. However, while the benefits of TQM and IT alignment are widely recognized, the role of learning agility defined as the ability of employees to quickly adapt to changing environments and acquire new skills has not been fully explored as a critical mediator that can enhance the impact of these

practices on HRD outcomes.

Despite the established importance of TQM and IT alignment, a significant gap exists in understanding how these elements interact to optimize HRD, particularly in the context of Saudi educational institutions. Although many studies have addressed the individual impacts of TQM or IT alignment on institutional performance, there is limited research that integrates these two elements into a cohesive framework, especially in relation to how they influence HR development in the Saudi education sector. Saudi institutions face ongoing challenges in effectively aligning their IT strategies with quality management practices, which limits their ability to fully capitalize on their human resources. Moreover, the role of employee learning agility as a mediator in this relationship remains underexplored, despite its potential to enhance the adaptability and skill development necessary for both TQM and IT alignment initiatives to succeed. Learning agility, which enables employees to adjust rapidly to new quality standards and evolving technological tools, could play a key role in overcoming these challenges. Thus, this research seeks to fill these gaps by proposing a conceptual framework that integrates TQM, IT alignment, and HRD, with a particular focus on the mediating role of learning agility. By doing so, it aims to offer valuable insights into optimizing HRD in Saudi educational institutions.

The primary objectives of this study are to investigate how TQM practices influence HRD in Saudi educational institutions, explore the impact of IT alignment on HR development, and examine the mediating role of learning agility in the relationship between TQM, IT alignment, and HRD. These objectives guide the following research questions: How does Total Quality Management impact Human Resource Development in Saudi educational institutions? What is the role of IT alignment in enhancing HRD in these institutions? How does learning agility mediate the relationship between TQM, IT alignment, and HRD? By addressing these questions, this study aims to bridge the existing gaps in the literature and provide a comprehensive understanding of how these organizational elements interact to shape HRD outcomes in the education sector.

The significance of this research extends beyond academic contributions; it offers practical insights for policymakers, educational administrators, and HR practitioners in Saudi Arabia. From an academic perspective, this study will address the gap concerning the mediating role of learning agility in the relationship between TQM, IT alignment, and HRD, contributing to a more nuanced understanding of how these factors work together to enhance human capital development. Practically, the findings will offer valuable recommendations for policymakers involved in shaping educational reforms that prioritize quality management and technology integration. Educational administrators can also benefit from adopting HR strategies that incorporate learning agility as a critical component of institutional success. As Saudi Arabia strives to align its educational sector with Vision 2030's strategic objectives, this research will provide a foundation for developing more effective, adaptable, and innovative HR practices that contribute to institutional growth and national development.

2. Theoretical Foundations
2.1Total Quality Management (TQM) in Education

Total Quality Management (TQM) originated in the manufacturing sector but has been increasingly

applied to educational institutions to improve quality and performance. TQM in education involves systematic efforts to enhance institutional processes, aiming at continuous improvement across various dimensions, including curriculum design, teaching methods, and administrative functions. Key principles of TQM such as customer focus, continuous improvement, and process-based management are critical in educational settings. These principles align with the goal of increasing student satisfaction and improving institutional performance by fostering a culture of excellence (Alsayel et al., 2023). TQM enhances education quality by establishing clear goals, providing consistent feedback, and optimizing the use of resources. The focus on performance metrics ensures that educational institutions meet stakeholders' expectations, including students, parents, employers, and regulatory bodies (Laghouag, 2023).

The application of TQM in education also profoundly impacts human resource development (HRD) by embedding a culture of continuous learning and professional development. Effective implementation of TQM leads to better management practices that emphasize staff training and empowerment, enhancing employees' abilities to contribute to institutional goals. For example, training programs aligned with TQM principles encourage the development of leadership skills, fostering innovation and problem-solving among educators and administrators (Rawashdeh et al., 2022). By continuously improving management practices and promoting knowledge sharing, TQM strengthens the capability of human resources to adapt to changes in the educational environment, thereby supporting institutional growth and development (Rajeh, 2023). Moreover, TQM-driven HRD integrates feedback mechanisms that promote accountability and high performance, reinforcing a culture of quality and excellence in education (Aggarwal, 2023).

2.2 IT Alignment in Education

Information Technology (IT) alignment refers to the strategic synchronization between an organization's IT infrastructure and its broader goals. In the context of education, IT alignment is crucial for ensuring that technology investments are in sync with institutional objectives, such as improving student outcomes, enhancing administrative efficiency, and promoting innovative teaching methods (Aleisa, 2024). Theories such as the Strategic Alignment Model (SAM) suggest that aligning IT with organizational goals enhances operational efficiency, flexibility, and competitive advantage. Educational institutions must align IT strategies with pedagogical objectives to optimize learning environments and institutional outcomes (Alragabah & Ahmed, 2024). For instance, the integration of e-learning platforms and data analytics tools allows institutions to personalize education, track student performance, and make data-driven decisions, thus enhancing the overall quality of education (Dženopoljac et al., 2023).

The alignment of IT with educational goals also plays a critical role in HR development. Effective IT alignment ensures that human resources are equipped with the necessary tools and skills to leverage technological advancements in their work, improving both teaching effectiveness and administrative efficiency (Alzahrane, 2024). Training programs focused on IT skills development enable educators and administrators to use digital tools effectively, fostering a tech-savvy workforce capable of navigating the complexities of modern education. Furthermore, IT alignment supports the development of collaborative platforms that enhance communication and knowledge sharing among staff, which, in turn, drives innovation and continuous improvement in HR practices (Chehade & Procházka, 2024). The strategic use of IT can also streamline HR processes, such as recruitment, training, and performance evaluations,

leading to more efficient management and development of human capital in educational settings (Espinosa Sáez et al., 2023).

2.3 Learning Agility as a Mediator

Learning agility, defined as the ability to learn, unlearn, and relearn in response to changing conditions, is an essential competency in today's dynamic work environments, including educational institutions. As education systems face rapid technological advancements and shifting pedagogical paradigms, learning agility becomes crucial for educators and administrators to remain relevant and effective (Mkheimer et al., 2023). Theoretical models, such as Kolb's Experiential Learning Theory, emphasize the importance of adaptive learning behaviors, where individuals actively seek out new knowledge, experiment with new methods, and reflect on their experiences to foster continuous improvement (Kelly, 2023). Learning agility enables educational professionals to respond effectively to evolving challenges, such as the integration of new technologies or changes in educational policy, making it a valuable asset for HR development in educational institutions (Indrayani et al., 2024).

Learning agility is integral to the successful implementation of both TQM and IT alignment initiatives in HR development. It serves as a bridge that enables individuals and organizations to embrace continuous improvement processes and leverage technological advancements. Theories of organizational learning suggest that learning agility enhances employees' ability to absorb and apply new knowledge, making them more adaptable to change and innovation (Maziriri et al., 2023). In the context of TQM, learning-agile employees are more likely to engage with quality improvement initiatives, contributing to a culture of excellence and continuous improvement. Similarly, in the context of IT alignment, learning agility facilitates the rapid adoption of new technologies, ensuring that HR practices evolve in line with technological advancements (Vaz et al., 2023).

2.4 Mediating Role of Learning Agility

Learning agility plays a mediating role in the relationship between TQM, IT alignment, and HR development by enhancing the capacity of employees to adapt to new processes and technologies. In the context of TQM, learning-agile individuals are more open to adopting continuous improvement practices, enabling the institution to achieve its quality goals more effectively. They are also more likely to embrace feedback and use it to refine their skills and approaches, contributing to the overall development of human resources (Javed et al., 2020). In terms of IT alignment, learning agility allows employees to stay ahead of technological trends and apply new tools and systems efficiently, improving both individual and organizational performance (Nishiwaki & Oe, 2024). This adaptability is crucial in educational institutions, where technological and pedagogical advancements occur rapidly, necessitating continuous professional development.

The relationship between learning agility and institutional development can be explained through the lens of several theoretical models, including Senge's concept of the learning organization and Argyris and Schön's theory of double-loop learning. These theories posit that organizations that foster a culture of continuous learning and adaptation are better equipped to innovate and thrive in changing environments. Learning agility, in this context, is not just a personal trait but a strategic organizational asset that drives institutional development and HR growth (Otoo & Rather, 2024). By cultivating learning-agile employees, educational institutions can improve their capacity for innovation, problem-

solving, and leadership, ultimately enhancing institutional performance and ensuring long-term sustainability (Saeed et al., 2023). Thus, learning agility acts as a critical enabler of both TQM and IT alignment efforts, facilitating the effective development and utilization of human resources in educational settings.

3. Hypotheses Development
3.1 Hypotheses on TQM and HRD

H1: There is a positive relationship between Total Quality Management and Human Resource Development

The proposed relationship between Total Quality Management (TQM) and Human Resource Development (HRD) in Saudi educational institutions builds on the foundation of existing literature, which emphasizes TQM as a critical driver of organizational performance and employee development. In the educational sector, TQM principles such as continuous improvement, employee involvement, and systematic management practices can significantly contribute to the growth and development of human resources (Rajeh, 2023). Studies show that the successful implementation of TQM fosters a culture of learning and innovation, where employees are regularly trained to enhance their competencies and adapt to evolving institutional demands (Rawashdeh et al., 2022). TQM also facilitates better alignment between institutional goals and employee performance, thereby promoting professional development and organizational commitment. Therefore, it is hypothesized that the adoption of TQM in Saudi educational institutions will have a positive impact on HRD by encouraging continuous learning, enhancing job satisfaction, and fostering a commitment to quality improvement (Alsayel et al., 2023; Laghouag, 2023).

3.2 Hypotheses on IT Alignment and HRD

H2: Effective IT alignment positively impacts Human Resource Development in the Saudi educational   sector.
Information Technology (IT) alignment refers to the strategic synchronization of an organization's technological infrastructure with its overall objectives, ensuring that technology investments support the institution's mission and enhance operational efficiency (Aleisa, 2024). In educational settings, IT alignment is crucial for enabling staff to effectively use digital tools and platforms for teaching, administration, and communication. The alignment of IT systems with educational goals allows for more efficient data management, streamlined processes, and enhanced collaboration, all of which contribute to HR development (Alragabah & Ahmed, 2024). Furthermore, IT alignment facilitates the implementation of e-learning platforms, digital resources, and data analytics, which are critical for modern educational practices. By equipping educators and administrative staff with the necessary skills to leverage these technologies, IT alignment promotes continuous professional development and enhances employee performance (Alzahrane, 2024). Therefore, it is hypothesized that effective IT alignment will positively influence HRD by improving employees' ability to adapt to new technologies and optimize their contributions to the educational institution's success (Chehade & Procházka, 2024).

3.3 Hypotheses on the Mediating Role of Learning Agility

H3: Learning agility mediates the relationship between Total Quality Management and Human Resource   Development.
Learning agility is defined as an individual's ability to learn quickly, adapt to new situations, and apply newly acquired knowledge to solve problems. This concept is particularly relevant in dynamic environments like education, where continuous learning is essential for both personal and organizational growth (Maziriri et al., 2023). TQM principles, which emphasize continuous improvement and employee development, naturally align with the concept of learning agility, as both frameworks promote adaptability and a commitment to learning (Aggarwal, 2023). In this context, learning agility acts as a mediating factor between TQM and HRD, enhancing employees' ability to absorb and apply the quality improvement strategies espoused by TQM (Javed et al., 2020). As educational institutions in Saudi Arabia strive for excellence through the implementation of TQM, learning agility enables staff to better respond to feedback, innovate, and contribute to institutional development. Therefore, it is hypothesized that learning agility will mediate the relationship between TQM and HRD, amplifying the positive effects of TQM on HRD outcomes (Mkheimer et al., 2023).

H4: Learning agility mediates the relationship between IT alignment and Human Resource Development.

The integration of IT in education requires employees to continually update their skills and knowledge to effectively use new technologies. Learning agility plays a pivotal role in enabling employees to adapt to these technological changes, ensuring that they can harness the full potential of IT tools for enhancing their performance and contributing to HRD (Kelly, 2023). In the context of IT alignment, learning agility allows employees to navigate complex technological environments, swiftly learn new systems, and integrate these systems into their daily tasks (Vaz et al., 2023). By promoting adaptability and fostering a learning-oriented culture, IT alignment mediated by learning agility can drive significant improvements in HRD outcomes, such as employee engagement, performance, and innovation (Nabi et al., 2023). Therefore, it is hypothesized that learning agility mediates the relationship between IT alignment and HRD, enabling employees to effectively adopt and utilize new technologies for the benefit of the institution (Indrayani et al., 2024).

3.4 Interaction Hypothesis
H5: The interaction between TQM and IT alignment, mediated by learning agility, leads to more significant improvements in HR development.

The interaction between TQM and IT alignment is crucial for maximizing the potential of human resource development in educational institutions. When both TQM and IT alignment are implemented effectively, they create a synergistic environment that fosters continuous learning, innovation, and operational efficiency (Saeed et al., 2023). Learning agility acts as a key mediator in this interaction, enabling employees to adapt to both quality improvement initiatives and technological advancements. As employees become more agile learners, they are better equipped to respond to the demands of both TQM and IT alignment, leading to enhanced HR development outcomes (Maziriri et al., 2023). The combination of these factors TQM, IT alignment, and learning agility creates a dynamic framework where human resources are continuously developed to meet the evolving needs of the institution. Therefore, it is hypothesized that the interaction between TQM and IT alignment, when mediated by

learning agility, results in more significant improvements in HR development, as employees become more capable of contributing to organizational growth and innovation (Otoo & Rather, 2024).

4. Gap in the Literature
4.1TQM and IT Alignment in Education

One of the critical gaps in the literature pertains to the combined effects of Total Quality Management (TQM) and IT alignment on Human Resource Development (HRD), particularly in the context of the educational sector. While there is a robust body of research exploring TQM's role in improving institutional performance through quality improvement practices (Rajeh, 2023), few studies have integrated IT alignment as a complementary factor. IT alignment, which refers to the strategic coordination of technology with institutional objectives, is often studied in isolation, focusing on its effects on operational efficiency, rather than in conjunction with TQM (Aleisa, 2024). The lack of studies that examine the intersection of these two critical frameworks TQM and IT alignment leaves a gap in understanding how their integration can more holistically improve HRD outcomes. Particularly in the Saudi educational sector, where both technology adoption and quality improvement are prioritized, there is limited empirical evidence on how the alignment of IT strategies with TQM initiatives could synergize to enhance HR development (Alragabah & Ahmed, 2024; Alsayel et al., 2023).

4.2Learning Agility as a Mediator

A significant gap also exists in the exploration of learning agility as a mediating variable in the relationship between TQM, IT alignment, and HRD. Learning agility, defined as the ability to adapt, learn quickly, and apply new knowledge in changing environments, is recognized as a critical competency in dynamic sectors like education (Maziriri et al., 2023). However, despite its relevance, the role of learning agility as a mediator between TQM and IT alignment in HRD has been insufficiently explored. Existing literature acknowledges the importance of learning agility in enhancing employee adaptability and innovation (Aggarwal, 2023), yet empirical studies that explicitly link learning agility with the successful implementation of both TQM and IT strategies in educational settings are scarce (Nabi et al., 2023). This gap is particularly notable in the Saudi context, where rapid educational reforms demand that staff not only embrace quality management principles but also adapt to evolving technological frameworks (Alzahrane, 2024). The mediating role of learning agility could be a critical factor in enhancing HRD by enabling employees to better respond to the dual demands of quality improvement and technological advancement, yet this remains under-researched.

4.3Sector-Specific Studies in Saudi Arabia

The Saudi educational sector presents unique contextual challenges, including cultural factors, government policies, and technological constraints that affect the integration of TQM and IT alignment for HR development. While there has been growing interest in the application of TQM and IT in education globally, very few studies have focused on how these frameworks can be effectively integrated within Saudi institutions (Rajeh, 2023). Sector-specific research is crucial, given the distinct organizational structures, resource limitations, and policy environments in Saudi Arabia (Alragabah & Ahmed, 2024). Existing literature largely overlooks the challenges that Saudi educational institutions face in adopting both TQM and IT strategies simultaneously, particularly in relation to HRD. Moreover,

the role of cultural factors in shaping the adoption of learning agility as a mediator in HR development initiatives has not been sufficiently addressed in Saudi studies (Alshahrani et al., 2024). This gap highlights the need for more targeted research that explores how the unique institutional context of Saudi Arabia influences the successful integration of TQM, IT alignment, and learning agility in enhancing HRD outcomes.

5. Conceptual Framework Development
5.1 Total Quality Management and HRD

The implementation of TQM principles in educational institutions directly influences HR development by enhancing the overall efficiency of processes, leadership capabilities, and organizational accountability (Rajeh, 2023). TQM emphasizes continuous improvement in organizational performance through structured processes that focus on quality at every level. When applied to HRD, these processes foster a culture of learning and accountability, which in turn enhances employee skills and competencies (Alragabah & Ahmed, 2024). TQM practices promote an organizational climate where leadership is committed to employee growth, training, and development, ensuring that staff members are aligned with the institution's long-term quality objectives. Furthermore, TQM frameworks often include mechanisms for regular feedback and performance assessment, which are essential for the continuous development of HR practices (Kelly, 2023). By improving institutional processes and leadership, TQM serves as a catalyst for creating an environment where HR development can thrive, leading to better staff performance and organizational outcomes.

5.2 IT Alignment and HRD

IT alignment plays a crucial role in supporting HR development within educational institutions by facilitating more efficient decision-making and streamlining operational processes. IT alignment refers to the integration of technological systems with the institution's strategic goals, ensuring that technology is leveraged to enhance productivity and organizational performance (Aleisa, 2024). In the context of HRD, aligning IT systems with institutional objectives helps streamline HR processes such as recruitment, training, and performance management, enabling educational institutions to operate more effectively (Alzahrane, 2024). Moreover, IT alignment allows for more data-driven decision-making, giving HR departments the tools to better understand employee needs, track performance metrics, and implement targeted development initiatives. The integration of advanced educational technologies also supports the continuous learning and professional development of staff by providing access to online training modules and digital resources, which are increasingly important in modern educational settings (Chehade & Procházka, 2024). Therefore, IT alignment is not only a driver of operational efficiency but also a key enabler of HR development in Saudi educational institutions.

5.3 Learning Agility as a Mediator

Learning agility is proposed as a mediating factor that bridges the gap between TQM, IT alignment, and HR development. Learning agility refers to an employee's ability to learn quickly, adapt to new environments, and apply knowledge in real-time, which is crucial in dynamic work settings like education (Maziriri et al., 2023). In the context of TQM and IT alignment, learning agility enables staff to effectively implement new quality management procedures and adapt to evolving technological systems.

This capacity for adaptation is particularly important in Saudi educational institutions, where continuous reforms and technological advancements require employees to remain flexible and proactive in their professional development (Ali et al., 2024). As a mediator, learning agility enhances the impact of both TQM and IT alignment on HR development by ensuring that employees are not only capable of meeting current performance expectations but are also prepared to handle future challenges. By fostering a culture of continuous learning and adaptability, learning agility amplifies the positive effects of TQM and IT strategies on HR outcomes (Nabi et al., 2023).

5.4 Interaction of TQM, IT Alignment, and Learning Agility

The proposed framework suggests a synergistic relationship between TQM, IT alignment, and learning agility, which together contribute to more significant improvements in HR development. The combination of TQM's focus on process optimization and IT alignment's role in streamlining operations creates an environment that fosters continuous improvement and innovation. Learning agility serves as the connecting factor, enabling employees to adapt to the changes brought about by TQM and IT initiatives and apply new skills in real-time (Rajeh, 2023; Alragabah & Ahmed, 2024). This interaction not only enhances individual employee performance but also leads to broader organizational development by ensuring that staff members are aligned with the institution's quality objectives and technological advancements (Alzahrane, 2024). Moreover, the synergy between these elements is particularly relevant in Saudi Arabia, where educational institutions face the dual challenges of improving quality standards and integrating advanced technologies (Alsayel et al., 2023). By leveraging the complementary strengths of TQM, IT alignment, and learning agility, Saudi institutions can achieve more robust HR development outcomes, ultimately leading to better institutional performance and staff competency.

5.5 Proposed Framework

This study proposes a conceptual framework that integrates Total Quality Management (TQM), IT alignment, and learning agility to examine their collective impact on Human Resource Development (HRD) in Saudi educational institutions. The model underscores the synergistic effects of TQM practices and IT alignment on HR development, while positioning learning agility as a critical mediator. By understanding how these elements interact, the framework aims to provide a comprehensive perspective on improving HR practices and employee capabilities in dynamic educational environments. In particular, it highlights the importance of fostering adaptability among staff, given the rapidly evolving nature of educational technologies and quality management demands in Saudi Arabia (Rajeh, 2023; Alragabah & Ahmed, 2024).
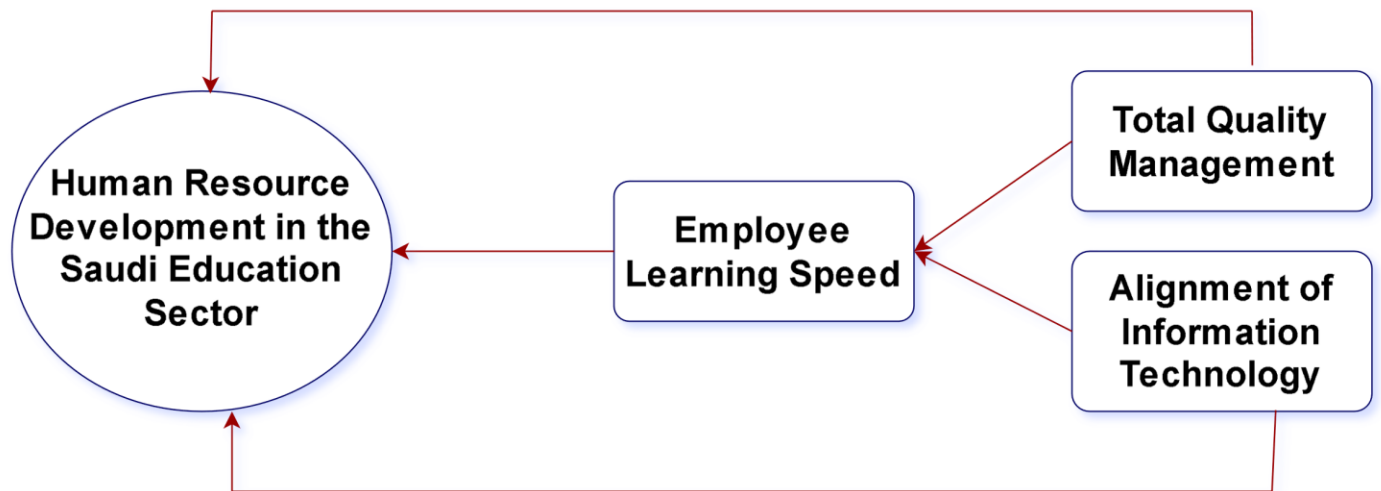
Fig. 1. Research Conceptual Framework

6. Practical Implications
6.1 For Educational Administrators

Educational administrators in Saudi Arabia can play a pivotal role in enhancing Human Resource Development (HRD) by fostering a culture of quality management and learning agility. Implementing Total Quality Management (TQM) principles within educational institutions offers a systematic approach to improving institutional performance and staff competencies. Administrators are encouraged to create an organizational culture that prioritizes continuous improvement, leadership development, and employee engagement, all of which are central to TQM (Rajeh, 2023; Ali et al., 2024). Additionally, administrators should promote learning agility among staff by encouraging flexible learning environments and offering professional development programs that emphasize adaptability and rapid skill acquisition (Maziriri et al., 2023).

Aligning IT initiatives with institutional and HR goals is also critical for administrators seeking to improve HRD. By integrating IT systems that streamline HR processes, such as employee performance tracking and training programs, administrators can enhance the efficiency of HR operations and ensure that technology supports both educational outcomes and employee development (Alzahrane, 2024; Aleisa, 2024). Furthermore, administrators should leverage data-driven tools and digital platforms to create personalized learning pathways for employees, allowing them to develop the necessary competencies to meet evolving institutional needs.

6.2 For Policymakers

For policymakers, the integration of TQM and IT alignment into educational reform is essential in achieving Saudi Arabia's Vision 2030 goals. As the Kingdom continues to reform its educational sector to meet global standards, policies that promote the widespread adoption of TQM practices will be instrumental in improving the overall quality and performance of educational institutions (Alragabah &

Ahmed, 2024). Policymakers should advocate for the development of frameworks that emphasize the alignment of educational technology with national development goals, ensuring that IT systems are used to enhance learning outcomes and HRD (Alsayel et al., 2023).

Moreover, integrating learning agility into national HR strategies is a key recommendation for policymakers. In today's rapidly changing educational landscape, fostering a workforce that can adapt to new challenges and technological advancements is vital for long-term success (Ali et al., 2024). Policymakers should develop and implement policies that mandate the inclusion of learning agility as a core competency in both public and private educational institutions, thus ensuring that educators and staff members are equipped to handle the dynamic demands of the education sector (Nabi et al., 2023). These policies could include government-funded training programs, certifications, and continuous professional development initiatives that promote agility and adaptability among educational professionals.

6.3 For HR Practitioners in Education

HR practitioners within the education sector have a crucial role in fostering a workforce that is both agile and aligned with quality management practices. To support TQM efforts, HR professionals should implement structured training programs that emphasize quality improvement, leadership development, and accountability, all of which are fundamental to the successful adoption of TQM in educational institutions (Rajeh, 2023; Kelly, 2023). Additionally, HR practitioners should focus on recruiting and retaining individuals who demonstrate high learning agility, as these employees are more likely to adapt to the evolving demands of educational environments and contribute to continuous improvement initiatives (Maziriri et al., 2023).

Best practices for using IT to enhance employee training and development include leveraging digital tools and platforms that provide accessible, on-demand learning opportunities for educators and staff members (Alzahrane, 2024). By incorporating e-learning modules, webinars, and virtual workshops into HR development programs, HR practitioners can ensure that employees have access to relevant training resources at their convenience, thus promoting a culture of continuous learning. Furthermore, HR departments should use data analytics to monitor employee performance and identify areas where additional training or support is needed, thereby aligning employee development efforts with institutional goals (Chehade & Procházka, 2024). This data-driven approach will not only improve HR processes but also ensure that staff development aligns with the broader strategic objectives of the institution.

7. Conclusion

This study highlights the pivotal role of Total Quality Management (TQM), IT alignment, and learning agility in enhancing Human Resource Development (HRD) within Saudi educational institutions. TQM is shown to provide a structured approach to improving institutional processes, leadership, and accountability, which directly fosters HR growth. Additionally, aligning IT strategies with educational and HR goals has proven to be essential for streamlining operations and improving decision-making, thus supporting employee development. Learning agility emerges as a critical competency, mediating the effects of TQM and IT alignment by enabling employees to quickly adapt to changing work environments and evolving institutional needs. Together, these factors create a comprehensive framework for fostering

HR development, ultimately contributing to the strategic goals of Saudi educational institutions, particularly in the context of Vision 2030.

However, the study is not without its limitations. Being conceptual in nature, the framework developed here has not yet been empirically tested, highlighting the need for future research to validate these theoretical linkages. Further empirical investigations could offer valuable insights into how these relationships manifest in real-world educational settings. Future research could also explore how specific industry-related factors, such as the availability of technological infrastructure or organizational culture, might influence the effectiveness of TQM and IT alignment in enhancing HR development. Empirical studies would allow for a more nuanced understanding of these dynamics and provide practical recommendations for educational institutions looking to implement these strategies successfully.

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