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Generation Z Work Readiness in the Digital Era: An Empirical Diagnosis and Conceptual HRM Collaboration Model at IAIN Parepare

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Abstract

This study examines the work readiness of Generation Z students in the digital era within the institutional context of IAIN Parepare, Indonesia. Rapid technological change has increased the demand for graduates who possess both digital competencies and adaptive professional skills. However, higher education institutions often face challenges in aligning graduate competencies with evolving industry expectations. Using an exploratory sequential mixed-method design, this study first conducted qualitative interviews and focus group discussions with institutional leaders, lecturers, industry practitioners, and human resource professionals to explore existing competency gaps and institutional practices. Insights from this phase informed the development of a survey instrument administered to 50 respondents in the quantitative stage. Qualitative data were analyzed using thematic analysis, while quantitative data were examined through descriptive statistics, regression analysis, and structural equation modelling. The findings indicate that students demonstrate relatively strong soft skills such as communication, teamwork, and professional ethics, but show moderate readiness in several digital hard-skills areas, particularly technological proficiency and independent problem solving. Based on these empirical insights, the study proposed an applied conceptual model that integrates human resource management practices, pentahelix collaboration, and Islamic value integration as institutional strategies for strengthening graduate work readiness. Rather than presenting a university-validated framework, the model is intended as a context-specific conceptual proposal grounded in the empirical case of an Islamic higher education institution.

KEYWORDS

generation z; industry-university collaboration; islamic values; human resource management; pentahelix; work readiness.

Introduction

The rapid transformation of the global labor market in the digital era has significantly reshaped the competencies required of university graduates. Technological advancement, automation, artificial intelligence, and digital platforms have created new demands for adaptive skills, digital literacy, and collaborative problem-solving abilities. As a result, higher education institutions are increasingly expected to play a strategic role in preparing graduates who are capable of navigating complex and rapidly evolving work environments.

Generation Z, commonly defined as individuals born between the mid-1990s and early 2010s, represents the newest cohort entering higher education and the workforce. This generation has grown up in an environment heavily influenced by digital technologies and online communication. While Generation Z students are often considered digital natives, research indicates that familiarity with technology does not automatically translate into professional digital competence or workplace readiness. Many graduates still face challenges in critical thinking, collaborative work, adaptability,

and industry-relevant digital skills.

The phenomenon of the skill gap in Generation Z in the world of work has become a serious concern for various circles, including Human Resources (HR) practitioners and educators. Generation Z, who were born between 1995 and 2010, are now entering the workforce with significantly different characteristics than the previous generation. Despite growing up as digital natives who are proficient in the use of technology, many studies show that there is a gap between the competencies possessed by Generation Z and the demands of the ever-evolving world of work. Generation Z is characterized by high digital literacy, strong expectations for flexible work environments, and a preference for meaningful and technology-integrated careers. (Dolot, 2018); (Schroth, 2019)(Ng & Parry, 2016).

(McKinsey & Company, 2021) reports that 87% of global companies are experiencing a skills gap or are predicted to face one in the next few years, with the most notable gaps occurring in soft skills such as interpersonal communication, teamwork, and adaptability in an increasingly complex work environment. Despite excelling in the use of digital technology, Generation Z often has difficulties in face-to-face interaction and professional communication, which is a major challenge for today's workforce.

Furthermore, the (LinkedIn Workplace Learning Report, 2022) highlights that 59% of HR professionals identify soft skills development as a top priority in employee development, but 89% of executives report difficulty finding candidates who have the right combination of technical and soft skills. In this case, Generation Z shows weaknesses in aspects of leadership, conflict management, and negotiation, which are crucial skills in the workplace. This phenomenon is exacerbated by the inability of most Generation Z to manage work stress, balance personal and professional life, and adapt to a conventional work culture. (Deloitte, 2023).

Digital transformation and the development of Artificial Intelligence (AI) in the era of Industry 4.0 provide fundamental challenges that need to be faced by organizations and workforces around the world. These changes not only focus on technological aspects but also affect business models, work processes, and competencies needed in the professional world. One of the main challenges facing many organizations is the readiness of their digital infrastructure. The McKinsey Digital Report notes that only 30% of companies in Southeast Asia have adequate digital infrastructure to optimally implement industrial 4.0 technology (Surindra et al., 2024). The digital skills gap is also a serious issue, with 75% of global companies planning to adopt AI and automation technologies in the next five years, yet 60% of the workforce does not yet have the digital skills needed for it (World Economic Forum, 2023). The rapid digital transformation across industries has significantly reshaped organizational structures and competency requirements, requiring institutions to redesign human resource practices and learning systems (Singh et al., 2021); (Strohmeier, 2020).

In addition, the aspect of emotional intelligence (EQ) is also a major concern in overcoming the competency gap in Generation Z. (Harvard Business Review, 2023) reports that 89% of workplace failures are caused by problems related to soft skills, particularly in terms of emotional intelligence. Generation Z, who are used to interacting through digital platforms, often struggle to build effective professional relationships and manage team dynamics. The phenomenon of high "job hopping" among Generation Z also reflects a mismatch between their expectations and the reality of the world of work, with 60% of them open to looking for a new job because they feel they do not find a match between the competencies they have and the demands of the job. (Gallup, 2023).

Universities as institutions responsible for producing

quality human resources face great challenges in preparing graduates who are able to meet the demands of the modern world of work. Colleges must be able to adapt Human Resource Management (HRM) practices to ensure that their graduates not only have technical competencies, but also soft skills that are relevant to the needs of the industry. (Times Higher Education, 2023) notes that 78% of global universities admit that conventional HR practices are no longer adequate to meet the demands of the digital age. This demands a profound transformation in the way universities manage academic staff and prepare their graduates.

The State Islamic Institute (IAIN) Parepare, as one of the Islamic universities in South Sulawesi, has a strategic position in facing this challenge. IAIN Parepare has developed various study programs that not only focus on traditional Islamic studies, but also on fields that are relevant to the needs of society and the modern world of work. However, there are still gaps that need to be addressed, especially in terms of digital infrastructure and digital competency development for educators. Therefore, IAIN Parepare needs a transformation in the practice of Human Resource Management in order to better prepare its graduates for the world of work that continues to change and develop.

Previous studies have widely discussed graduate employability, digital skill gaps among Generation Z, and the role of industry-university collaboration in higher education. However, three aspects remain underexplored. First, limited studies examine how human resource management practices within universities influence graduate work readiness, particularly in Islamic higher education institutions. Second, while the pentahelix collaboration model has been applied in regional development and innovation ecosystems, its application in redesigning HRM strategies within universities remains insufficiently examined. Third, few studies investigate how Islamic values can be integrated into institutional collaboration models aimed at strengthening graduate employability in the digital era. Addressing these gaps, this study investigates the work readiness of Generation Z students at IAIN Parepare and proposes an empirically grounded HRM collaboration model.

Therefore, this study aims to examine the current level of Generation Z work readiness among students at IAIN Parepare and to identify existing competency gaps between academic preparation and industry expectations. Furthermore, this study proposes a pentahelix-based collaboration framework that may strengthen institutional strategies for improving graduate employability in the digital era. By integrating insights from human capital development, work readiness theory, and collaborative governance perspectives, this study seeks to contribute to the growing discussion on how higher education institutions, particularly Islamic universities, can better prepare Generation Z graduates for the evolving demands of the digital workforce.

Literature Review

This research refers to several main theories that support the development of Generation Z's work readiness and the transformation of Human Resource Management in Islamic universities. At the middle theory level, Human Capital Theory (Becker, 1994) links investment in human resource development to improving organizational performance, while the Stakeholder Theory (Freeman, 1984) emphasizes the importance of involving all stakeholders in organizational decisions. Generation Theory provides an in-depth understanding of the characteristics of Generation Z that influence the approach to Human Resource Management.

In applied theory, Digital Transformation Theory (Westerman et al., 2014) provides a framework for digital transformation in Human Resource Management, while Work Readiness Theory (Caballero et al., 2011) emphasizes the

importance of job readiness through competency development. The Islamic Human Resource Management Theory (Hasan, 2015) integrates Islamic values in modern human resource practices, and the Pentahelix Collaboration Model (Muhji et al., 2017) provides a framework for collaboration between academics, business, government, communities, and the media in human resource development.

Within the context of higher education, the Pentahelix Model provides a framework for strengthening the relationship between universities and the broader socio-economic environment. Industry partners contribute practical expertise and technological knowledge, government institutions provide regulatory support, communities represent societal needs, and media platforms facilitate information dissemination.

HR Management in the Digital Era

Human Resource Management (HRM) in higher education is a strategic process that involves the management and development of academic and administrative personnel to support institutional goals. Within universities, HRM practices influence curriculum implementation, teaching effectiveness, research productivity, and the overall quality of graduate outcomes.

Effective HRM practices contribute to improving the capacity of academic staff to design relevant learning experiences that respond to societal and industry needs. In the context of contemporary higher education, HRM is no longer limited to administrative management but extends to strategic initiatives such as faculty development, collaborative research, and partnerships with external stakeholders.

Theories related to digital transformation in Human Resource Management, such as Digital HRM Theory (Strohmeier, 2020) and Smart HRM Theory (Sierra-Cedar, 2022) explain the importance of digitalization in Human Resource Management, both in the integration of technology, digital culture, and organizational processes. Transformational Leadership in the Digital Era Theory (Westerman et al., 2014) highlights the importance of transformational leadership in managing digital change, while the Technology Acceptance Model (Bondarouk & Ruël, 2009) describes the factors influencing technology adoption in Human Resource Management. Recent studies emphasize that digital human resource management enables organizations to integrate data-driven decision making, automation, and advanced analytics into HR processes, thereby improving organizational performance and adaptability. (Bondarouk et al., 2017)(Kundi et al., 2021)(Zhao et al., 2022).

Characteristics of Generation Z

Digital Natives Theory (Prensky, 2001) explains that Generation Z, as a generation that grew up with digital technology, has a different way of learning and interacting than previous generations. Generation Z Behavioral Theory (Turner, 2015) describes their unique characteristics, such as phigital, hyper-custom, and FOMO, which influence their behavior in the workplace.

Work Readiness and Competence

Work readiness has become a critical issue in higher education as institutions are increasingly expected to produce graduates who are capable of adapting to rapidly changing workplace environments. Work readiness generally refers to the combination of knowledge, skills, attitudes, and professional competencies that enable graduates to perform in professional settings effectively. It encompasses not only technical expertise but also soft skills such as

communication, teamwork, problem-solving, and adaptability.

Career Construction Theory (Savickas, 2013) describes job readiness as an interaction between professional identity and career adaptability, while Competency-Based Theory (McClelland, 1973) emphasizes that success in the world of work is determined more by real competencies than academic intelligence. The Employability Skills Framework (Bennett, 2018) identifies key skills that need to be developed to improve employability, especially in digital contexts.

Higher education institutions, therefore, play a crucial role in preparing Generation Z students to transition successfully into professional careers. Universities are expected not only to deliver academic knowledge but also to create learning environments that foster practical competencies and professional attitudes. This responsibility requires institutions to adopt more strategic and collaborative approaches in managing educational resources and academic personnel.

Industry-University Collaboration

Islamic Work Ethics Theory (Ali, 2001) integrates Islamic values such as trust, justice, and professionalism in the practice of human resources, while the Maqasid Shariah Theory (Chapra, 2008) emphasizes the need to maintain material and spiritual well-being in HR management practices. Islamic Human Capital Development Theory (Hashim, 2021) guides how Islamic principles can be applied in human resource development to create professionally competent individuals with integrity.

Based on the literature discussed above, the development of Generation Z work readiness can be understood as a multidimensional process influenced by institutional management practices, collaborative networks, and value-based education.

Human Resource Management in higher education institutions serves as the internal mechanism that shapes academic practices and learning environments. Meanwhile, the Pentahelix Collaboration Model expands institutional capacity by connecting universities with industry, government, community organizations, and media platforms. At the same time, Islamic values provide an ethical foundation that guides the development of responsible and professional graduates.

The interaction among these elements forms an institutional ecosystem that supports the development of both technical competencies and professional attitudes among students. Through effective HRM practices, collaborative partnerships, and the integration of Islamic values, higher education institutions can enhance their capacity to prepare Generation Z students for the challenges of the contemporary workforce.

This study, therefore, examines how HRM practices within the institutional context can be strengthened through the Pentahelix Collaboration Model while maintaining the integration of Islamic values to improve the work readiness of Generation Z graduates. Based on the reviewed literature, this study develops an analytical framework that connects four key elements: 1) Human Resource Management practices within universities, 2) Pentahelix collaboration involving industry, government, community, and media actors, 3) the integration of Islamic values as an ethical foundation guiding professional development, and 4) Generation Z work readiness as the primary outcome. HRM practices function as the internal institutional mechanism, while pentahelix collaboration expands external engagement with labor market actors. Islamic values provide a normative foundation that shapes responsible professional behavior. The interaction among these elements is expected to strengthen graduate work readiness in the digital era.

Methods

Research Design

This study uses a mixed-method approach with an exploratory sequential design. This approach combines two stages of research: first, the collection of qualitative data to explore the conditions of Human Resource Management (HRDM) practices at IAIN Parepare and identify the competency gap of Generation Z students; second, quantitative data collection to test and validate the Human Resource Management reengineering model developed. By integrating both forms of data, the study was able to explore not only the extent of the phenomenon but also the contextual factors influencing it.

Research Site and Participants

This research was conducted at IAIN Parepare, an Islamic religious university located in South Sulawesi. The institution represents a relevant context for examining the interaction between human resource management practices, collaborative partnership, and the development of Generation Z work readiness.

The qualitative phase involved 18 participants, consisting of 6 lecturers, 4 institutional leaders, 4 industry practitioners, and 4 HR practitioners. These four groups were chosen because they have an important role in the management and development of competencies in higher education. Data were collected through six individual semi-structured interviews and two FGDs. The interview participants included institutional leaders and industry representatives, while the FGDs involved lecturers, students, and HR practitioners to capture broader stakeholder perspectives. Each interview lasted approximately 30-40 minutes, and each FGD involved 6-8 participants.

For the quantitative phase, 50 students from IAIN Parepare participated in this survey. These respondents represented the primary group whose work readiness competencies were assessed in the quantitative analysis and reported in the survey tables.

Data Collection

At the qualitative stage, data were obtained through in-depth interviews, focus group discussions (FGDs), and observations. Interviews were conducted with key stakeholders such as leaders, lecturers, and industry practitioners to explore their views on the state of Human Resource Management practices and the needs of student competency development. Meanwhile, the FGD was conducted to get a group perspective, especially related to human resource development strategies and challenges faced at IAIN Parepare.

The qualitative phase consisted of six semi-structured interviews and two FGDs. Participants were selected using purposive sampling based on their involvement in curriculum development, student training programs, or industry collaboration initiatives. Each interview lasted approximately 30-40 minutes, while FGDs involved 6-8 participants per session. Insights obtained from the qualitative phase were used to identify key competency dimensions and to inform the construction of the survey instrument used in the quantitative stage.

Quantitative data were collected using surveys, which were disseminated to students, lecturers, HR practitioners, and alums to gauge their perceptions of students' job readiness and competencies needed in the world of work.

The qualitative findings served as the exploratory foundation of the study. Themes identified from interviews and FGDs were used to determine key competency indicators and institutional factors that shaped the development of the survey instrument. These insights subsequently informed the

conceptual structure of the proposed HRM collaboration model. This procedure ensured that the quantitative phase and model development were grounded in the empirical insights generated during the qualitative stage.

Instruments and Data Analysis

The instruments used in this study include interview guides to explore qualitative information, survey questionnaires with a Likert scale to measure respondents' perceptions of work readiness and required competencies, and competency evaluation instruments to assess students' work readiness.

Data obtained from interviews and FGDs were analyzed using thematic analysis, while data from surveys were analyzed using descriptive statistics to describe respondents' characteristics and existing conditions. To test the relationships between variables and validate the developed model, regression analysis and Structural Equation Modeling (SEM) were used.

Qualitative data were analyzed using three stages of thematic coding: open coding, axial coding, and selective coding. Open coding was used to identify initial concepts related to HRM practices, collaboration, and student competencies. Axial coding grouped these concepts into broader themes, while selective coding was used to identify relationships among themes that informed the conceptual model.

Quantitative analysis was conducted in two stages. Regression analysis was first used to examine the relationship between institutional practices and work readiness indicators. Structural Equation Modeling (SEM) was subsequently applied to evaluate the structural relationships among the main constructs and to test the coherence of the proposed conceptual model.

Regression analysis and SEM were used to serve complementary analytical purposes. Regression analysis was first employed to examine the direct relationships between institutional practices and indicators of students' work readiness. This step provided an initial statistical assessment of the strength and direction of relationships among key variables. Subsequently, Structural Equation Modeling (SEM) was applied to evaluate the broader structural relationships among the main constructs and to assess the internal coherence of the proposed conceptual model. Using both techniques allowed the study first to identify significant relationships at the variable level and then test how these relationships operate within a more comprehensive conceptual structure.

Triangulating sources and triangulating methods maintain the validity of the data to ensure the validity and reliability of research findings. The research instruments are also tested to ensure that the data collected is trustworthy and reflects the actual conditions.

Result and Discussion

This study identifies the conditions of Human Resource Management (HRM) practice at IAIN Parepare and analyzes the competency gap among Generation Z students.

Existing Work Readiness Conditions of Generation Z Students at IAIN Parepare

To interpret the result, the mean scores were classified into three categories: low readiness, moderate readiness, and high readiness. The classification was determined using the score interval derived from the Likert scale used in the instrument. Based on this classification framework, mean scores falling within the middle range of the scale were interpreted as representing moderate levels of readiness, indicating that students demonstrate basic competency but still require further development in several areas. Students have strengths

Table 1. The results of a survey on student job readiness on 10 relevant competency indicators in the world of work

Indicator	Mean	Standard Deviation	Strongly Agree	Agree	Disagree
Professional Confidence	4.38	0.59	62%	38%	0%
Cross-Disciplinary Teamwork	4.29	0.72	52%	48%	0%
Independent Problem-Solving Ability	4.00	0.77	43%	52%	5%
Effective Communication Skills	4.19	0.66	48%	52%	0%
Ability to Work Under Pressure	4.19	0.81	48%	48%	4%
Digital Technology Proficiency	4.05	0.91	38%	57%	5%
Professional Ethics and Responsibility	4.14	0.66	43%	57%	0%
Adaptability to Digital Environments	4.19	0.75	43%	57%	0%
Organizational Experience	4.24	0.70	48%	52%	0%
Institutional Learning Support	4.05	0.85	38%	57%	5%

Table 2. Descriptive Comparison of Students' Perceptions and Industry Expectations of Job Readiness

Indicator	Mean Student	Mean HRD	Gap	% Student Disagree
Work Technology Skills	4.05	4.50	0.45	5%
Lecturer Soft Skills Guidance	3.85	4.36	0.51	15%
Curriculum Supports Digital	3.95	4.21	0.26	5%
HRM to Digitalization	3.75	4.29	0.54	10%

in soft skills such as effective communication and professional ethics. However, there are still significant shortcomings in hard skills related to digital technology capabilities and independent problem-solving. It is important to note that the classification of "moderate readiness" reflects an interpretive category based on the scoring framework, rather than a normative judgment about students' capabilities. The results, therefore, provide a descriptive overview of students' current competency levels and highlight areas that may benefit from further institutional support and training initiatives.

The survey results presented in [Table 1](#) are based on the responses from 50 student respondents.

Description of [Table 1](#): Work readiness of Generation Z students at IAIN Parepare. These results show that students show high confidence in professionalism (Mean = 4.38), but there are gaps in work technology skills and independent problem-solving skills, which have Mean = 4.05 and 4.00, respectively. This table reflects students' abilities in various competencies needed in the world of work.

Based on this data, although Generation Z students at IAIN Parepare have a high level of confidence, especially in the areas of professionalism and interpersonal skills, they still need further development in digital technology skills and the ability to solve problems independently. This shows that there is a significant gap in hard skills related to the increasingly digital world of work.

Students' Competency Gap and Work World Needs

Both students and HRD representatives were asked to evaluate a set of competency indicators related to workplace readiness. The indicators included communicative ability, teamwork, adaptability, problem-solving, and technological competence. The instruments used similar scale anchors to facilitate comparison between the two groups. The HRD and industry practitioner group of 8 respondents represents organizations that regularly recruit graduates from higher education institutions.

The descriptive comparison indicates that while students

tend to rate their competencies relatively positively, industry representatives often report higher expectations regarding several key competencies. In particular, HRD respondents emphasized the importance of professional communication skills, workplace discipline, and problem-solving ability as critical competencies required in contemporary professional environments.

[Table 2](#) presents a descriptive comparison between student self-perceptions of work readiness and industry expectations regarding key competencies. The results indicate that HRD respondents generally reported higher expectations across several competency indicators compared to students' self-assessments. The differences are particularly visible in indicators related to technological adaptability, workplace communication, and problem-solving abilities. These descriptive results suggest the presence of a gap between students' perceived readiness and industry expectations, highlighting areas that may require further strengthening in the learning process.

This comparison reveals that students at IAIN Parepare feel that they lack adequate guidance regarding the technological skills needed in the digital workforce. At the same time, the industry expects graduates who are ready with more advanced digital skills, such as the use of business software and technology-based project management. In addition, even though students show good soft skills, they feel that they still lack adequate guidance from lecturers in terms of critical thinking and conflict management.

Similar findings have been reported in previous studies, which indicate that higher education institutions often struggle to align graduate competencies with rapidly changing labor market demands in the digital economy ([Ananthram & Bennett, 2021](#)) ([Tomlinson, 2017](#)).

Conditions of Human Resources Practice at IAIN Parepare

The practice of human resources at IAIN Parepare is currently more focused on developing soft skills and professional ethics, which are developed through Islamic values such as trust, effective communication, and cooperation. Based on interviews with lecturers and HR management staff, it was found that although the curriculum has integrated soft skills teaching, the integration of digital technology in teaching is still limited. This causes students to be less prepared to face technological challenges in the world of work.

The results of the FGD also show that although there are several basic technology-related training programs, such as the use of Microsoft Office and Google Workspace, students still feel less exposed to the more complex technological tools needed in the professional world, such as data analysis software and digital project management systems.

Proposed Human Resource Management Reengineering Model

Based on these findings, it is recommended to develop a pentahelix collaboration-based Human Resource

Table 3. The relationship between the empirical findings and the elements incorporated into the proposed HRM reengineering model

Empirical Findings	Implication for HRM Strategy	Model Component
Moderate Level of Student Work Readiness	Need for strengthened competency development	Curriculum and training enhancement
Competency Gap Between Students and Industry Expectations	Need for stronger industry collaboration	Industry partnership programs
Institutional Challenges in Preparing Students for the Workforce	Need for integrated stakeholder engagement	Pentahelix collaboration framework

Management reengineering model, involving five key stakeholders: academia, industry, government, community, and the media. This model aims to bridge the gap in student competencies in the field of technology and soft skills by optimizing collaboration between the education sector and the industrial sector.

This model also emphasizes increasing students' upskilling and reskilling in digital technology skills, as well as developing soft skills through an approach based on Islamic values. It is hoped that with this model, students will be better prepared to face the demands of the digital world of work and can improve their employability in an increasingly growing global market.

The proposed model is derived from several key empirical observations identified in the data. First, the results indicate that students' current competency levels remain within the moderate range, suggesting the need for institutional strategies that can further strengthen practical and professional skills. Second, the comparison between student perceptions and industry expectations highlights specific competency areas that require greater emphasis in educational programs.

Collaboration among universities, industry, and other stakeholders is widely considered a key strategy for strengthening graduate employability and developing innovation ecosystems in the knowledge economy. (Verma & Gustafsson, 2020).

It is important to distinguish between empirical findings and conceptual recommendations in this section. The empirical findings highlight the existence of competency gaps and institutional challenges, while the proposed HRM reengineering model represents a conceptual framework developed by the authors to address these challenges.

The proposed model is derived directly from the empirical findings. The identified competency gaps, particularly in digital hard skills and independent problem solving, highlight the need for stronger collaboration between universities and external stakeholders. These findings, therefore, informed the development of the pentahelix-based HRM collaboration model.

Description of Table 3: The proposed model therefore represents an analytical synthesis of the study findings rather than a purely normative recommendation. By aligning institutional HRM practices with collaborative stakeholder engagement and competency-based education, the model aims to support the development of graduates who are better prepared to meet contemporary workforce demands.

This study aims to identify the conditions of Human Resource Management (HRDM) practice at IAIN Parepare, especially in the context of preparing for the work readiness of Generation Z students in the digital era, as well as analyzing the existing competency gap. Based on the results of the

research involving qualitative and quantitative data, the main findings related to the condition of work readiness, competency gap, and Human Resource Management practices at IAIN Parepare can be discussed in detail as follows.

Work Readiness Conditions of Generation Z Students at IAIN Parepare

This study shows that the work readiness of Generation Z students at IAIN Parepare is generally at a moderate level. The survey results indicate that students show a high level of confidence in soft skills, such as communication skills, teamwork, and professional ethics. For example, the indicator "Professional confidence" has a fairly high average score (Mean = 4.38), which reflects that students feel prepared to face a work environment that demands professionalism. However, even though they feel confident in this, there is a lack of digital technology skills and independent problem-solving, which are key aspects of the modern workplace.

This skill gap is especially seen in technology-related hard skills. For example, the indicator "Work technology skills" obtained a lower average score (Mean = 4.05), which indicates that students feel less prepared to apply more complex technologies in the world of work, such as the use of business software and digital project management systems. These findings are in line with the results of McKinsey & Company (2021), which stated that although Generation Z is very proficient in using personal technology, they often have difficulty applying it in a professional context.

Meanwhile, the ability to solve problems independently is a big challenge for students with lower average scores (Mean = 4.00). This may be influenced by the tendency of Generation Z to be accustomed to quick and instant access to information, which can reduce their ability to think critically and solve problems independently. This phenomenon is relevant to the findings of the Society for Human Resource Management. (Racolța-Paina & Irimi, 2021) which noted that many entrepreneurs consider Generation Z to lack adequate critical thinking and analytical skills.

This result is consistent with previous studies, which report that although Generation Z is highly familiar with digital technology in daily life, many students still lack the professional competencies required in workplace contexts. (Dolot, 2018);(Schroth, 2019). These studies highlight that digital familiarity does not automatically translate into digital professional competence, particularly in areas such as analytical thinking, technology-based problem solving, and workplace communication.

Furthermore, the relatively strong performance of students in soft skills such as teamwork and professional ethics aligns with the findings of (Ananthram & Bennett, 2021), who emphasize that higher education institutions increasingly focus on developing employability skills through collaborative learning and character-based education. In the context of Islamic higher education, the emphasis on ethical values and professional conduct may contribute to strengthening these competencies among students. However, the limited development of advanced digital skills suggests that universities still need to enhance the integration of digital learning environments and industry-relevant technological training.

However, it is important to interpret these findings with caution. The assessment of work readiness in this study is primarily based on self-reported student responses and stakeholder perceptions, which may not fully reflect actual workplace performance. As a result, the findings should be understood as representing perceived readiness levels rather than objective measures of competency.

Several factors may contribute to the observed readiness levels. One possible explanation relates to the level of exposure students receive to practical learning experiences during their

academic programs. Limited opportunities for industry interaction, internships, or project-based learning may influence students' perceptions of their preparedness for professional environments. Another factor that may affect the result is respondent bias, as students may evaluate their own competencies differently from how they would be assessed in actual workplace settings.

This study has several limitations. First, the research was conducted in a single institutional context, which may limit the generalizability of the findings. Second, the measurement of work readiness relied primarily on perception-based survey responses, which may not fully capture actual competency performance. Third, although the study employed a mixed-method design, the integration between qualitative insights and quantitative validation remains limited. Future studies may expand the model through multi-institutional research and longitudinal analysis.

Competency Gap between Students and the Needs of the World of Work

The results of the study also show that there is a gap between students' job readiness and expectations for the world of work, especially in terms of technology and soft skills. Based on survey data, the largest gap was seen in technology skills, where students gave an average score of 4.05, while expectations from the industry were 4.50. This shows that even though students feel they have basic skills in the use of technology, they are still not sufficiently prepared to face the demands of the increasingly AI-based world of AI and advanced digital technologies. This phenomenon is in line with the findings of the (World Economic Forum, 2023) which states that many global workers need reskilling to keep pace with rapid technological advancements.

This gap is particularly evident in the area of digital technology skills, where industry stakeholders expect a higher level of competency than what students perceive themselves to possess. Similar findings have been reported by (Tomlinson, 2017), who argues that the mismatch between graduate competencies and labor market demands remains one of the key challenges in higher education systems worldwide. In addition, (Omar et al., 2025) highlight that graduate employability in the digital era increasingly depends on the integration of digital competencies, analytical thinking, and technology-based problem-solving skills. The findings of the present study confirm this argument, as industry practitioners emphasized the need for competencies such as data analysis, digital project management, and artificial intelligence literacy. These competencies are still relatively underdeveloped among many students, indicating the need for curriculum reform and stronger collaboration with industry partners.

On the other hand, there is a significant gap in soft skills guidance provided by lecturers, with a gap of 0.51 points between industry expectations and student perceptions. Although students feel they are getting enough training in effective communication and teamwork, they feel they are being undertrained in critical thinking, conflict management, and negotiation skills, which are very important skills in the world of work. The (LinkedIn Workplace Learning Report, 2022) also noted that 59% of HR professionals place soft skills as a top priority in employee development, but have difficulty finding candidates who have the right combination of technical skills and soft skills.

Practice of Human Resources at IAIN Parepare

The practice of Human Resource Management at IAIN Parepare tends to focus more on developing soft skills based on Islamic values, such as trust, professional ethics, and the ability to work in a team. This approach is consistent with the principles of Islamic human resource management, which

highlight the importance of integrity, trustworthiness, and social responsibility in professional life. (Hasan, 2015);(Hashim, 2021). This is in line with the educational goals at IAIN Parepare, which aim not only to produce technically competent graduates, but also those who have high integrity and work ethics. However, although the development of soft skills has been done well, the findings from the FGD and interviews with HR managers show that the curriculum at IAIN Parepare is still not enough to accommodate the technological skills that are increasingly needed in the world of work.

It's important to note that the (World Economic Forum, 2023) predicts that 50% of the global workforce will need reskilling to survive in a world of work that is increasingly connected to technology, such as AI and automation. This suggests that colleges should immediately update their curriculum and introduce more technology training to ensure graduates are ready to face the challenges of the digital workforce. Currently, technology teaching at IAIN Parepare is more limited to basic skills, such as the use of office software. In contrast, more complex skills such as data analysis and technology-based project management are still very limited.

Proposed HRM Reengineering Model

Based on the findings, it is recommended to develop a Pentahelix-based HRM reengineering model involving five main stakeholders: academia, industry, government, community, and media. This finding is consistent with previous studies that highlight the importance of multi-stakeholder collaboration in improving knowledge transfer and aligning educational outcomes with labor market needs (Muhyi et al., 2017);(Verma & Gustafsson, 2020). This collaboration aims to bridge the existing skills gap, with an emphasis on developing students' hard skills in digital technology and improving soft skills through an approach based on Islamic values.

This model also emphasizes the development of upskilling and reskilling in the field of digital technology, such as AI, data analysis, and digital-based project management, to ensure that students can be better prepared to face the demands of an increasingly technology-based world of work. The Pentahelix Collaboration Model (Muhyi et al., 2017) emphasizes the importance of more intensive collaboration between academia and industry in designing curricula that are more relevant to the needs of the world of work, as well as providing technology-based internship programs that can provide hands-on experience to students.

While the proposed model offers a conceptual approach for improving institutional collaboration and competency development, its implementation would require several practical considerations within the context of IAIN Parepare. One important requirement involves strengthening institutional infrastructure and organizational capacity to support collaborative programs with external stakeholders. Effective implementation would depend on the availability of resources, institutional commitment, and a coordination mechanism that facilitates sustained collaboration between the university and industry partners.

Despite its potential benefits, the implementation of the proposed model requires several institutional prerequisites. These include strengthening digital learning infrastructure, increasing lecturer training in industry-oriented competencies, establishing formal collaboration mechanisms with industry partners, and developing institutional policies that support collaborative programs with external stakeholders.

Through stronger collaboration with industry partners, universities can provide more practical learning opportunities, including technology-based internships, project-based learning, and real-world problem-solving experiences. Such initiatives can significantly enhance students' readiness to enter the workforce while also ensuring that academic programs remain aligned with the rapidly evolving demands of the digital

economy.

Another factor that may influence the feasibility of the proposed model is the capacity of academic staff to integrate collaborative learning approaches into their teaching practices. Faculty development initiatives may therefore be necessary to support lecturers in designing learning experiences that incorporate industry engagement, project-based activities, and interdisciplinary collaboration.

In comparison with other collaborative models discussed in previous studies, the proposed HRM reengineering framework emphasizes the integration of institutional management practices with multi-stakeholder collaboration and value-based education. Rather than focusing solely on industry partnerships, the model highlights the broader ecosystems of actors involved in knowledge exchange and workforce development.

Therefore, the proposed model should be understood as a conceptual framework derived from the findings of this study, intended to provide a strategic direction for institutional development. Further empirical research would be necessary to evaluate the effectiveness of the model when implemented in practice.

Implications for Human Resources Development at IAIN Parepare

By implementing the pentahelix-based HRM reengineering model, it is hoped that there will be an increase in student work readiness at IAIN Parepare. This model can address the existing skills gap, especially in terms of technology skills and soft skills. In addition, strengthening collaboration with industry in designing technology-based internship programs will provide direct exposure to students to real work practices in the industry.

This model also has the potential to strengthen IAIN Parepare's position as a university that produces graduates who are competent in the field of technology and ethics, which is urgently needed by today's world of work. Given the huge challenges faced by Generation Z in terms of technology, closer collaboration between universities, industry, and government is indispensable to create job-ready graduates in an increasingly digitized world.

Conclusion

This study examined the work readiness conditions of Generation Z students at IAIN Parepare. It explored how institutional human resource management practices may contribute to strengthening competencies relevant to contemporary workforce demands. The findings indicate that students generally demonstrate a moderate level of perceived work readiness, suggesting that while basic competencies are present, several skills emphasized by industry stakeholders are still required further development. The study also identified descriptive differences between student self-assessments and industry expectations, highlighting the importance of strengthening collaboration between higher education institutions and external stakeholders. Based on these findings, the study proposes a Human Resource

Management reengineering framework that integrates institutional HRM practices with a pentahelix collaboration approach involving academia, industry, government, community, and media actors to support competency development among students. However, the findings are derived primarily from perception-based data within a specific institutional context, which limits the generalizability of the results. Therefore, the proposed model should be understood as a conceptual framework supported by the study's findings rather than a fully validated implementation model, and further research is needed to examine its practical application and effectiveness in broader higher education settings.

Based on the above findings, it is recommended that IAIN Parepare take several strategic steps. First, the institution should improve the integration of technology in Human Resource Management curricula and training programs, particularly by emphasizing skills relevant to the digital world of work such as artificial intelligence (AI) and data analysis. Second, it is important to strengthen collaboration with industry, especially in designing technology-based internship programs, so that students can gain hands-on experience in applying the technological skills they have learned. Third, the role of the pentahelix model needs to be optimized to enhance synergy among universities, industry, government, community, and media, thereby introducing students to a more realistic and relevant world of work aligned with the latest technological developments. Fourth, the development of students' soft skills should be reinforced through the integration of Islamic values in the teaching and learning process, which can help produce graduates with strong character and professional integrity. By implementing these recommendations, it is expected that IAIN Parepare will be able to produce graduates who are more competent, well-prepared to face a technology-based work environment, and capable of making positive contributions to the professional world with high levels of integrity and ethical standards.

Author contributions

Musmulyadi contributed to the conceptualization of the research, research design, and manuscript drafting. Fahmiah Akilah contributed to data collection, data analysis, and interpretation of the findings. Safrida contributed to literature review development, methodological refinement, and manuscript revision. All authors have read and approved the final version of the manuscript.

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