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Competency Gaps among Graduates of Islamic Religious Higher Education Institutions in the Digital Era: Stakeholder Perspectives and Implications for Curriculum Management

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Competency Gaps; Curriculum Management; Digital Competence; Graduate Employability; Islamic Higher Education

Abstract:
Islamic religious higher education institutions (PTKI) must respond to changing workplace demands without weakening the religious identity that defines their educational mission. This study examined gaps between stakeholder expectations and the self-rated competencies of graduates of UIN Antasari Banjarmasin and considered how the findings could inform curriculum management. An explanatory sequential mixed-methods design combined surveys of 87 alumni and 16 stakeholders with interviews involving 14 alumni and all 16 stakeholders. Survey data were summarized descriptively, matched indicators were compared through an adapted importance-competence gap analysis, and interview data were analyzed thematically. The widest gaps concerned subject-matter mastery (33.2), effective communication (30.0), problem-solving (28.4), and quantitative data processing and analysis (28.1). Basic digital skills, including office applications and online information searching, showed narrower gaps, although data analysis and digital security remained areas for improvement. Stakeholders also valued graduates' religiosity, integrity, loyalty, and Islamic work ethic. The findings suggest that graduate-readiness concerns in PTKI are not simply digital; they also involve disciplinary, analytical, and interpersonal capacities. In response, the study proposes a dual-responsive curriculum management framework that links evidence-based adaptation to workplace and technological demands with the deliberate preservation of Islamic educational identity.

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Introduction

Higher education curricula are expected to remain relevant to social change and labor-market needs (Print, 1993; Ornstein & Hunkins, 2018). Graduate employability, however, cannot be reduced to academic achievement. It develops through the interaction of disciplinary knowledge, transferable skills, experience, personal attributes, and the conditions of the labor market (Dacre Pool & Sewell, 2007; Clarke, 2018; Small et al., 2018). Maintaining that relevance has become more difficult as workplace expectations change more quickly than formal curriculum-review cycles. Technological change, including the spread of artificial intelligence, is reshaping jobs and increasing the need for curriculum decisions grounded in current evidence (Tee et al., 2024).

Islamic religious higher education institutions (PTKI) face an additional challenge. They are expected to prepare graduates for a digital economy while sustaining a mission

centered on Islamic knowledge, character, and values. Their curriculum problem is therefore not simply a shortage of technical skills, but the need to pursue professional readiness and religious formation at the same time (Rohman et al., 2023). Research on madrasah curriculum reform makes a similar point: technological modernization is more meaningful when it is accompanied by evidence-based evaluation and the preservation of spiritual and moral foundations (Idham et al., 2026). For PTKI, balancing these demands requires more than a normative commitment. It requires evidence about where graduate competencies fall short of workplace expectations (Isbah et al., 2023; Nugroho et al., 2024).

The 2024 tracer study of UIN Antasari Banjarmasin offers an institutional indication of this problem. Among 1,518 alumni covered by the study, 59% were employed, half regarded their field of study as fairly relevant to their work, and 10% considered it irrelevant. Graduate users rated English proficiency as good for 50.10% of alumni, Arabic proficiency for 44.72%, and ICT competence for 66.32%. Most indicators were rated good, but relatively few reached the excellent category, suggesting room to strengthen curriculum design and learning management (UIN Antasari, 2024). Similar concerns about mismatches between graduate capabilities and workplace expectations have been reported in other national settings (Damoah et al., 2021; Tran, 2018).

Graduate work readiness is commonly discussed across three related domains. Hard skills concern disciplinary and technical competence, including data analysis, report preparation, and the use of occupational tools. Soft skills include interpersonal and intrapersonal capacities such as communication, teamwork, and problem-solving. Digital skills refer to the productive, critical, and secure use of technology. Studies of employers and graduates repeatedly identify communication, teamwork, problem-solving, and applied disciplinary knowledge as central to employability (Andrews & Higson, 2008; Finch et al., 2013; Succi & Canovi, 2020). Digital competence is equally broad: it includes information management, communication, content creation, problem-solving, and the use of technology for cognitive work, not merely routine software operation (Spante et al., 2018; van Laar et al., 2017; Zhao et al., 2021). These domains overlap in practice. Tee et al. (2024), for example, found that employers in Malaysia were particularly concerned about data analysis, specialized software, and digital communication, and that digital weaknesses often interacted with gaps in soft skills. Kenayathulla et al. (2019) further showed that comparing the perceived importance of a competency with the level at which it is mastered can help identify priorities for development. Yet much of this literature still examines hard, soft, and digital skills separately, even though graduates are expected to use them together.

Alignment with labor-market needs is a longstanding concern in curriculum management (Print, 1993; Ornstein & Hunkins, 2018), but alignment is not achieved simply by adding isolated employability activities. Work-based and work-integrated learning can connect academic study with professional practice when students engage in authentic tasks and receive meaningful feedback (Hills et al., 2003; Jackson, 2015). In Indonesia, Hendrawan and Daryanto (2019) found that employers expected curricula to make managerial competencies and work dispositions more explicit in relation to the Indonesian National Qualifications Framework (KKNI). Other studies, however, caution that employability initiatives produce mixed results when they are detached from assessment, workplace experience, or institution-wide coordination (Cranmer, 2006; Mason et al., 2009). Stakeholder participation is also often consultative rather than sustained, leaving institutions with limited mechanisms for translating employer feedback into recurring curricular decisions (Damoah et al., 2021). The unresolved issue is therefore not whether stakeholder input matters, but how it can be converted into priorities that curriculum managers can act on.

In Indonesia, research on graduate work readiness has expanded, but it has largely focused on general higher education and broad employability models (Pujiwati et al., 2021). Employability involves more than possessing a fixed set of skills; graduates must also be able to recognize, explain, and mobilize their competencies as careers and workplace demands change (Bridgstock, 2009; Clarke, 2018). Nugroho et al. (2024) found that Indonesian students' and graduates' readiness for work is shaped by technical and nontechnical skills as well as field experience, including internships. At the institutional level, career services and external partnerships can also improve graduate transitions into employment (Isbah et al., 2023). These studies offer useful strategic directions, but they rarely provide PTKI with a matched competency-gap map that can be used directly in curriculum review.

PTKI are also distinguished by an explicit commitment to Islamic character formation. Graduate-user research at an Islamic institution has identified integrity, work ethic, and empathy as qualities valued in alumni (Armiah et al., 2015). Rohman et al. (2023) similarly argue that the integration of traditional and modern education can support the competitiveness of madrasa graduates. More recent studies in Islamic education management suggest that technological adaptation and digital information literacy can be incorporated without abandoning Islamic moral and institutional commitments (Idham et al., 2026; Rifauddin et al., 2026). Islamic identity, in other words, need not stand in opposition to employability. The remaining challenge is to move beyond treating character as a separate moral outcome and to consider how it might be deliberately connected to curricular competencies and work readiness.

These bodies of work leave a specific gap. Research has addressed digital competence, stakeholder involvement, graduate employability, and Islamic character, but little work in Indonesian PTKI has brought all four together. In particular, studies seldom compare stakeholder priorities with alumni self-assessments across hard, soft, and digital competencies and then use the resulting gap map to inform curriculum management. The contribution of the present study lies in this combination. It treats competency gaps as evidence for curricular decision-making and develops a PTKI-specific, dual-responsive framework that attends to both workplace change and Islamic educational identity.

The study pursued four objectives: (1) to map digital-era workplace competencies from the perspective of stakeholders; (2) to assess UIN Antasari alumni's self-rated competencies; (3) to identify the gaps between stakeholder expectations and alumni self-ratings; and (4) to formulate data-informed strategies for curriculum management. Two research questions guided the inquiry: (a) Which competencies show the widest gaps between stakeholder expectations and alumni readiness, and how large are those gaps? (b) What curriculum management strategies could PTKI use to address them while preserving Islamic educational identity?

Method

An explanatory sequential mixed-methods design was used (Creswell, 2014). The survey phase first produced a descriptive profile of expected and self-rated competencies. Interviews were then conducted to explore the experiences and reasoning behind the survey patterns. Integration took place during interpretation: interview themes were used to explain why particular gaps appeared and to connect those gaps with the curriculum recommendations. The qualitative findings were therefore not treated as a separate, parallel data set, but as explanatory evidence within the combined analysis. This design was appropriate because curriculum management requires both a measurable account of competency patterns and an understanding of how those patterns are experienced in practice.

1. Participants and Sampling

Participants came from two groups at UIN Antasari Banjarmasin. The first comprised 87 alumni from five faculties: Ushuluddin and Humanities; Tarbiyah and Teacher Training; Islamic Economics and Business; Da'wah and Communication Science; and Sharia. They had graduated between 2014 and 2025. The second group comprised 16 stakeholders from educational institutions, government agencies, state-owned enterprises, private companies, and nongovernmental organizations. All completed the competency-importance questionnaire, and 14 had employed or were currently employing UIN Antasari alumni. The online survey used incidental, voluntary-response sampling because participation depended on respondents' willingness to complete the survey link. For the interviews, all 16 stakeholder respondents were included, while 14 alumni survey respondents were selected through convenience sampling based on willingness and accessibility. The study is therefore exploratory: it maps initial patterns that may inform curriculum decisions but does not claim to represent the full alumni or stakeholder population.

2. Instruments

The questionnaires covered three competency domains, hard skills, soft skills, and digital skills, through 30 indicators derived from the Indonesian National Qualifications Framework (KKNI) and the literature on digital-era work competencies. Hard-skill indicators included subject-matter mastery and quantitative data processing. Soft-skill indicators included oral communication and teamwork, while digital-skill indicators included data analysis with tools such as Excel or SPSS and efficient online information searching. The complete item operationalization and English translation of both questionnaires are provided in Supplementary Table S1.

Stakeholders rated the importance of each competency on a four-point scale ranging from Not Important to Very Important. Alumni rated their own competence on a five-point scale ranging from Very Low to Very High. Both questionnaires also included open-ended questions. The coverage of the instruments was informed by the KKNI and relevant literature on digital-era work competencies. Internal consistency was assessed with Cronbach's alpha. For the alumni questionnaire, alpha values were 0.930 for hard skills, 0.925 for soft skills, and 0.927 for digital skills. For the stakeholder questionnaire, the corresponding values were 0.716, 0.843, and 0.925. Item-level descriptive statistics, scale reliability outputs, corrected item-total correlations for the alumni instrument, and response distributions are reported in Supplementary Tables S2-S5.

3. Interview Procedures

Thirty informants were interviewed: all 16 stakeholder survey respondents and 14 of the 87 alumni survey respondents. Alumni interviewees were selected through convenience sampling on the basis of willingness and accessibility. Depending on participants' circumstances, interviews were conducted face-to-face, through Zoom, or by telephone or WhatsApp call. Sessions lasted approximately 30-45 minutes. Alumni quotations retain the identification numbers assigned in the original survey (for example, Alumnus 73) so that the quantitative and qualitative records remain linked; the numbers do not indicate the size of the interview sample. Table 1 summarizes the informants.

Table 1. Composition of Interview Informants

Informant Group	n	Selection Procedure	Relation to Survey Respondents
Alumni	14	Convenience sampling: alumni who were willing and accessible to interview	Subset of the 87 alumni survey respondents

Stakeholders	16	Total sampling: all 16 stakeholder respondents were interviewed	Identical to all 16 stakeholder survey respondents
Total	30	Convenience sampling (alumni) and total sampling (stakeholders)	14 alumni survey respondents and all 16 stakeholder survey respondents

The interview guide covered hard skills, soft skills, and digital skills. Questions explored the reasons behind respondents' survey ratings, their workplace experiences, and their suggestions for curriculum improvement (Merriam, 2009). With participants' consent, the interviews were recorded and transcribed verbatim.

4. Data Analysis and Gap Mapping

Survey responses were summarized using frequencies, percentages, and indicator means. To compare stakeholder-rated importance with alumni self-rated competence, the study used an adapted importance-competence gap procedure informed by Importance-Performance Analysis (Martilla & James, 1977) and its application to employability skills (Kenayathulla et al., 2019). Because the two questionnaires used different response scales, each mean was converted to a 0-100 index using [(observed score - minimum possible score) / (maximum possible score - minimum possible score)] x 100. The gap score was then calculated by subtracting the competence index from the importance index. For descriptive prioritization, the study applied the following interpretive thresholds: 30 or above, very high; 20-29.99, high; 10-19.99, moderate; and below 10, low. These categories were study-defined and were not inferential cutoffs. The comparison was also descriptive rather than a statistical test because it involved two respondent groups and two original scales. Six items from each instrument lacked direct conceptual counterparts, leaving 24 matched indicator pairs for the gap analysis. The complete item pairing, normalized indices, and gap computations are reported in Supplementary Table S6. Interview transcripts were analyzed through Braun and Clarke's (2006) six phases of thematic analysis: familiarization, initial coding, theme development, theme review, theme definition, and reporting.

5. Credibility and Research Ethics

Credibility was supported through triangulation across the two participant groups, member checking of preliminary themes, and an analytic audit trail. Participation was voluntary and based on informed consent. Respondent identities were anonymized using labels such as Stakeholder 1 and Alumnus 1, and the data were kept confidential and used only for research.

Findings

1. Respondent Profile

The alumni sample comprised 87 respondents from five faculties who had graduated between 2014 and 2025. They worked in education, government, private-sector organizations, health services, and entrepreneurship. The 16 stakeholders included school principals, lecturers, heads of study programs, supervisors, institutional coordinators, and company branch heads. Fourteen had direct experience employing UIN Antasari alumni, giving them a practical basis for their assessments. Table 2 presents the respondent profile.

Table 2. Respondent Profile

Group	Characteristic / Category	n	%
Alumni (n = 87)	Faculty: Tarbiyah and Teacher Training	46	52.9
	Faculty: Ushuluddin and Humanities	30	34.5
	Faculty: Islamic Economics and Business	6	6.9
	Faculty: Sharia	3	3.4
	Faculty: Da'wah and Communication Science	2	2.3
	Gender: Female	58	66.7

	Gender: Male	29	33.3
	Employment status: Employed	76	87.4
	Employment status: Not yet employed	11	12.6
Stakeholders (n = 16)	Sector: Government	8	50.0
	Sector: Educational institution	4	25.0
	Sector: Private	2	12.5
	Sector: State-owned enterprise	1	6.3
	Sector: NGO	1	6.3
	Experience employing alumni: Yes	14	87.5
	Experience employing alumni: No	2	12.5

2. Stakeholder-Perceived Competency Needs

Stakeholders placed high importance on all three competency domains. Within soft skills, teamwork and emotional intelligence/empathy received the maximum importance index of 100, followed by communication, problem-solving, and leadership/responsibility. The highest-rated hard skills were subject-matter mastery, technical or functional competence, and the ability to understand documents and work instructions. In the digital domain, office applications and online collaboration tools were rated more highly than advanced data analysis. Table 3 summarizes these ratings by domain.

Table 3. Summary of Stakeholder-Rated Competency Importance

Domain	Mean Importance Index (0–100)	Most Important Indicator
Soft skills	97.6	Teamwork; emotional intelligence and empathy (100)
Hard skills	90.3	Subject-matter mastery; technical competence (95.8)
Digital skills	86.3	Office applications; online collaboration tools (91.7)

Note. Domain mean indices were calculated from the indicators included in the 24-pair importance-competence analysis. Item-level results for all stakeholder indicators are reported in Supplementary Table S2.b.

3. Alumni Competency Readiness

Alumni generally rated their competencies between moderate and high. Mean scores were 3.72 for hard skills, 3.90 for soft skills, and 3.78 for digital skills on the five-point scale. Teamwork and online information searching received the highest ratings (both 4.09), followed by work ethic and integrity (4.06) and compliance with standard operating procedures (4.00). The lowest ratings were given to quantitative data processing and data analysis with Excel or SPSS (both 3.46), followed by effective oral communication (3.55). Table 4 presents the domain scores and internal-consistency estimates.

Table 4. Alumni Competency Readiness (Self-Rated)

Domain	Mean (1–5 scale)	Cronbach's alpha	Strongest Indicator	Weakest Indicator
Hard skills	3.72	0.930	SOP compliance (4.00)	Quantitative data processing (3.46)
Soft skills	3.90	0.925	Teamwork (4.09)	Oral communication (3.55)
Digital skills	3.78	0.927	Information searching (4.09)	Excel/SPSS data analysis (3.46)

4. Competency Gap Map

Table 5 compares stakeholder-rated importance with alumni self-ratings on the 24 matched indicators. The widest gap was in subject-matter mastery (33.2), followed by effective communication (30.0), problem-solving (28.4), quantitative data processing and analysis (28.1), leadership and responsibility (27.7), and technical or functional competence (27.4). Under the study-defined thresholds, subject-matter mastery and effective communication were very high priorities. Most digital indicators fell in the moderate range. The digital gap was therefore more selective than the gaps in hard and soft skills, with the

clearest concern centered on digital security literacy. The complete source-item pairing and calculations for all 24 indicators are provided in Supplementary Table S6.

Table 5. Competency Gap Map (Adapted Importance-Competence Gap Mapping)

Rank	Domain	Indicator	Importance Index	Competence Index	Gap	Category
1	Hard	Subject-matter mastery	95.8	62.6	33.2	Very high
2	Soft	Effective communication	93.8	63.8	30.0	Very high
3	Soft	Problem-solving	97.9	69.5	28.4	High
4	Hard	Quantitative data processing and analysis	89.6	61.5	28.1	High
5	Soft	Leadership and responsibility	95.8	68.1	27.7	High
6	Hard	Technical/functional competence	95.8	68.4	27.4	High
7	Hard	Understanding documents and work instructions	95.8	69.5	26.3	High
8	Hard	Preparing reports/documents	93.8	68.1	25.6	High
9	Soft	Emotional intelligence and empathy	100.0	75.9	24.1	High
10	Digital	Digital security literacy	89.6	66.7	22.9	High
11	Soft	Teamwork	100.0	77.3	22.7	High
12	Hard	Formal presentation	85.4	62.9	22.5	High
13	Soft	Discipline and integrity	97.9	76.4	21.5	High
14	Digital	Online collaboration tools	91.7	72.4	19.3	Moderate
15	Digital	Office applications	91.7	73.3	18.4	Moderate
16	Digital	Design tools (Canva)	87.5	69.3	18.2	Moderate
17	Digital	Data analysis (Excel/SPSS)	79.2	61.5	17.7	Moderate
18	Hard	SOPs and work procedures	91.7	75.0	16.7	Moderate
19	Digital	Digital work platforms	81.2	64.9	16.3	Moderate
20	Digital	Professional email	81.2	65.2	16.0	Moderate
21	Hard	Data-driven decision-making	85.4	70.1	15.3	Moderate
22	Digital	Searching and verifying information	89.6	77.3	12.3	Moderate
23	Digital	Adapting to new software	85.4	74.4	11.0	Moderate
24	Hard	Professional document writing	79.2	72.1	7.0	Low

Note. Indices were normalized to a 0-100 scale using [(X - Xmin) / (Xmax - Xmin)] x 100. The gap equals the importance index minus the competence index. Study-defined categories were as follows: 30 or above = very high; 20-29.99 = high; 10-19.99 = moderate; below 10 = low.

5. Stakeholder Views of Alumni Strengths and Development Needs

The interviews helped explain the survey patterns. When discussing alumni strengths, stakeholders repeatedly referred to Islamic character, integrity, and work ethic. A private-sector stakeholder observed:

> *"They have a deeper understanding of religion, high loyalty, and an Islamic work ethic, and in terms of theory and application they are no less capable than graduates of other universities"* (Stakeholder 10).

Another stakeholder emphasized the place of religion in alumni's reasoning:

> *"They are religious; when discussing issues they always bring in religious considerations"* (Stakeholder 1).

A stakeholder from the business sector offered a broader assessment:

> *"We get everything the company needs, skills, good character, discipline, and expertise in their field. Everything matches what our company expects"* (Stakeholder 14).

Across the interviews, stakeholders also noted integrity and the ability to connect disciplinary knowledge with conduct. Alumni were described as having *"integrity and honesty"* (Stakeholder 11), while another participant said that their *"moral character stands out"* (Stakeholder 3). A stakeholder from an educational institution praised *"students' ability to integrate Islamic knowledge with their soft skills and hard skills"* (Stakeholder 15). Another drew attention to relational sensitivity, describing alumni as *"having sensitivity in responding to interactions with superiors, colleagues, and service recipients, and working in accordance with applicable rules"* (Stakeholder 2).

The interviews also echoed several of the gaps identified in the survey, particularly those related to confidence, communication, discipline, and digital capability. One stakeholder said that alumni *"need to build more confidence and initiative"* (Stakeholder 1). Another noted that *"when they disagree or feel uncomfortable, they tend to stay silent, even though it troubles them inwardly"* (Stakeholder 2).

Communication and technology were frequently mentioned together. Stakeholders called for stronger *"communication skills and digital mastery"* (Stakeholder 11), greater *"TT proficiency"* (Stakeholder 12), and better *"digital mastery, namely digital-based data skills"* (Stakeholder 6). Concerns about discipline centered on *"discipline and respect for time"* (Stakeholder 4) and *"punctuality in attendance"* (Stakeholder 13). One stakeholder from education also stressed current pedagogical knowledge, particularly *"the ability to use learning models that support deep learning"* (Stakeholder 16).

6. Campus Experiences Supporting Work Readiness

Alumni most often identified field-based experiences, including internships, practicums, and community service (KKN), as the campus activities that best prepared them for work. Student organizations were also important. One alumnus said that organizational involvement helped them *"learn how to work with a team, and experience working with deadlines and specific goals"* (Alumnus 1). Another linked organizational and internship experience: *"through organizations, students learn leadership, communication, and time management that are highly relevant to the workplace; internships help students get to know the work environment"* (Alumnus 5).

Direct contact with workplace settings appeared to matter more than the formal label attached to an activity. As one alumnus explained, *"practicums or internships, dealing directly with the field, are very useful for developing resilience and adaptability"* (Alumnus 76). Others referred to specific experiences. One alumnus explained, *"as a psychologist's assistant frequently dealing with clients, I became more prepared to handle a variety of personalities"* (Alumnus 7), while another said that *"the paper-presentation system improved my communication and public speaking skills when presenting data or fieldwork assignments"* (Alumnus 73).

Alumni recommendations followed the same pattern. They called for more practical experience and stronger communication, soft-skill, and digital development. One proposed that the university *"increase soft-skills training such as communication, problem solving, and teamwork, integrate the curriculum with current industry needs, and facilitate professional competency certification"* (Alumnus 6). Others asked for greater attention to public speaking (Alumnus 2) and for the university to *"increase practicum activities and expand internship partnerships with other institutions"* (Alumnus 1).

Digital capability was also viewed as something that should be developed across programs rather than offered only to interested students. Alumni recommended *"strengthening digital skills and data literacy as well as improving entrepreneurial skills"* (Alumnus 47). One argued that *"in the digital era, every student must have these skills, initiated by the campus and required for all students, not merely optional"* (Alumnus 73). Another hoped that continued attention to both

religious and digital competence would become *"a distinguishing strength of UIN Antasari Banjarmasin graduates"* (Alumnus 51).

Discussion

1. Cross-Domain Gaps in Core Competencies

A central finding is that the competency problem identified in this PTKI is broader than digital literacy. The widest gaps crossed domains and involved subject-matter mastery, effective communication, problem-solving, and quantitative data analysis. Alumni appeared relatively comfortable with routine digital tasks such as office applications and online information searching. The more specific digital concerns were data analysis and security literacy. This pattern qualifies accounts that treat digital skills as the dominant graduate deficit (Tee et al., 2024). It also supports a more differentiated understanding of digital competence, separating routine operational ability from the informational, analytical, ethical, and problem-solving capacities needed for more demanding work (Spante et al., 2018; van Laar et al., 2017; Zhao et al., 2021).

In this setting, the stronger signal is not a general inability to use technology, but uneven development in disciplinary, communicative, and analytical competence. Employer-focused studies have likewise found that applied subject knowledge, communication, and problem-solving remain central to graduate readiness, including in technology-rich workplaces (Andrews & Higson, 2008; Finch et al., 2013; Succi & Canovi, 2020). Curriculum responses should therefore avoid equating digital readiness with additional software training. A more relevant response would strengthen the use of disciplinary knowledge through analysis, explanation, presentation, and decision-making within regular coursework.

2. Soft Skills as Inconsistently Integrated Curricular Outcomes

The size of the communication and problem-solving gaps suggests that alumni did not consistently experience these capacities as explicit, sustained curricular outcomes. This finding does not demonstrate how the formal curriculum was designed because the study did not examine program learning outcomes (CPL), semester learning plans (RPS), or assessment instruments. It is better understood as evidence of how alumni experienced the curriculum. Even with that limitation, the pattern is consistent with research showing that employer input is often weakly translated into course design (Damoah et al., 2021). Soft skills are also more likely to develop when students repeatedly practice them through authentic tasks, aligned assessment, and workplace experience, rather than through occasional workshops (Cranmer, 2006; Jackson, 2015; Mason et al., 2009; Succi & Canovi, 2020). For curriculum managers, the issue is therefore not simply whether communication or problem-solving appears in a list of graduate attributes, but whether students practice and are assessed on those capacities across their programs.

3. Islamic Character as a Curricular Asset

The findings also point to an existing asset. Compared with the largest competency gaps, indicators such as discipline and integrity were rated more favorably, while interviewees repeatedly valued religiosity, loyalty, and an Islamic work ethic. These results do not establish that PTKI graduates outperform graduates from other institutions, because no comparison group was included. Nor do the survey data measure Islamic character as a single construct. Rather, the interviews show that stakeholders perceived these qualities as meaningful features of UIN Antasari alumni. This interpretation is consistent with studies that frame Islamic identity as a potential support for graduate competitiveness when it is connected to curriculum and professional conduct (Armiah et al., 2015; Rohman et al., 2023). Research in

Islamic education management likewise suggests that technological change can be shaped by Islamic values and information ethics, although those studies focus on learning effectiveness and digital literacy rather than employability itself (Idham et al., 2026; Rifauddin et al., 2026).

4. Proposed Dual-Responsive Curriculum Management Framework

To connect diagnosis with curricular action, this study proposes a dual-responsive curriculum management framework grounded in the institutional findings. The framework is a conceptual proposition for further testing, not a validated theoretical model. It brings together five elements: stakeholder evidence on workplace needs; alumni self-assessment of current capacity; importance-competence gap mapping to establish priorities; curricular action through changes to learning outcomes, teaching, and assessment; and the deliberate integration of Islamic character. The final element gives the framework its second form of responsiveness. Curriculum is expected to respond not only to changes in work and technology, but also to the identity and educational mission of PTKI.

The elements operate as a cycle. Stakeholder input and alumni self-assessment generate the gap map; the map informs curricular action; and subsequent tracer studies provide evidence about whether the response has worked. The integration of the quantitative and qualitative findings is important here. The observation that alumni *"tend to stay silent when they disagree"* (Stakeholder 2), for example, gives context to the large communication gap and supports the recommendation to embed structured presentations and discussion across courses rather than rely on a stand-alone workshop. The framework shares the broader employability view that readiness emerges from the interaction of knowledge, generic skills, experience, personal attributes, and context (Dacre Pool & Sewell, 2007; Clarke, 2018; Small et al., 2018). Its specific contribution is to place Islamic identity alongside digital and workplace responsiveness, rather than treating it as an additional or separate outcome. This emphasis is consistent with Islamic curriculum research that connects technological adaptation with spiritual and moral commitments and with the critical, ethical use of digital information (Idham et al., 2026; Rifauddin et al., 2026). Compared with Employability Model 4.0 (Pujiwati et al., 2021) and KKNI-oriented curriculum alignment (Hendrawan & Daryanto, 2019), the framework also provides a practical gap-mapping step through which PTKI can convert stakeholder and alumni evidence into priorities. Figure 1 presents the relationships among these elements.

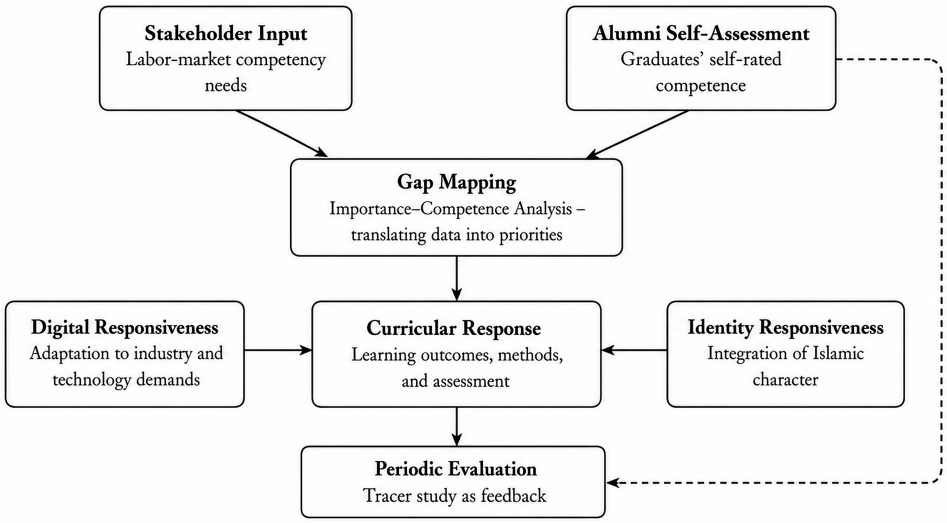

Figure 1. Proposed Dual-Responsive Curriculum Management Framework

5. Practical Implications for Curriculum Management

The framework has practical value only when responsibilities, mechanisms, and indicators are clearly assigned. In the short term, study programs and quality-assurance units can address the widest gaps by integrating case analysis, quantitative work, problem-solving tasks, and structured presentations into existing courses. In the medium term, faculty leaders and career units can formalize the internships and field practicums that alumni regarded as most influential and establish regular stakeholder participation in curriculum review. These activities should include reflection, competency mapping, and feedback so that students learn to recognize and explain the capabilities they have developed (Bridgstock, 2009; Jackson, 2015). Over the longer term, applied digital competence and Islamic character can be embedded in graduate learning outcomes and assessed across programs. Table 6 translates these priorities into a proposed management matrix.

Table 6. Strategic Recommendation Matrix for PTKI Curriculum Management

Priority	Identified Problem (from gap map)	Curricular Strategy	Responsible Party	Mechanism and Indicators
Core (hard) competencies	Subject-matter mastery (gap 33.2), quantitative data processing and analysis (28.1), technical competence (27.4)	Strengthen core learning through project- and analysis-based instruction	Study programs and course lecturers	Include quantitative analysis in capstone work and use practitioner cases; indicators: aligned learning outcomes and a data-analysis rubric
Soft skills	Communication (30.0), problem-solving (28.4), leadership (27.7)	Use experiential learning and structured presentations	Study programs and student-affairs units	Integrate presentations, discussion, and debate across courses; indicator: communication rubric
Digital skills (targeted)	Digital security literacy (22.9), digital data analysis (17.7)	Provide targeted applied digital learning rather than a blanket program	Study programs and ICT units	Offer focused security and data-analysis modules; indicator: narrower gaps on the targeted digital items
Islamic character	Existing strength not yet consistently framed as a curricular competency	Integrate Islamic character into learning outcomes	Faculty leadership and quality-assurance units	Use character criteria in internship assessment and values-based mentoring; indicator: explicit character-related learning outcomes
Experience-based learning	Internships and organizational involvement were viewed as influential but not consistently formalized	Formalize experiential learning	Faculty leadership and career units	Allocate internship credit and map competencies; indicator: improved tracer-study and placement feedback
Evaluation mechanism	Need for continuous use of tracer-study evidence in curriculum review	Establish periodic stakeholder-informed curriculum evaluation	LP2M, quality-assurance units, and career units	Conduct annual tracer studies and curriculum forums with graduate users; indicator: repeated gap mapping and documented follow-up

Source: Primary data analysis and literature review, 2025.

6. Limitations

Several limitations qualify the findings. The small stakeholder sample and the incidental recruitment of alumni make the results exploratory rather than representative. Both sets of scores are perception-based and may not correspond fully to objectively assessed competence. The questionnaires were also not identical, so the gap analysis had to be restricted to matched indicators and normalized across different scales. Because the study was descriptive and conducted at one institution, it cannot establish causal relationships or show whether the same pattern applies across PTKI. The alumni had graduated over an 11-

year period, from 2014 to 2025, and therefore encountered different curricula, technologies, and labor-market conditions. Future research could address these limitations through multi-institutional samples, matched instruments, objective competency measures, and longitudinal or intervention designs.

Conclusion

The comparison of stakeholder priorities and alumni self-ratings shows that graduate-readiness concerns at UIN Antasari are not confined to digital literacy. The widest gaps were found in subject-matter mastery, effective communication, problem-solving, and quantitative data analysis, while routine digital competencies were comparatively stronger. Interviews added an important second perspective: stakeholders valued religiosity, integrity, loyalty, and an Islamic work ethic, yet alumni and employers still called for more sustained opportunities to practice communication, analysis, and problem-solving. Curriculum improvement should therefore focus less on blanket digital training and more on integrating these core capacities into coursework, assessment, and field-based learning. The proposed dual-responsive framework offers a way to organize that work by using stakeholder and alumni evidence to set priorities while keeping Islamic educational identity within the curriculum response. As a context-grounded proposition, the framework now requires testing across other PTKI and through designs capable of examining the effects of specific curricular interventions on graduate readiness.

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