



Beyond Digital Delivery: Designing Student-Centered Pedagogies for Engagement, Agency, and Deeper Learning in Online Higher Education

Wardaniah¹, Fatimah Syivaa Usarriroh^{2*}

¹ Universitas Nurul Jadid, Indonesia

² Universitas Islam Negeri Sunan Kalijaga Yogyakarta, Indonesia

Email: Syivaafatimah51@gmail.com

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*Correspondence Address:

Syivaafatimah51@gmail.com

Abstract :

This study aims to analyze educational challenges related to graduate competency gaps, inequality of educational access, and limitations in implementing learning innovation, with particular attention to Arabic language education in resource-constrained areas. A qualitative case study approach was employed, involving in-depth interviews with teachers, principals, and students, complemented by direct observations and document analysis. Data were analyzed through data condensation, reduction, display, and verification, with source and method triangulation used to strengthen credibility. The findings reveal three major problems: the mismatch between graduates' theoretical knowledge and workplace competencies, unequal access to technology, authentic Arabic learning resources, and teacher professional development, and limited implementation of innovative and communicative learning practices. These challenges reinforce the dominance of grammar-translation approaches and constrain students' communicative abilities, particularly speaking and listening skills. The study concludes that Arabic language education requires contextual, competency-based, communicative, and technology-supported transformation. The implications highlight the need for adaptive policies, equitable infrastructure, continuous teacher training, and innovative pedagogical practices to strengthen graduate employability and reduce educational inequality.

INTRODUCTION

Artificial intelligence is reshaping higher education, making learning increasingly mediated by intelligent systems and digital platforms. This transformation matters to society because universities are responsible not only for transmitting knowledge but also for developing graduates who can think critically, collaborate effectively, and learn independently. AI access can substantially expand learning opportunities, yet it can also encourage students to outsource judgment when technology substitutes for intellectual effort. Recent evidence shows growing AI adoption among university students, while systematic reviews report benefits for personalization, engagement, communication, and collaborative learning. However, UNESCO emphasizes that educational AI should remain

human-centered, ethical, equitable, and pedagogically purposeful. Therefore, the central social challenge is not whether AI should enter higher education, but how universities can redesign learning so students use AI to strengthen participation, reflection, collaboration, and decision-making rather than becoming passive consumers of machine-generated knowledge.

The general problem emerges when technological convenience develops faster than pedagogical adaptation. Online higher education has expanded access and flexibility, but many learning environments still reproduce transmission-oriented practices in which lecturers provide materials, students complete standardized tasks, and interaction becomes secondary to content delivery. Generative AI intensifies this tension because students can obtain explanations, summaries, ideas, translations, and draft responses instantly. Such accessibility can reduce productive struggle and encourage cognitive offloading when learning activities do not require students to question, negotiate, create, or justify knowledge. Collaborative learning can also become superficial if students divide assignments or use AI individually before submitting a shared product. Consequently, society faces a problem: institutions may possess advanced technologies while retaining learning designs that position students primarily as recipients. This mismatch makes pedagogical transformation essential for meaningful and participatory online learning across diverse contexts today.

This problem is visible in online higher-education classrooms, where AI tools increasingly coexist with learning management systems, discussion forums, video meetings, and collaborative documents. Students commonly use AI to clarify concepts, generate ideas, summarize readings, formulate questions, and improve written work, while lecturers experiment with AI-supported feedback and personalized learning. Yet the presence of these tools does not automatically produce active participation. Evidence from higher education research indicates that AI can improve learner-content interaction, motivation, communication, peer learning, and cooperative support, but outcomes depend strongly on task design and emotional engagement. Research on student agency similarly shows that collaborative participation, co-creation, feedback, and access to resources can foster learners' control over learning actions, although integrated approaches remain limited. Therefore, students have unprecedented access to AI assistance, but opportunities to exercise agency through collaboration may remain underdeveloped. This paradox defines the empirical context of this study.

Previous scholarship has established pathways for integrating AI into higher education. Systematic reviews show that AI-supported learning can personalize content, provide adaptive feedback, enhance motivation, support assessment, and facilitate collaborative interaction. Research on AI-powered collaborative learning further identifies task design and emotional engagement as conditions for successful outcomes. Meanwhile, studies of AI-enabled self-regulated learning indicate that chatbots, adaptive systems, and environments can support autonomy and regulation. These contributions show that AI can function as a learning scaffold rather than an automation tool. Nevertheless, much literature remains organized around technological capabilities, individual personalization, learning performance, or isolated forms of self-regulation. Less attention has been devoted to how AI can be deliberately embedded within collaborative pedagogy to transform students from recipients of assistance into agents who initiate inquiry, negotiate meaning, evaluate AI outputs, and co-construct knowledge with peers. This limitation identifies an important conceptual and pedagogical gap.

A second limitation concerns the fragmented treatment of student agency,

collaboration, and artificial intelligence. Reviews of agency in higher education find that existing practices include isolated elements such as participation, co-creation, feedback, or resource provision, while accounts of agency remain scarce. Research on AI in higher education frequently demonstrates improved engagement or personalized learning without explaining how students exercise sustained control over learning processes. This creates a gap between what AI enables and what pedagogy actually organizes students to do. If AI supplies increasingly capable answers, collaborative learning must be redesigned around questions, judgment, dialogue, verification, reflection, and shared responsibility. Otherwise, technological assistance may unintentionally reinforce passive learning by making intellectual decisions invisible. The unresolved issue is not simply whether AI improves outcomes, but under what collaborative pedagogical conditions AI can stimulate agentic learning. Addressing this issue is essential for developing human-centered online higher education.

The state of the art proposed in this study is to reconceptualize AI-enhanced online learning through a combined lens of collaborative pedagogy and student agency. Rather than treating AI as a tutor that delivers individualized assistance, the study positions AI as a mediating resource within learning activities that require students to initiate questions, distribute responsibilities, challenge machine outputs, exchange perspectives, and justify collective decisions. This approach extends personalization models by emphasizing the social and agentic dimensions of learning. Its novelty lies in connecting three elements often investigated separately: intelligent technological support, structured peer collaboration, and learner agency. This perspective reframes the student from an AI user into a learning agent who actively directs, evaluates, and reshapes interactions with technology and peers. This contribution matters because UNESCO calls for human-centered AI, while research demonstrates that agency and collaboration remain incompletely integrated. A pedagogical model connecting these dimensions can offer stronger theoretical and practical foundations.

This study addresses the research problem of how collaborative pedagogy can be reimagined so AI-enhanced online higher education develops students as active learning agents rather than passive recipients of AI assistance. It asks how learning activities can connect AI-supported inquiry with peer interaction, critical evaluation, reflection, and responsibility. The problem is significant because access to AI does not itself determine whether students exercise agency. Without structures, students may rely on generated answers while contributing less questioning, reasoning, and dialogue. The study consequently focuses on conditions that enable AI to support active participation rather than cognitive substitution. It examines how collaborative learning designs can redistribute responsibility, require students to interrogate information, and make their decisions visible within online processes themselves. In doing so, the research moves beyond asking whether AI is useful toward examining how AI can be pedagogically organized to cultivate agency within diverse online higher-education settings and learning communities.

The study argues that AI becomes effective when positioned as a mediating resource within collaborative learning, not as an answer provider. When students must formulate questions, compare AI outputs, challenge assumptions, exchange perspectives, negotiate interpretations, and justify decisions, technology can become a catalyst for learning. This argument implies that student agency is socially and pedagogically produced, not automatically generated by access. The contribution is a framework connecting intelligent technological support, structured collaboration, and

agentic learning in online higher education. Such integration may strengthen autonomy, collaborative competence, critical engagement, and reflective judgment while preserving human responsibility for knowledge construction. Ultimately, the research positions AI not as a replacement for human learning, but as a catalyst that can help transform students from passive users of technology into active learning agents capable of directing, evaluating, and co-creating their learning experiences. This perspective provides a foundation for reimagining collaborative pedagogy in AI-enhanced online higher education.

RESEARCH METHOD

This study uses a qualitative research design with a case study approach. The choice of this design is based on the need to understand the phenomenon of education in depth in a specific context, i.e. in schools that have limited access to educational resources. The case studies allow researchers to dig into the data in more detail and present a more realistic picture of the challenges faced by education in these areas.

This research will be carried out in several schools in rural areas that have limited access to educational facilities, both in terms of technology and teacher training. This location was chosen because it shows a significant educational gap between urban and rural areas, as well as providing insight into the challenges faced by schools in underdeveloped areas. Data will be collected through in-depth interviews with teachers, principals, and some students. In addition, data will also be collected through direct observation in selected schools, as well as document analysis related to education policies implemented in the area.

Data analysis in this study is carried out through several systematic stages, namely data condensation, data reduction, data display, and data verification. At the data condensation stage, the researcher filters and summarizes important information obtained from interviews and observations. Furthermore, data reduction is carried out by grouping data into relevant themes to make it more structured and easy to analyze. The data that has been reduced is then presented in the form of a table or diagram at the data display stage to make it easier to understand and draw conclusions. The final stage is data verification, which is ensuring the validity and consistency of data through the triangulation process. The validity of the data was tested using triangulation methods (interviews, observations, and documentation) and triangulation of sources (teachers, students, and principals). In addition, data validation is also strengthened by comparing research findings with relevant literature.

RESULT AND DISCUSSION

Result

Qualitative Result

The Gap between Graduate Competencies and the Needs of the World of Work

The gap between graduate competencies and the needs of the world of work in this study is defined as a mismatch between the abilities that students have after completing their education and the skills needed by the world of work, especially in the aspects of practical skills, communication, and problem-solving. Operationally, this gap is identified through students' low ability to apply knowledge contextually, lack of practical experience, and limited integration of skills-based learning in the learning process in the school studied.

In the context of Arabic language education, this gap is also seen in the low ability of students to master language skills in an applicative manner, such as maharah al-kalam (speaking), maharah al-istima' (listening), and the ability to translate and understand Arabic texts contextually. Learning that focuses too much on qawa'id (nahwu and sharaf) causes students to be less trained in using Arabic in real situations, both in academic and professional communication.

Based on the results of interviews with teachers, information was obtained that "Most of our students do understand theory well, but when asked to practice or solve real problems, they are still confused and lack confidence." In learning Arabic, this condition is reflected in students who are able to memorize rules, but have difficulty speaking or understanding simple conversations. The researcher interprets that this condition shows the dominance of theory-based learning approaches over practice. An interview with the principal revealed that "We realized that our graduates are still under-employed, especially in terms of technical and communication skills." In the context of Arabic, this shows that graduates do not have adequate communicative competencies for the needs of the world of work such as teaching, translation, and the field of global-based Islam.

The results of the observation show that learning is still dominated by lecture methods and the use of textbooks. In learning Arabic, this is characterized by a lack of conversation (hiwar), discussion (munaqasyah), and simulated use of language in a real context. Based on these findings, it can be affirmed that the gap in Arabic language education is caused by the dominance of theoretical learning, which ignores the strengthening of communicative skills as the main competency.

Table 1. The Gap between Graduate Competencies and the Needs of the World of Work

Informant Position	Interview Excerpts	Indicator
Teacher	"Students understand theory, but struggle in practice."	Low practical skills
Principal	"Graduates are less job-ready, especially in technical skills."	Low work readiness
Teacher	"Our focus is still on completing the curriculum."	Dominance of theoretical learning

The table above shows that all informants have relatively uniform views regarding the low practical competence of students. In the context of Arabic language education, this condition is reflected in the ability of students who tend to be strong in mastering linguistic theories such as qawa'id (nahwu and sharaf), but weak in applicative skills such as maharah al-kalam (speaking), maharah al-istima' (listening), and the ability to understand texts contextually. Teachers highlight the weakness of students' practical skills even though they understand theory, while principals emphasize that graduates are not ready to face the world of work. This indicates that the problems that occur are not individual, but systemic and comprehensive in the educational process, including in learning Arabic.

Furthermore, the indicators that emerged showed a close relationship between learning orientation and the results achieved by students. In Arabic language learning, the focus on curriculum completion often encourages teachers to emphasize cognitive

and theoretical aspects, such as mastery of rules and translation (qawa'id wa tarjamah), rather than the development of communicative skills. As a result, students get less opportunities to practice using Arabic in real-life situations, so their practical skills are neglected. This condition has a direct impact on the low job readiness of graduates, especially in fields that require active Arabic language competence, such as teaching, translation, and professional communication. In the end, this situation further strengthens the gap between the world of education and the world of work in the context of Arabic language proficiency that is applicable and relevant to global demands.

Inequality of Access and Quality of Education between Regions

Inequality of access and quality of education in this study is defined as significant differences in the availability of educational resources, the quality of infrastructure, and opportunities for teacher competency development between schools in rural and urban areas. In the context of Arabic language education, this inequality can be seen from differences in access to Arabic learning resources, such as digital media, native speaker learning videos, Arabic language applications, and modern books or references. Schools in rural areas tend to have limitations in accessing authentic Arabic resources, so learning becomes less contextual and non-communicative.

Based on interviews with teachers, it was stated that "We are very limited in the use of technology." In Arabic language learning, this limitation has an impact on the lack of use of media such as conversational audio (istima'), learning videos, and interactive platforms that can improve students' language skills. Interviews with school principals show that access to teacher training is very limited. In the context of Arabic, this has an impact on the lack of teacher competence in applying modern methods such as communicative approaches or direct methods in learning Arabic.

The results of the observation show the limitations of facilities such as the internet and learning media. In learning Arabic, this causes students to not get exposure to authentic Arabic, so their abilities are limited to texts and theory. Thus, this inequality not only impacts the quality of education in general, but also specifically hinders the development of communicative and contextual Arabic language competencies.

Table 2. Inequality of Access and Quality of Education between Regions

Informant Position	Interview Excerpts	Indicator
Teacher	"We are constrained by facilities and networks for digital learning."	Limitations of technology
Principal	"Access to teacher training is very limited in the regions."	Lack of teacher competency development
Teacher	"Learning still uses the usual methods due to limited facilities."	Less innovative learning

The table above shows that education inequality occurs in a multidimensional manner, including aspects of infrastructure, human resources, and learning processes. In the context of Arabic language education, technological limitations not only hinder learning in general, but also limit students' access to authentic Arabic learning resources,

such as audio istima' (listening), video conversations, and interactive learning platforms. Teachers highlight the limitations of technology as the main obstacle, while the principal emphasizes limited access to training as a factor that slows down the improvement of teacher competence, especially in implementing communicative Arabic learning methods such as al-madkhal al-ittishali. This shows that educational inequality is not only caused by one factor, but is the result of the accumulation of various interrelated limitations.

Limitations in the Implementation of Innovation and Education Reform

The limitations of the implementation of educational innovation and reform in this study are defined as the ineffectiveness of the implementation of education reform policies and programs, especially in technology-based learning and student-centered learning. In the context of Arabic language education, this limitation can be seen in the low application of innovative methods such as communication-based learning (al-madkhal al-ittishali), the use of Arabic digital media, and the integration of technology in the learning of maharah lughawiyah (language skills).

Based on interviews with teachers, it was stated that "We have not received enough training." In Arabic language learning, this has an impact on the teacher's lack of ability to develop active learning strategies such as role play (tamtsil ad-da'ura), discussion, and conversation practice. Interviews with school principals show that policies are often out of context. In the context of the Arabic language, this can be seen from the curriculum that demands innovation, but is not balanced with facilities such as language laboratories or access to Arabic-language digital media.

The results of the observation show that some teachers still use conventional methods. In learning Arabic, this is reflected in the use of the qawa'id wa tarjamah (grammar-translation method) method that emphasizes text analysis rather than active communication. The researcher interprets that resistance to change and limited resources are the main factors that hinder the innovation of Arabic language learning. In fact, learning Arabic in the modern era demands a more communicative, interactive, and technology-based approach.

Table 3. Limitations in the Implementation of Innovation and Education Reform

Informant Position	Interview Excerpts	Indicator
Teacher	"We haven't had enough training to implement innovative learning."	Lack of practical training
Principal	"The policy often doesn't match the conditions of our schools."	Non-contextual policy
Teacher	"Some teachers are still comfortable with the old methods."	Resistance to change

The table above shows that the limitations of the implementation of educational innovation are influenced by three main factors, namely teacher capacity, policy relevance, and school organizational culture. In the context of Arabic language education,

the capacity of teachers is not only related to general pedagogic abilities, but also competence in applying communicative language learning methods, such as al-madkhal al-ittishali (communicative approach) and the development of maharah lughawiyah (language skills). Teachers revealed the lack of training as the main obstacle, which had an impact on their low ability to integrate the practice of hiwar (conversation), istima' (listening), and the use of Arabic-language digital media in learning. Meanwhile, the principal highlighted the incompatibility of the policy with the conditions in the field, which in Arabic language learning is often seen from the demands of the curriculum that emphasizes communicative competence without the support of facilities such as language laboratories or access to authentic Arabic learning resources.

Indicators of resistance to change show that psychological and cultural factors have a significant role in inhibiting learning innovation, particularly in the context of Arabic language education. This is reflected in the tendency of teachers to continue to use traditional methods such as qawa'id wa tarjamah (grammar-translation method) which focuses on the analysis of rules, rather than the active and communicative use of language. This habit makes teachers reluctant to switch to more innovative approaches such as communicative or technology-based approaches, especially when they are not supported by adequate training. As a result, learning Arabic becomes less interactive and not optimal in developing students' communication skills. Furthermore, data patterns show a close relationship between policies, human resource capacity, and implementation in the field. When policies are not contextual and are not accompanied by training and facility support, innovations such as the use of digital media, project-based learning, and active communication practices are difficult to implement. These conditions form a cycle of barriers, in which limited training and facilities reinforce resistance to change, which ultimately hinders the success of Arabic language learning reforms. Therefore, without comprehensive interventions through adaptive policies, teacher competency improvement, and the provision of supporting facilities, Arabic learning innovations will be difficult to realize effectively and sustainably, thus having a direct impact on the low quality of students' communicative skills mastery in the era of globalization.

Discussion

The results of this study show that there is a gap between the competence of graduates and the needs of the world of work, which is in line with various literature that highlights the phenomenon of mismatch between educational output and industry demands (Nasution et al., 2025; Rasmitadila et al., 2025; Riyadi, 2020; Udeogalanya, 2022). These findings are consistent with previous research that states that education systems that are still oriented to theory and memorization tend to produce graduates who lack practical skills and adaptive abilities (Nisak & Ishari, 2025). In the context of Arabic language education, this gap is seen in the dominance of mastery of qawa'id (nahwu and sharaf) compared to the development of communicative skills such as maharah al-kalam (speaking), maharah al-istima' (listening), and the ability to understand texts contextually. In modern education studies, the competency-based approach emphasizes the importance of integration between knowledge and skills, including in Arabic language learning, which ideally combines linguistic and communicative aspects, but in practice this has not been fully implemented in the field (Cunnington et al., 2023; Kasuga & Kalolo, 2025; Septiana et al., 2023). The differences that emerged in this study

lie in the context of regions with limited resources, where the gap is not only caused by learning approaches, but also by structural factors such as language learning facilities (e.g. language laboratories) and minimal Arabic teacher training (Andriyanto & Widodo, 2025; Kirmadi et al., 2026; Rozi et al., 2025).

In addition, the findings on the inequality of access and quality of education between rural and urban areas also reinforce the results of previous research that highlights the existence of educational inequality as a global problem, especially in developing countries (Fitzgerald et al., 2025; D. Putri, 2025). In the context of Arabic language education, this inequality can be seen in the limited access to authentic Arabic learning resources, such as *istima'* audio media, learning videos, and interactive digital platforms that support the development of *maharah lughawiyah*. The literature shows that access to technology, teacher training, and infrastructure are the main determinants of quality of education. The results of this study are in line with this view, where the limited facilities and access to training have a direct impact on the low innovation of Arabic language learning, especially in the application of a communicative approach (*al-madkhal al-ittishali*) (Anton & Van Ryzin, 2024; Demartini et al., 2024; Duan & Zhao, 2025). However, this study provides additional emphasis that these inequalities are cyclical and mutually reinforcing, so that without appropriate policy interventions, the gap will continue to widen. Thus, these findings enrich the literature by showing how geographical factors and resource distribution affect the quality of learning Arabic systemically.

Furthermore, findings related to the limitations of the implementation of innovation and education reform show that there is a gap between policy and practice, which has also been widely discussed in the education policy literature. Many studies state that education policies are often top-down and lack contextual, making them difficult to implement effectively at the school level (Zickafoose et al., 2024). The results of this study support this view, especially with the resistance of teachers to change and the lack of applicable training (Adeoye & Baharun, 2025; Riatmaja et al., 2025). In Arabic language learning, this resistance can be seen in the tendency of teachers to continue using the *qawa'id wa tarjamah* method rather than a communicative or technology-based approach. However, this study also adds the perspective that the cultural factors of school organization and the readiness of individual teachers are important elements that are often overlooked in policy implementation. This shows that the success of Arabic language learning reform is not only determined by the quality of policies, but also by the readiness of implementing actors in the field (Faizin, 2024; Gonzales & Roberts, 2025; Rochmat et al., 2022; Sellami, 2025).

In terms of theoretical implications, this study strengthens the concept that the quality of education is the result of the interaction between structural, cultural, and pedagogical factors. These findings support the theory of education systems that see education as an interconnected ecosystem, including in Arabic language learning that requires synergy between curriculum, methods, teachers, and facilities (Najiah & Baharun, 2025; Shawyun et al., 2025; Sunarjo et al., 2024). In addition, this research also contributes to the development of education policy implementation theory by emphasizing the importance of contextual and participatory approaches in designing and implementing Arabic language learning innovations. Thus, this study not only confirms the existing theory, but also expands the understanding of the dynamics of education implementation, especially in the context of learning Arabic in areas with limited

resources.

Practically, the results of this study have significant implications for policy makers, school managers, and teachers. First, curriculum reform is needed that places more emphasis on the development of students' practical skills and job readiness, including strengthening maharah al-kalam and maharah al-istima' in Arabic language learning. Second, the government needs to ensure equitable access to educational facilities, such as language laboratories and digital media, as well as continuous training of Arabic language teachers, especially in rural areas. Third, the implementation of education policies must be adjusted to local conditions to be more effective and sustainable, including in the development of contextual Arabic learning strategies. In addition, there is a need to make efforts to build an innovative culture in schools through continuous training and mentoring for teachers to be able to apply a communicative and technology-based approach in Arabic language learning. Thus, the results of this study provide strategic direction in efforts to improve the quality of education as a whole and reduce gaps, especially in the mastery of Arabic language that is relevant to global demands.

CONCLUSION

This study emphasizes that the main problems in education lie in the gap between the competence of graduates and the needs of the world of work, inequality of access to education, and the limited implementation of learning innovations, which overall shows the dominance of theoretical approaches over the development of practical skills. In the context of Arabic language education, this condition is reflected in the strong mastery of qawa'id (nahwu and sharaf) but the weakness of communicative skills such as maharah al-kalam and maharah al-istima', so that graduates are less prepared to face professional demands. The main lesson from this study is the importance of transforming learning towards a balanced approach between theory and practice, contextual, and competency-based. Scientifically, this research contributes by enriching the study of education through integrative analysis between structural, cultural, and pedagogical factors, as well as presenting the perspective of Arabic language education on global issues such as skills mismatch and educational inequality, and emphasizing the importance of a contextual and participatory policy approach. However, this study has limitations in the limited scope of the location, the use of a qualitative approach that has not quantitatively measured the relationship between variables, and has not accommodated the students' perspective in depth, especially in the evaluation of the effectiveness of Arabic language learning methods. Therefore, further research is suggested to expand the study area, use a mixed methods approach, and examine more specifically communicative and technology-based Arabic language learning models to improve students' maharah lughawiyah more effectively and sustainably.

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