

A Digital Innovation in Arabic Rhetoric Education: Developing an E-Module for Teaching Arabic Rhetoric with Content and Language Integrated Learning

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ABSTRACT - This study aims to analyze the effectiveness of an e-module developed for the *Ilm al- Bayan* course at UIN Imam Bonjol Padang through a series of empirical tests involving experimental and control groups. The research followed the ADDIE development model, beginning with a needs analysis, followed by module design, expert validation, and implementation among students. Quantitative methods were employed to evaluate learning outcomes, motivation, and user acceptance of the e- module. Data analysis was conducted using the Kolmogorov–Smirnov and Shapiro– Wilk test for normality. Levene’s test for homogeneity, Paired Samples *t*-Tests, and Independent Samples *t*-Tests. The results demonstrated that the data for both the experimental and control groups were normally distributed and homogeneous. The Paired Sample *t*-Test revealed a significant improvement in learning outcomes for both groups, with the experimental class showing a greater mean difference ($- 7.036$, $p < 0.05$) than to the control class (-4.673 , $p < 0.05$). Furthermore, the Independent Samples *t*-Test confirmed a significant difference between the post-test scores of the two groups ($t = 5.571$, $p = 0.000$), indicating the effectiveness of the e- module intervention in enhancing students’ learning performance. Overall, the study concludes that the integration of the e-module, designed using the ADDIE model and informed by the CLIL and ARCS motivational frameworks, significantly improves students’ learning outcomes, motivation, and engagement. These findings suggest that e-modules can serve as an effective pedagogical tool for Arabic language education, providing a more interactive, student-centered learning experience that supports digital transformation in higher education.

INTRODUCTION

The knowledge of Arabic Rhetoric is assumed as the knowledge to assess and measure students’ level of speech quality as well as to identify aesthetic angle in each of the speakers’ words (Zakaria et al., 2020) (Nikula & Marsh, 1998). Students should not only utter eloquent and aesthetical words but should also be able to appreciate and uncover hidden meaning, especially those included in the Al-Quran. This talent and skill are retrieved from effective learning on the knowledge of Arabic Rhetoric which covers the methods and appreciation of Quranic verses, beautiful expressions from the hadith, or prose, as

well as wholesome effort to understand and appreciate them to the best possible (Elaiish et al., 2019; Achmad, et al, 2022).

Although the Arabic Rhetoric subject is viewed-as the spearhead in developing students' character, its implementation in schools has been considered less successful because instructions tend to focus on on the cognitive component rather than the emotional and psychomotor components (Nuha & Musyafa'ah, 2023) (Aflisia & Harahap, 2019). As a result, students appear to gain religious knowledge without necessarily practicing it. Meanwhile, traditional teacher teaching methods, focusing on teachers rather than students, make learning monotonous for students. Teachers therefore need strategies that actively involve students in learning activity. Assignments, discussions, questioning, encouraging students to express ideas, and conducting evaluations are examples of practices that support active participation. Creating a learning environment that promotes creativity is a key indicator of high- quality instruction. In response to the obstacles and issues faced in the field, students are actively participating by providing input to reduce these problems to the Arabic Rhetoric teachers as a solution to improve teaching techniques. This is to ensure that students can easily understand the Arabic Rhetoric material effectively. Some of the suggested solutions include: the teacher reading the book and then explaining the material from the chapter that has been read, followed by the teacher giving instructions to the students to practice reading the Arabic Rhetoric book and practicing writing Arabic sentences on the whiteboard (Zakaria et al., 2020) (Ahmad et al., 2023)

Mohamad Syukron et al. (2023) found that, to increase students' interest in mastering Balaghah, teaching methods must be renewed and diversified., Approaches, strategies, and teaching methods used in Arabic rhetoric that are less effective or unsuitable for students in higher education institutions are among the causes of their weak mastery of the subject (Syukron, 2023). According to Hakim (2020), Arabic rhetoric frequently rely on the lecture method when delivering lessons. This indicates that religious teachers, including those who teach Arabic rhetoric, still employ conventional and passive approaches influenced by traditional teaching practices and primarily focused on the teacher. Teachers are seen mainly to deliver information through lectures while students only receive the information by listening (Hakim et al., 2020).

Furthermore, Shabriyah et al. (2022) stated that one of the factors hindering the achievement of Arabic Rhetoric teaching and learning goals is the use of rote memorization while neglecting the cultivation and application of the aesthetic and rhetorical values embedded in the expressions studied. Therefore, a contextual-based approach emphasizing communicative and collaborative activities among students is believed to develop students' critical and creative thinking skills when studying this subject and is recommended for implementation by teachers (Shabriyah & Nuruddin, 2022).

Methods and teaching techniques have been identified as key factors influencing students' interest in mastering Arabic Rhetoric. A study by Nazeri (2022) (Arham & Akrab, 2018) found that, out of 50 students surveyed, 49 students (98%) stated that in learning Arabic Rhetoric, teaching methods need to be diversified by teachers and lecturers. This is further reinforced by a study conducted by Syukran et al. (2023), which found that, to attract students' interest in mastering Arabic Rhetoric, teaching methods and techniques need to be renewed and diversified. Approaches, strategies, and teaching methods used in Arabic rhetoric that are ineffective or unsuitable for students in higher education institutions are among the causes of their weak mastery of the subject (Syukron, 2023) Overall, this study explores the teaching practices used by experienced Arabic Rhetoric subject teachers in delivering the curriculum content. Teaching this subject requires teachers' commitment to providing diverse teaching materials and understanding the curriculum content beforehand so that students can understand and master it well.

According to Abdullah and Omar (2016), the teaching of 'Ilm al-Balāghah in Malaysia remains largely examination-oriented and heavily reliant on rote memorization, focusing on definitions, examples, and theoretical constructs, with instruction predominantly centered on the lecturer. Such an approach does not effectively develop students' linguistic competence, as learners are often unable to apply the aesthetic values embedded in balāghah in actual language use (A. J. Othman et al., 2011). Similarly, Sopian et al. (2013), in their study involving secondary school students (SMA) in Melaka, found that respondents expressed dissatisfaction with the teaching and learning methods employed in balāghah instruction. The study emphasizes the need for teachers to be exposed to a wider range of innovative pedagogical techniques to enhance instructional effectiveness. In particular, it recommends the

adoption of inductive approaches, such as al-Ṭarīqah al-Istiqrā'iyah and al-Ṭarīqah al-Istinbāṭiyah, which encourage active learner engagement and deeper conceptual understanding.

Several studies in Indonesia have indicated that students' mastery of 'Ilm al-Balāghah remains relatively low, which is closely associated with instructional methods, limited exposure to contextualized learning, and the scarcity of modern, student-friendly learning materials (Rosni Samah, 2009; Sopian et al., 2013). In addition, the continued reliance on classical Arabic texts without sufficient pedagogical adaptation creates significant comprehension barriers, particularly for learners with limited vocabulary and linguistic proficiency (Muhammad et al., 2007; Nazri, 2017). These challenges hinder students' ability to engage meaningfully with rhetorical concepts and to apply them effectively in authentic language contexts.

Rosni Samah and Marwan Ismail (2006) found that students' level of mastery in 'Ilm al-Balāghah is generally very weak. This weakness is largely attributed to issues in the teaching and learning process, particularly the overemphasis on memorizing rules and examples of rhetorical elements without sufficient focus on practical application. As a result, students struggle to internalize and utilize the concepts of balāghah effectively.

Similarly, Mohamad Syukri Abdul Rahman et al. (2018) concluded that the instructional approach in teaching balāghah modules requires significant enhancement. They emphasized the need for improvements at both the lecturer and institutional levels, including revisions to the curriculum, teaching methodologies, and the development of specialized balāghah learning modules. Furthermore, they highlighted that teaching techniques and strategies should be continuously updated and diversified to increase students' interest and engagement in learning balāghah. In addition, the selection of Arabic texts that are not aligned with students' proficiency levels has been identified as another contributing factor to declining motivation and interest. Inappropriate materials can create unnecessary difficulty, thereby discouraging learners from actively engaging with the subject.

Sery (1999) found that students' mastery of 'Ilm al-Balāghah is generally low and that the subject is often perceived as uninteresting. This issue persists despite the fact that balāghah has been introduced to students as part of Arabic language education since the secondary school level (Form Four). Similarly, Sopian et al. (2013) reported that students' level of mastery remains relatively weak, primarily due to a lack of interest and limited awareness of the importance of balāghah, as well as a low intrinsic motivation to engage deeply with the subject. In contrast, Raja Hazirah (2012) found that while university students' mastery of balāghah ranges from low to moderate, their levels of motivation and inclination to learn the subject are relatively high. However, the study also revealed a notable discrepancy: students are often unable to fully master balāghah despite achieving good or even excellent examination results. This suggests that current instructional approaches may emphasize performance outcomes over genuine conceptual understanding and practical application.

Motivational factors also play a significant role in the learning of 'Ilm al-Balāghah. One of the primary challenges stems from students' perception of the subject as complex and difficult, particularly as it requires engagement with diverse and demanding texts, including the Qur'an, Prophetic traditions (ḥadīth), Arabic poetry (shi'r), and both classical and modern prose (nathr) (Muhammad, 2008). Such textual complexity can create cognitive barriers that reduce learners' confidence and interest. Similarly, Nazri (2017) reported that respondents in his study perceived balāghah as a difficult subject largely due to their limited vocabulary. This lexical constraint hinders their ability to comprehend rhetorical concepts effectively, whether in poetic or prose texts. Consequently, insufficient vocabulary mastery not only affects textual understanding but also impedes deeper engagement with the aesthetic and analytical dimensions of balāghah.

Previous studies have also identified issues related to the use of textbooks in the teaching and learning of 'Ilm al-Balāghah. H. H. Othman (1999) found that both teachers and textbooks contribute to students' difficulties in mastering balāghah. In particular, the Arabic rhetorical texts presented in textbooks were reported to be difficult for the majority of respondents to understand. Similarly, Sopian et al. (2013) highlighted that students encounter challenges in utilizing the prescribed textbooks effectively and are often unable to benefit fully from them. As a result, they struggle to complete assigned tasks accurately

Research Background

The term "content and language integrated learning" (CLIL) was coined in 1994 and officially launched in 1996, marking a significant innovation in curriculum development. CLIL represents an educational approach that focuses on using an additional language for both learning and teaching content as well as language skills (Harrop, 2012).

As described by (Kontio & Sylvén, 2015), CLIL involves integrating subject matter content to facilitate language learning, with content spanning various non-language disciplines such as science, history, and literature. Originating in Canada in the 1960s, the CLIL method has gained considerable popularity in Europe over the past two decades.

This educational approach intertwines language acquisition with subject matter learning to enhance learners' language proficiency and deepen their understanding of specific topics. The CLIL framework emphasizes four key elements: Content, cognition, communication, and culture. Initially, students engage with content during language lessons, followed by the development of cognitive skills to interpret and analyse content linguistically. Communication involves learning language within different contexts, while cultural awareness plays a pivotal role in advancing foreign language proficiency. (Aro & Mikkilä-Erdmann, 2015) studied the effectiveness of CLIL for foreign language learning. As stated in their research, learning the language, and learning the culture go hand-in-hand. It is almost impossible to learn a language without learning the culture surrounding that language. In fact, cultural awareness help to influence the way people speak. In the study, the authors conducted pre and post-test to determine the culture awareness development for the participants. The result of the study showed a significant improvement to the students' cultural awareness by implementing the CLIL method.

Sakellariou and Papadopoulou (2020) observed that nearly all European countries offer various forms of CLIL courses, which can be implemented from elementary school through university levels. A significant advantage of CLIL is that it integrates language learning seamlessly into regular curriculum without requiring additional teaching hours. Their findings align with prior research indicating the positive impact of CLIL on students' language acquisition and cognitive development. Additionally, the CLIL approach allows students to acquire a new language while maintaining proficiency in their native language, fostering a positive attitude towards plurilingualism among learners.

Incorporating educational technology alongside CLIL can yield significant advantages. (Barre-Parrales & Villafuerte-HolguĆn, 2021) conducted research to assess how technology affects the authenticity of CLIL courses. Their findings indicated that integrating technology not only assists students in enhancing their language proficiency but also enriches their understanding of the subject matter. Additionally, technology plays a beneficial role in reinforcing the four key components of the CLIL learning model: content, cognition, communication, and culture.

CLIL can have great applications in many fields. As stated by (Azmi et al., 2019), CLIL can be integrated to enhance the quality of journalism. According to the author, the use of CLIL can lead to better curriculum design and enhanced material development. Another study by (Pancheva & Antov, 2017) showed the benefits of CLIL within Engineering Education. This method of teaching and learning helps to improve the confidence level of the learners and enhanced the "academic cognitive processes and communication skills". Furthermore, students can learn more vocabulary. Consistent with (Harrop, 2012), CLIL students have better foreign language skills compared to traditional language learners. Another application of CLIL is in the field of physical education by implementing the CLIL method, it helps students to improve their oral comprehension skills. Indeed, students have to use English to explain ideas, give instructions for activities, and communicate with peers.

Research on the CLIL approach in Indonesian tertiary education is scarce. These trials have shown that in order to improve student practice, meaning must be prioritized in addition to form. In an effort to more completely realize its promise for producing globally-minded and competent professionals, this method aims to transform language learners into language users who can adapt to the demands of globalization (Brown, 2013). Moreover, teaching language and material separately is less productive and meaningful than giving students instructions that emphasize their integration (Umemura, 2013).

In Indonesian universities, CLIL is hardly ever employed, and even when it is, very few content lecturers are qualified to implement it in the classroom. International class programs (ICPs) are being created by

State University of Makassar (UNM) in an effort to include CLIL into its majors and raise the university's profile. Nevertheless, given that so few Indonesian universities have adopted the use of foreign language (English) as a medium in teaching non-linguistic disciplines, not many studies of CLIL in higher education have ever been carried out.

Even so, despite their growing impact on Indonesian education, CLIL implementation is still in its experimental stages and is seen as dubious when it comes to higher education in particular. Coleman (2006) discovered that there was a need for training for both indigenous personnel and pupils, as well as "inadequate language skills among students and teachers." The absence of certified CLIL teaching professionals in Indonesia is one of the primary causes. In the so-called "CLIL-based Classroom," where teachers are expected to possess not only subject-matter expertise but also 70 linguistic competencies, their qualifications are highly valued. A few pedagogical concepts need to be addressed in order to implement a CLIL method, which integrates language and content (Coyle et al., 2010).

Indonesia's higher education context. This is a part of a research conducted at Faculty of Science and Technology of Nusa Cendana University in Kupang, East Nusa Tenggara Province. This paper outlines an attempt to discover students' progress in both content and language skill in a content and language integrated learning (CLIL) lessons at an. in primary schools as it is utilized to support the teaching of English to young learners (TEYL) in Indonesia This study explores the implementation of an adapted form of Content and Language Integrated Learning (CLIL). Three teachers of well-established public primary schools in one of the municipalities of East Java province participated in the study due to their experiences in integrating subject content and English in day-to-day classes., the emerging outcomes of the study should serve as practical guidance for the improvement of TEYL activities by adapting CLIL in the primary schools of Indonesia.

The demand for Indonesian language learning innovation is urgently needed. Learning will be of high quality if the lecturer can manage and be able to apply the right learning model. The use of an appropriate learning model is expected to be able to achieve the objectives of learning writing skills, in this case not only increasing the competence of language skills but also understanding language learning content. One model that can be used is the Content and Language Integrated Learning model. CLIL is a learning model that combines language and language learning content. Pendekatan Content and Language Integrated Learning (CLIL): paradigma pembelajaran baru kurikulum 2013 dalam pembelajaran bahasa indonesia. Delving into Content Lecturers' Teaching Capability in Content Language Integrated Learning (CLIL) at an Indonesian University. (Muhammad Arham and Andi Hudriati Akrob: 2023). Based on discussion above, this study tries to develop the Module of Science of al Bayan with the Content and Language Integrated Learning (CLIL) with the ADDIE model in State Islamic University of Imam Bonjol Padang Indonesia..

METHODS

Research Design

This study employs a quasi-experimental research design because the sample does not undergo random assignment to groups. In quasi-experimental research, participants are selected from existing groups, and randomization is not always possible due to practical or institutional constraints. According to Creswell (2014), quasi-experimental designs are commonly used in educational settings where intact classes must be used and random assignment is not feasible. In this study, the students come from the same academic context and share similar learning characteristics, which supports the comparability between the experimental and control groups.

The quasi-experimental design applied in this research follows the non-equivalent pre-test and post-test model. This design involves two groups: an experimental group and a control group, both of which are given a pre-test before the treatment and a post-test after the treatment. Sugiyono (2008) explains that the pre-test and post-test design allows researchers to measure the effect of an intervention by comparing students' performance before and after the treatment. The absence of random assignment is compensated by the use of pre-test scores to examine initial group equivalence.

Table 1 : Pre- Test and Post Test

<i>Group</i>	<i>Pre- Test</i>	<i>Treatment</i>	<i>Post- Test</i>
<i>Control Group</i>	O1		O2
<i>Experimental Group</i>	O1	X	O2

Target Population

The Population of this study are the students of Arabic Language department in State Islamic University Imam Bonjol Padang which located in West Sumatera Indonesia. Target population for this research is 152 students The population of this study consists of students of the Arabic Language Department at State Islamic University Imam Bonjol Padang, which is located in West Sumatera, Indonesia. This department offers courses that emphasize the development of Arabic linguistic competence, including grammar, rhetoric, and literary analysis. As a result, the students are regularly engaged with subjects related to IIm al-Bayān and other branches of Arabic rhetoric, making them an appropriate population for investigating the use of e- modules in learning Arabic rhetorical concepts.

Sample Size

This participates are 152 undergraduates' students who enrolled in Arabic language course in Islamic University Imam Bonjol Padang, a random sampling. The participants of this study are 152 undergraduate students who are enrolled in the Arabic Language Department at State Islamic University Imam Bonjol Padang. These students are actively involved in Arabic language courses, including rhetoric, grammar, and literary studies, which makes them a relevant population for research on the effectiveness of learning media in Arabic instruction. According to Creswell (2014), a population refers to a group of individuals who share the same characteristics and from whom a researcher seeks to draw conclusions. In this study, all 152 students represent the accessible population because they meet the criteria required for the investigation and are directly exposed to the instructional context being examined.

Research Instrument

The instruments that be used in this study are, a needs analysis questionnaire, motivation questionnaire, a user acceptance questionnaire, an expert validation questionnaire, pre-test and post-tests. In this section, a description of each instrument is provided to address how the data collected. The instruments used in this study include a needs analysis questionnaire, a motivation questionnaire, a user acceptance questionnaire, an expert validation questionnaire, as well as pre-test and post-test assessments. Each instrument was designed to collect specific types of data related to the development and evaluation of the e-module for IIm al-Bayān, particularly on the topic of tasybīh.

RESULTS AND DISCUSSION

E- Module With Content and Language Integrated Learning



Figure 1

The Figure above shows the content of the e-module begins with a focused discussion on the definition of *tashbīh*, drawing upon the perspectives of several scholars in the field of Arabic rhetoric. This opening section is particularly significant, as it establishes the conceptual foundation upon which subsequent topics are built. By introducing learners to precise and authoritative definitions, the module ensures that they develop a clear and accurate understanding of the term before engaging with more complex analytical tasks.

According to Ahmad al-Hāshimī in *Jawāhir al-Balāghah*, *tashbīh* is defined as a rhetorical device that establishes a comparison between two entities based on a shared attribute. This comparison serves not only as a stylistic feature but also as a means of enhancing clarity and aesthetic expression. By highlighting similarities between different objects or ideas, *tashbīh* enables speakers and writers to convey meaning in a more vivid and impactful manner. This definition underscores the dual function of *tashbīh* as both a communicative and an artistic device.

Similarly, Amin and al-Jārim (2004) in *Al-Balāghah al-Wādhah* describe *tashbīh* as a linguistic tool that facilitates comprehension by linking abstract or unfamiliar concepts to concrete and familiar images. This perspective emphasizes the cognitive function of *tashbīh*, particularly its role in making complex ideas more accessible to the audience. By bridging the gap between the known and the unknown, *tashbīh* supports effective communication and enhances the interpretability of language.



Figure 2

Figure 2, the learning media content of the e-module presents the definition of *tashbīh* through an integrated multimedia approach, particularly emphasizing video-based learning. This design reflects a deliberate effort to enhance students' comprehension by combining traditional textual explanations with dynamic visual and auditory elements. By embedding multimedia resources within the instructional content, the module creates a richer and more engaging learning environment that supports deeper conceptual understanding.

The inclusion of video as a complementary learning tool allows students to experience the concept of *tashbīh* in a more vivid and contextualized manner. Unlike static text, video can demonstrate how rhetorical expressions function in real communicative settings, including excerpts from Arabic literary texts or spoken discourse. This dynamic presentation enables learners to observe not only the structure of *tashbīh* but also its stylistic and aesthetic impact, thereby bridging the gap between theory and practice.

From a cognitive perspective, the integration of visual and auditory inputs aligns with established principles of multimedia learning. Mayer (2021) argues that learners process information more effectively when it is presented through multiple channels, as this approach reduces cognitive overload and facilitates meaningful learning. In this context, the combination of written definitions and video explanations allows students to build more robust mental representations of the concept, enhancing both comprehension and retention.

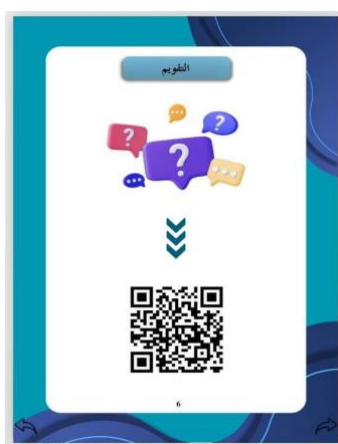


Figure 3

In Figure 3 the assessment of the e-module is presented through an online platform that they scan barcode directly connected to Quizizz. This digital-based assessment serves as both a formative and summative tool, enabling students to demonstrate their understanding of *tashbīh* concepts while engaging in an interactive and user-friendly format. The integration of Quizizz allows for immediate feedback, which is essential for formative assessment as it helps learners identify areas of strength and aspects requiring improvement (Black & William, 2009). Moreover, the gamified features of Quizizz enhance student motivation and participation, creating a more dynamic assessment environment compared to traditional paper-based tests (Darmawan et al., 2020).

By aligning the assessment with the learning outcomes of the e-module, this approach ensures that evaluation not only measures knowledge retention but also supports continuous learning and active engagement. Such integration of technology-based assessment aligns with contemporary best practices in digital pedagogy and reinforces the effectiveness of e-learning environments (Mayer, 2021).

The Impact of using E- Module for University Students

Table 2 Independent Samples T-Test (Pre-Test of Experimental and Control Classes)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre Eksperimen – Pre Kontrol	(Equal variances assumed)	0.037	0.848	3.927	108	0.000	4.145	1.056	2.053	6.238
	(Equal variances not assumed)	–	–	3.927	107.996	0.000	4.145	1.056	2.053	6.238

The results of the independent samples t-test on the pre-test scores indicate that there was no statistically significant difference between the experimental and control groups before the intervention was implemented. The analysis showed that the calculated t-value was 4.145 with 108 degrees of freedom (df), and the significance value (Sig. 2-tailed) was 0.000. However, based on the statistical interpretation, the significance value should be compared with the predetermined alpha level of 0.05. Since the obtained p-value is less than 0.05 ($p < 0.05$), the result actually indicates a statistically significant difference between the two groups' pre-test scores. Therefore, the interpretation of the result should be carefully reconsidered.

A significant difference in pre-test scores suggests that the two groups did not have exactly the same level of prior knowledge before the treatment. Although the experimental group may have shown only a slight difference in average performance, the statistical test indicates that this difference was meaningful. According to Field (2018), a significant p-value in an independent samples t-test indicates that the observed difference between two groups is unlikely to have occurred by chance. Therefore, the initial condition of the groups should be considered when interpreting the effect of the intervention.

The presence of differences in pre-test results does not necessarily invalidate the study, but it requires careful consideration during the analysis of the treatment effect. In experimental research, pre-test scores are used to identify participants' initial abilities and to determine whether groups are comparable before an intervention is applied (Creswell & Creswell, 2023). When initial differences exist, researchers should focus not only on the post-test comparison but also on the improvement or gain scores achieved after the intervention.

Overall, the pre-test findings provide important information regarding the students' initial learning conditions before the implementation of the instructional treatment. These results highlight the importance of considering students' prior knowledge when evaluating the effectiveness of an educational intervention. The subsequent analysis of post-test results is therefore essential to determine whether the instructional approach applied in the experimental group contributed to greater learning improvement compared to the control group.

Table 3 Independent Samples T-Test (Post-Test of Experimental and Control Classes)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper

									Lower	Upper
Post Eksperimen – Post Kontrol	(Equal variances assumed)	0.005	0.943	5.571	108	0.000	6.509	1.168	4.193	8.825
	(Equal variances not assumed)									

The results of the independent samples t-test revealed that there was a statistically significant difference between the post-test scores of the experimental and control groups. The calculated t-value was 5.571 with 108 degrees of freedom (df), and the significance value (Sig. 2-tailed) was 0.000, which is lower than the significance level of 0.05. Therefore, the null hypothesis was rejected, indicating that the instructional intervention applied in the experimental group significantly influenced students' learning outcomes. This finding suggests that the learning approach implemented in the experimental class was more effective than the conventional teaching method used in the control class.

The effectiveness of the intervention is further supported by the mean difference value of 6.509, which indicates that students in the experimental group achieved a higher average post-test score compared to students in the control group. This improvement demonstrates that the integration of the implemented learning approach provided greater support for students' understanding and achievement. According to Creswell and Creswell (2023), significant differences found through statistical testing indicate that an intervention may contribute to measurable changes in participants' performance, particularly when supported by meaningful differences between groups.

Furthermore, the 95% confidence interval of the mean difference ranged from 4.193 to 8.825. Since this interval does not include zero, the result confirms that the observed difference between the two groups is statistically reliable and unlikely to occur due to chance. This finding aligns with the concept of inferential statistics, where confidence intervals are used to estimate the extent to which sample findings represent actual differences within the population (Field, 2018). Thus, the statistical evidence confirms that the intervention had a positive effect on students' academic performance.

The findings of this study are consistent with previous research emphasizing that innovative and student-centered instructional approaches can enhance learning effectiveness by promoting deeper understanding and active engagement among learners (Richards & Rodgers, 2014). The significant improvement achieved by the experimental group suggests that the implemented approach successfully addressed students' learning needs and provided a more meaningful learning experience compared to traditional instruction. Therefore, the results indicate that the instructional intervention can be considered an effective strategy for improving students' academic achievement.

CONCLUSIONS

The present study demonstrates that the development and implementation of an e-module for the Ilm al-Bayan course significantly enhance students' learning outcomes, motivation, and engagement. Based on the statistical analyses, both normality and homogeneity assumptions were satisfied, allowing the application of parametric tests. The Paired Sample t-Tests revealed that students in the experimental class showed a greater improvement from pre-test to post-test compared to the control class, indicating that the e-module intervention effectively supported learning. Additionally, the Independent Sample t-Tests confirmed a significant difference between the post-test scores of the experimental and control groups, further validating the effectiveness of the e-module.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest" should be included if there is no conflict of interest.

AVAILABILITY OF DATA AND MATERIALS

The data used and analysed in this study are not publicly available; however, they may be obtained from the corresponding author upon reasonable request.

DECLARATION OF GENERATIVE AI

Not applicable.

ETHIC STATEMENTS

Not applicable.

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