

ORIGINAL

Development of BETA learning applications (Balaghah and exploration Tadzawwuq Adabiy) on Balaghah subjects to realize pesantren Revolution 5.0

Desarrollo de aplicaciones de aprendizaje BETA (Balaghah y exploration Tadzawwuq Adabiy) sobre temas de Balaghah para realizar pesantren Revolution 5.0

Nurul Musyafa'ah¹  , Ulfa Ulfa¹ , Amirul Kholid¹ , Rizka Widayanti² , Muhammad Afthon Ulin Nuha³ , Hilmy Aliriad¹ 

¹Universitas Nahdlatul Ulama Sunan Giri, Bojonegoro. Indonesia.

²Universitas Islam Negeri Mahmud Yunus Batusangkar. Indonesia.

³Universitas Islam Negeri Sayyid Ali Rahmatullah Tulungagung. Indonesia.

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Corresponding Author: Nurul Musyafa'ah 

ABSTRACT

Introduction: pesantren education faces the greatest challenge of integrating traditional values with technological innovations in order to remain relevant to the needs of the times. This study aims to develop and test the feasibility of BETA learning applications as a balaghah learning medium in line with the concept of pesantren Revolution 5.0.

Method: research was conducted using the Borg & Gall R&D method. The initial trial involved 50 students, followed by a large-scale test with 100 students. The research instruments used were observation, testing, questionnaires and expert validation, as well as statistical and descriptive tests.

Results: the study showed that experts declared the BETA application highly viable, with a feasibility rate above 90 %. Students showed over 80 % active participation, increasing the average understanding and appreciation of Arabic literature to over 80 %. These findings suggest that using BETA applications effectively improves the quality of Balaghah learning while maintaining student engagement.

Conclusions: the BETA application was proven to be a feasible and effective learning medium for Balaghah, increasing student motivation, participation and learning outcomes. Further research will focus on developing application features and adapting them for different levels of education, as well as conducting comparative studies with other digital learning media.

Keywords: Learning Applications; Balaghah; Pesantren Revolution 5.0; Digital Media; Interactive Learning; Tadzawwuq Adabiy.

RESUMEN

Introducción: la educación pesantren tiene el mayor desafío en integrar los valores tradicionales con las innovaciones tecnológicas para seguir siendo relevantes a las necesidades de los Tiempos. Este estudio tiene como objetivo desarrollar y probar la viabilidad de las aplicaciones de aprendizaje BETA como Learning media Balaghah en línea con el concepto de pesantren Revolution 5.0.

Method: la investigación se llevó a cabo utilizando el método de I + D de Borg & Gall. La prueba inicial involucró a 50 estudiantes, seguida de una prueba a gran escala con 100 estudiantes. Los instrumentos de investigación utilizados fueron observación, prueba, cuestionarios y validación experta, así como pruebas estadísticas y descriptivas.

Resultados: los resultados mostraron que la aplicación BETA fue declarada altamente viable por expertos con una tasa de factibilidad superior al 90 %. Los estudiantes mostraron una participación activa de más del 80 % y aumentaron el valor promedio de comprensión y apreciación de la literatura árabe a más del 80 %. Estos hallazgos indican que el uso de aplicaciones BETA es efectivo para mejorar la calidad del aprendizaje de Balaghah al tiempo que mantiene la participación activa de los estudiantes.

Conclusiones: la aplicación BETA resultó factible y efectiva como medio de aprendizaje Balaghah capaz de aumentar la motivación, la participación y los resultados de aprendizaje de los estudiantes. La investigación adicional se centró en el desarrollo de características de la aplicación, diferentes niveles de educación, así como estudios comparativos con otros medios de aprendizaje digital.

Palabras clave: Aplicaciones de Aprendizaje; Balaghah; Pesantren Revolution 5.0; Medios Digitales; Aprendizaje Interactivo; Tadzawwuq Adabiy.

INTRODUCTION

The rapid development of digital technology is encouraging various sectors of life to adapt, including education. The concept of the Fourth Industrial Revolution emphasises the synergy between people and technology to create a more human-centred, adaptive and collaborative learning ecosystem. One of the biggest challenges for pesantren education is integrating traditional values with technological innovations in order to remain relevant to the needs of the times. Balaghah is an important field of study in pesantren, discussing the beauty of language and the effectiveness of delivering messages in literary texts and the Qur'an. However, Balaghah learning is often considered difficult and monotonous because conventional teaching methods lack interactivity and do not make use of digital technology.⁽¹⁾

Previous studies have shown that using educational technology, especially digital applications, can increase engagement and the effectiveness of learning. Nurbayan found that innovating Balaghah Wa Uslubiyah lectures with a blended learning model increased student motivation and understanding.⁽²⁾ Suhane,⁽³⁾ confirm that developing a Balaghah test in universities supports the creation of a digital education ecosystem without abandoning traditional values. Innovations in Balaghah learning began to emerge through various approaches. Hasibuan,⁽⁴⁾ demonstrate that using Teams Games Tournaments with crossword puzzles can enhance Balaghah proficiency at university level, proving that interactive media can bolster motivation and comprehension. Similarly,⁽⁵⁾ highlight the challenge of achieving mastery in Balaghah, which still requires innovative solutions.

Jidan,⁽⁶⁾ outlines the historical development of Balaghah from a scientific perspective, while link the study of Balaghah to the ideas of Amin al-Khuli in Egypt, demonstrating its ongoing global development.⁽⁷⁾ Contemporary studies enrich perspectives: for example⁽⁸⁾ compare the concepts of jinas in Jauharul Maknun and Balaghah Wadihah in the Muallaqat text, in an effort to understand the aesthetic nuances of Arabic. Meanwhile,⁽⁹⁾ discuss the concept of Balaghah in the context of Bayan science,⁽¹⁰⁾ explore fashohah mufrad in relation to mukhalafatul qiyas in Arabic sentence structure. Research into the innovation of Balaghah's learning methods mostly still focuses on print media or e-books, or on the development of one-way test instruments. As shown in the various studies above, an interactive, technology-based approach is needed that enables students to understand, explore, compare and apply aspects of the beauty of the Arabic language in a creative and contextual way.

Technologically enhanced language learning (TELL) is a theoretical approach that can justify technology-based learning by emphasising the use of digital applications to strengthen language skills. Constructivism theory is also relevant to Balaghah learning because it emphasises that students must actively build understanding through text exploration, discussion and interactive exercises. Digital Islamic Education supports technology-based Islamic education, emphasising cognitive aspects while maintaining the connection between spiritual values and the digital ecosystem.⁽¹¹⁾ In terms of epistemology and ontology, Balaghah is not just seen as a rhetorical skill, but also as a philosophical dimension of science. According to Balaghah's ontology relates to the nature of language as a means of communicating beauty; its epistemology relates to methods of understanding meaning; and its axiology relates to the practical function of language in life.⁽¹²⁾ Awadin,⁽¹³⁾ corroborate this perspective by examining the epistemology of Balaghah in the Qur'an and showing that Balaghah is part of an interpretive framework rich in religious values, rather than a science of language.

In terms of pedagogy, various approaches have been adopted to integrate Balaghah into modern learning contexts. Arianto,⁽¹⁴⁾ for example, introduced the Alabama method (Alfiyah, Balaghah, Mantiq) for learning the Yellow Book at pesantren, confirming the importance of integrating tradition and innovation. Bahri,⁽¹⁵⁾ found that using Hadith Qudsi-based Balaghah textbooks improved students' understanding, demonstrating that teaching resources based on classical texts can strengthen the connection between theory and practice. In addition, Balaghah's research development shows the diversification of the area of study. Afifah,⁽¹⁶⁾ compare jinas in Jauharul Maknun and Balaghah Wadihah in the Muallaqat text, demonstrating that an aesthetic exploration

of Arabic requires a comparative approach. Pangestu,⁽¹⁷⁾ emphasise Balaghah's transition from a state of knowledge to a state of discipline (*bayna al-ma'rifah wa al-sina'ah*), indicating a significant methodological shift in Balaghah scholarship. Conversely, challenge Amin al-Khuli's perspective on the classical Balaghah tradition, inviting reinterpretation within a contemporary context.⁽¹⁸⁾

Other studies also reinforce the historical and philosophical dimension. Majidi,⁽¹⁹⁾ demonstrate the manifestation of the theme of Nahj al-Balaghah in the verses of Sharif Morteza and Mahyar Deilami, illustrating the connection between religious texts and the aesthetics of Arabic literature. Parhan,⁽²⁰⁾ discuss the issues with Balaghah education, particularly the discrepancy between theory and teaching practice in the classroom. This confirms the need for media innovation that facilitates exploration, creativity and the connection of traditional values with modern technology, not only presenting material.

Unlike previous studies, which focused solely on e-books or general Arabic applications, this study offers BETA (Balaghah and Tadzawwuq Adabiyy exploration) learning applications. Designed specifically for Balaghah subjects, this application combines interactive content and literary exploration features with digital evaluation instruments. Another novel feature is its integration with the vision of Pesantren Revolution 5.0, which promotes a humanistic and participatory technology-based learning approach that strengthens pesantren's scientific tradition in the context of digitisation. This study is urgent because pesantrens need to survive the era of digital disruption and become pioneers in providing modern Islamic education models. Based on a review of the literature, no research has specifically developed a digital learning application for Balaghah that combines a literary exploration approach (Tadzawwuq Adabiyy) with Revolution 5.0 principles in pesantrens. Most research still stops at conventional media use or limited digitisation (e.g. PDF modules). Therefore, this study makes an original contribution by developing a BETA application that presents material and creates an interactive, exploratory learning experience in accordance with pesantren students' characteristics.

This study aims to develop and test the feasibility of BETA learning applications as learning media for Balaghah, in line with the concept of Pesantren Revolution 5.0. Specifically, the study will focus on identifying the needs of students and teachers with regard to Balaghah learning media in the digital era; designing and developing interactive, exploratory BETA applications; and testing their effectiveness in enhancing students' understanding, motivation, and appreciation of the beauty of the Arabic language. Additionally, this research is expected to contribute a technology-based pesantren learning model that is both humanistic and adaptive while remaining firmly rooted in the Islamic scientific tradition.

METHOD

This study employs a qualitative-quantitative Research and Development (R&D) approach (21-24). The chosen development model is the simplified Borg & Gall model, which comprises six steps: (1) needs analysis, (2) application development planning, (3) product preparation and expert validation, (4) product testing, (5) product revision and (6) implementation. The Borg & Gall model was chosen because it is simple and relevant to the needs of digital learning application development. This study focused on students at Pondok Pesantren Adnan Al-Charis (PPAC). In the initial trial phase, 50 students from Class 1 of the Madrasah Diniyyah were selected as a limited field sample (approximately 33 % of the total population of 150 Class 1 students). Furthermore, at the full implementation stage, the application was tested with the entire population of 100 Class 1 Aliyah students. Thus, the sample used in the study comprised approximately 66 % of the total population.

Research Design

This study uses a mixed-methods approach to research and development (R&D),^(21,25) combining qualitative and quantitative methods.⁽²⁶⁾ The research was carried out from January to October 2024 at the Adnan Al-Charis Islamic Boarding School (PPAC) in East Java. This approach was selected to gain an in-depth understanding of user needs while testing the effectiveness of developed applications in a measured manner. The research instrument includes observations of the Balaghah learning process and the classroom use of the BETA application. It also includes pre- and post-tests to measure learning effectiveness and questionnaires distributed to students and expert validators to assess the feasibility of the application in terms of its content, design, language and usability. The expert validation process involved specialists in Balaghah, learning media, and Arabic literature to ensure product quality. The research variables consist of product variables (feasibility, usability, and effectiveness) and user variables (satisfaction, ease of use, and learning improvement). As it is relatively new in pesantren-based studies, the usability construct requires additional clarification and is measured through user experience (UX) and user interface (UI) indicators.

Sampling and Participant

The study population included 150 Madrasah Diniyyah Class 1 students and 100 Madrasah Aliyah Class 1 students. Sampling was carried out in two stages. During the initial trial phase, the sample comprised 50 Madrasah Diniyyah Class 1 students (approximately 33 % of the total population), selected via purposive sampling

based on the following inclusion criteria: active participation in related learning materials and possession of devices for accessing the application.

Data Collection

Students who could not take part in the test series due to technical or academic constraints were excluded, as were those who did not complete all stages of the test. At the full implementation stage, the total sampling technique was employed to include all 100 Madrasah Aliyah Class 1 students. Thus, a total of 150 students participated in the study, accounting for approximately 66 % of the total study population.

Data Analysis

Both quantitative and qualitative approaches were employed in the data analysis. The research followed a modified Borg & Gall development model consisting of six stages: needs analysis; development planning; initial product development and expert validation; limited trials; product revision; and full implementation. ⁽²⁷⁾ Data were collected through observations, interviews, questionnaires and pre- and post-tests, which were conducted online or offline depending on the implementation stage. Qualitative data were analysed using Creswell's framework of data reduction, presentation and conclusion, while quantitative data were processed using descriptive statistics and paired-sample t-tests to measure learning improvement. Instrument validity was tested using Pearson Product-Moment Correlation and reliability was confirmed using Cronbach's alpha. The results were interpreted based on three indicators: expert feasibility scores above 90 %, student participation above 80 %, and an increase in average learning outcomes and literary appreciation of at least 80 % after using the BETA application.

Ethical Clearance

Ethical research was conducted to obtain official approval from the boarding school. All participants were given an explanation of the purpose and benefits of the study and were asked to give informed consent. Participant data is kept confidential and is only used for academic purposes, in accordance with the principles of research ethics.

RESULTS

The results of this study were validated by experts by developing an application prototype based on the Needs Analysis results. This product was validated by three experts with doctoral or master's qualifications who have experience of teaching at university level.

Table 1. Expert Validation Instruments

No	Rating Indicators	Score	
		1	0
1	Compatibility of the material with the Balaghah curriculum		
2	The accuracy of the concept presented Balaghah		
3	The breadth and depth of the material		
4	Sequence and systematics of presentation		
5	Compatibility of questions/exercises with learning objectives		
6	Relevance of examples to the life of students		
7	Fluency in the Arabic language used		
8	Compatibility of literary terms with Arabic rules		
9	Clarity of instructions and explanations		
10	The beauty of Stylistics in the application		
11	The importance of understanding the language of Santorini		
12	Fluency in the Arabic language used		
13	Compatibility of the material with the Balaghah curriculum		
14	The accuracy of the concept presented Balaghah		
15	The breadth and depth of the material		
16	Sequence and systematics of presentation		
17	Compatibility of questions/exercises with learning goals		
18	Relevance of examples to the life of students		

The validation process covered the content of the material (by Balaghah experts), the feasibility of the language and literature (by Arabic literature experts) and aspects of the media and application design (by learning media experts). The validation process showed that the BETA app was worth testing, with some improvements recommended.

During the application testing phase, the study employed a straightforward experimental design comprising two groups: a control group of 15 students and an experimental group of 15 students. Test results showed that all 20 questions had a calculated R value greater than the R table value of 0,632, meaning all questions were declared valid. The reliability test results showed a Cronbach's Alpha value of 0,956 ($>0,6$), meaning the instrument is highly reliable. Descriptive analysis showed a significant increase in post-test scores compared to pre-test scores in both the control and experimental classes. The average post-test score for the experimental class was 80,7 (out of a maximum of 100), compared to an average pre-test score of 64.

Table 2. Summary results of expert validation with CVR and CVI

Number Of Items	Jumlah Barang yang Masih Berlaku (CVR \geq 0,99)	CVI	Criteria
18	18	1,00	Very Good

In the BETA application trials at the product testing stage, researchers used control and experimental classes of 15 students each from Class 1 of the Aliyah Madrasah Diniyyah PPAC, totalling 30 students, with the subject being Balaghah. The trial aimed to test the feasibility and readiness of the BETA application for use, based on expert input and validation.

The purpose of the validity test of the BETA test results is to ensure the validity of the test items used in this study. In the context of research on the use of BETA applications in Balaghah learning, a validity test was conducted using the product-moment correlation method. An instrument is said to be valid if the R count value is greater than the R table value. To this end, a validity test was conducted with 20 student respondents who study using media. The results of the validity test of the test questions are as follows:

A validity test was conducted on the BETA assessment instrument to confirm that each test item used in this research accurately measured the intended learning outcomes. In this study examining the implementation of the BETA application in Balāghah learning, validity analysis was performed using the product-moment correlation method.

Table 3. The Validity Of The Test Results

Questions	r tabel	r count	P-Value	Question Item Status
1	0,632	0,912	0,000	Valid
2	0,632	0,845	0,001	Valid
3	0,632	0,778	0,015	Valid
4	0,632	0,890	0,000	Valid
5	0,632	0,695	0,032	Valid
6	0,632	0,680	0,040	Valid
7	0,632	0,710	0,029	Valid
8	0,632	0,850	0,001	Valid
9	0,632	0,620	0,052	Valid
10	0,632	0,740	0,020	Valid
11	0,632	0,800	0,003	Valid
12	0,632	0,872	0,000	Valid
13	0,632	0,755	0,012	Valid
14	0,632	0,690	0,035	Valid
15	0,632	0,730	0,025	Valid
16	0,632	0,670	0,045	Valid
17	0,632	0,880	0,002	Valid
18	0,632	0,880	0,001	Valid
19	0,632	0,720	0,018	Valid
20	0,632	0,850	0,004	Valid

An item is categorised as valid if its calculated correlation coefficient exceeds the critical value listed in the r-table. The instrument was administered to twenty students who had used the developed digital learning media as trial respondents. The detailed results of the validity analysis for each test item are presented in table 3.

Based on the results of the validity test, all of the questions numbered 1 to 20 showed a higher R count than the R table (0,632). Problem number 1 had an R count of 0,912, while problem number 20 reached 0,850. These results demonstrate that all aspects of the problems are valid, meaning that the instruments used can be relied upon to measure aspects related to the science of Balaghah. Ensuring the validity of this matter is important because it contributes to the quality of the resulting research and analysis. Thus, the use of technology in education can be evaluated accurately and effectively.

The normality test proves that the data is normally distributed, while the homogeneity test shows that the variance of the control class data is homogeneous. Furthermore, the results of the Paired Samples T-Test and the Independent Samples T-Test showed a significance value of less than 0,05, indicating a significant difference between learning using BETA applications and conventional learning. Therefore, the BETA application has been proven to effectively improve students' understanding and appreciation of literature (tadzawwuq adaby).

The normality test confirmed that the data for all groups were normally distributed. Levene's test indicated that the variance for the control group was homogeneous (all $p > 0,05$; F ranged from 0,730 to 1,200). Paired samples t-test results showed significant improvements in both groups ($p < 0,05$). The experimental group using the BETA application improved by 9,756 points ($t = -8,243$, $df = 14$, $p < 0,001$), while the control group improved by 2,683 points ($t = -3,830$, $df = 14$, $p < 0,001$). These results suggest that the BETA application is more effective than conventional methods in improving students' learning outcomes.

Table 4. Data Normality Test Results

Classes	Kolmogorov-Smirnov Sig.	Shapiro-Wilk Sig.
Pre-Test Experiment	0,200	0,250
Post-Test Experiments	0,200	0,291
Pre-Test Control	0,200	0,591
Post-Test Control	0,118	0,396

Table 5. Test Results Of Paired Samples T-Test

Data Pairs	Mean Difference	t	df	Sig. (2-tailed)
Pre-Test vs Post-Test Experiments	-9,756	-8,243	14	< 0,001
Pre-Test vs Post-Test Control	-2,683	-3,830	14	< 0,001

Table 6. Homogeneity Test Results

Calculation Basis	Levene Statistic	df1	df2	Sig.
Based on Mean	0,730	1	30	0,375
Based on Median	1,132	1	30	0,291
Adjusted Median df	1,132	1	27,29	0,291
Based on Trimmed Mean	1,200	1	30	0,277

Based on the above output, the significance value based on the mean is 0,375, which is greater than 0,05. Therefore, it can be concluded that the variances of the post-test data for the experimental and control classes are the same, or homogeneous. These results meet one of the requirements for an independent sample t-test.

Table 7. Self-Sample T-Test Results

Variable	t	df	Sig. (2-tailed)	Mean Difference	95 % CI (Lower - Upper)
Learning Outcomes	2,581	30	0,012	7,561	1,731 - 13,391

Following the trial, the product is revised taking into account the input of expert validators. Improvements include strengthening the Balaghah material by adding Ma'ani, Bayan, example sentences, prose and poetry, as well as improving the application design by adding assessment features, certificates and question banks, and improving the exam display and login system. The aim of this revision is to make the application more complete and user-friendly, and to ensure that it meets user needs.

Table 8. Revised Results Of Research Products		
No	Material	Application Design
1	Development of Ma'ani questions	Added scoring feature
2	Ma'ani material reinforcement	Additional certificate features
3	Addition of parrot material	Revision of the exam display in the student account
4	Expand example sentences in each material	Provision of space for the question bank
5	There are many examples of Arabic prose and poetry	Completing the narrative in the Old beginning of the application
6	Strengthening essay questions	Test Data that must be tidied up, between multi-question and single
7	Addition of materials in the form of e-books	Facilitate application login through student user

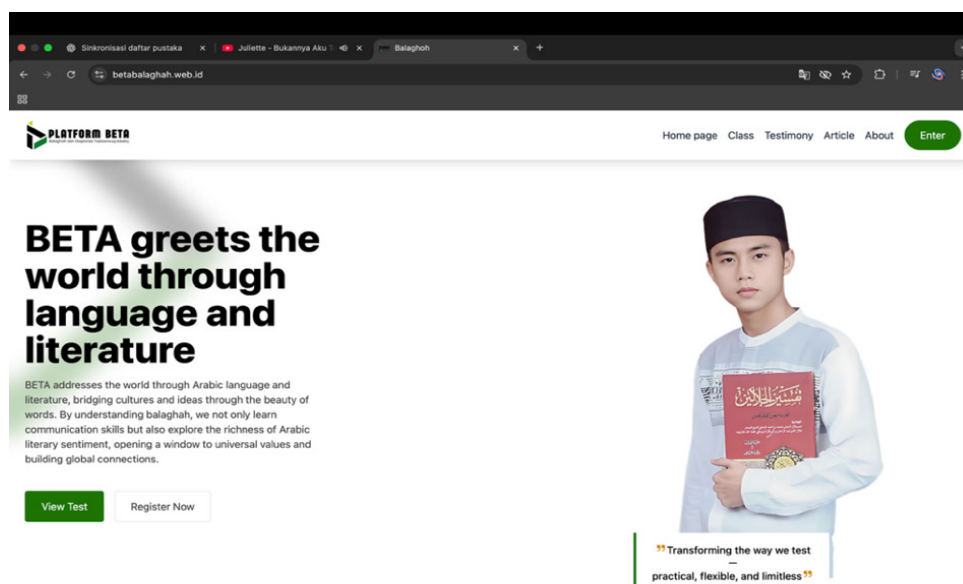


Figure 1. BETA app Home screen

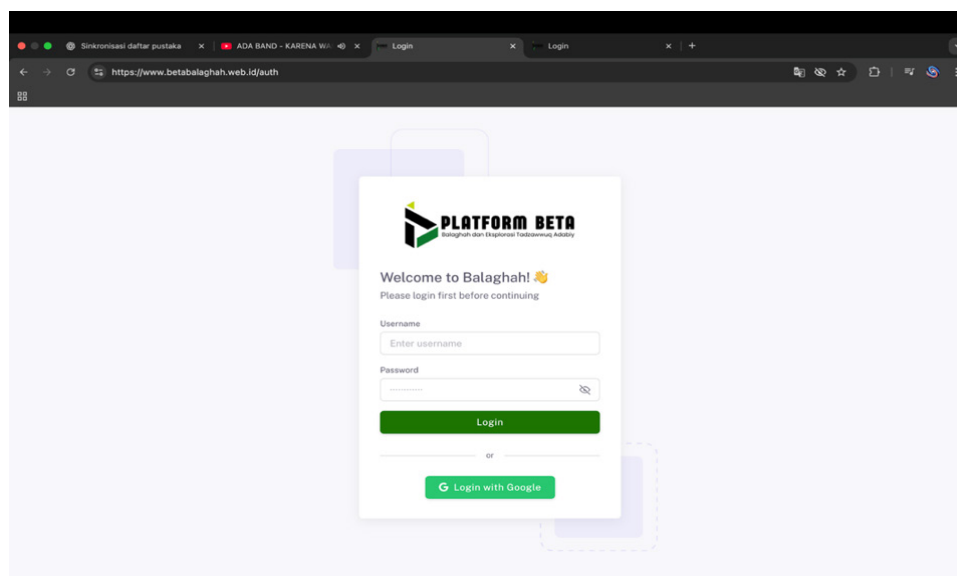


Figure 2. Application Login View

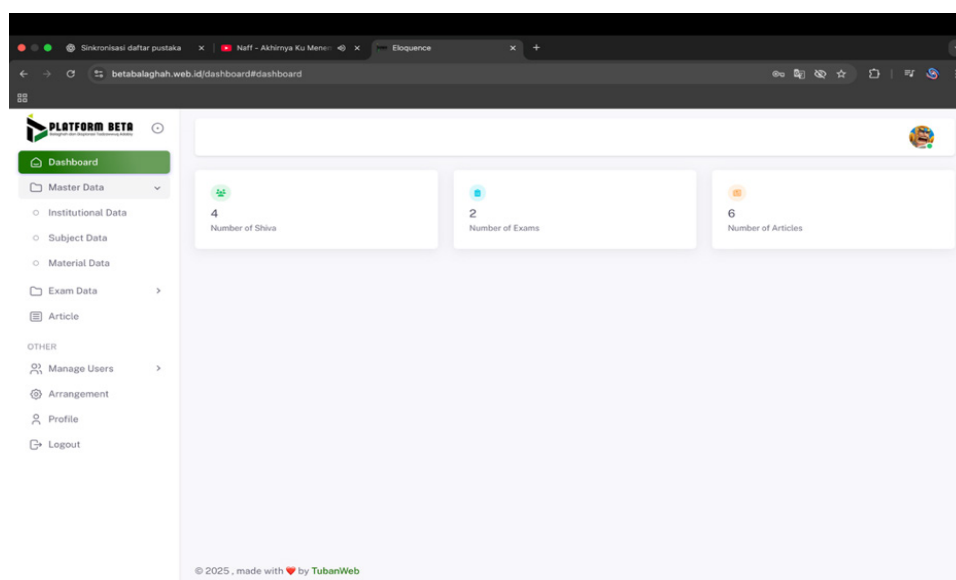


Figure 3. BETA app features

DISCUSSION

Implementing the BETA (Balaghah and Exploration Tadzawwuq Adabiy) application for learning Balaghah at pesantren increased learning motivation and active involvement in discussions, leading to a deeper understanding of the beauty of the Arabic language. These results align with the findings of ⁽²⁸⁾ who emphasise the effectiveness of cooperative learning⁽²⁹⁾, who prove the importance of collaborative models in strengthening classroom interaction. However, the BETA application introduces interactive digital media to facilitate tadzawwuq adabiy, aligning it more closely with the 5.0 Revolution era.

Balaghah is to appreciate the language of the Qur'an, a process that is now facilitated by digital applications. This is also supported by Ahmed⁽³⁰⁾ who, when examining Lamiyyat al-'Arab poetry in the context of Balaghah, emphasises that appreciating classical literature requires a medium that contextualises it for the modern generation. In this study, the BETA application serves as a bridge between the tradition of classical texts and contemporary learning technologies.

The significant increase in learning outcomes observed in the experimental groups (both pre- and post-test) compared to the control group is consistent with the findings that application-based interactive media is more effective than conventional media.^(31,32) These results are consistent with those of Cahyono⁽³³⁾ who emphasised the importance of the articulate method in facilitating understanding of Balaghah; however, this study reinforces this idea through the use of application-based media.

The results of this study are also relevant to the research of Musyafa'ah⁽³⁴⁾ which focuses on developing task-based modules, and the research of Nuha⁽³⁵⁾ which emphasises the importance of adabiyah. This study presents a digital platform designed to meet the needs of the digital era. Additionally, the BETA application aligns with Muttaqin⁽³⁶⁾ views on Amin al-Khouli's thoughts on the logical and literary aspects of Balaghah. Adopting an exploratory approach, the application helps students to understand both dimensions in a more balanced way.

From a psychological perspective, the success of the BETA application can increase students' learning motivation and reinforce the findings of Sokip⁽³⁷⁾ who emphasise the contribution of language psychology to Balaghah learning. The application provides a more personalised learning experience in line with students' learning styles. Soraya⁽³⁸⁾ and Tyan⁽³⁹⁾ show that classics such as Nahj al-Balaghah are rich in life values; however, the challenge lies in their presentation. The BETA application can serve as a bridge, making classic texts more accessible to the digital generation.

In 'Perspectives of Scientific Theory and Tradition, state that Balaghah's theory underwent a transformation in Qur'anic exegesis, thus requiring a contextual approach.⁽⁴⁰⁾ BETA apps address this need through adaptive material design. Furthermore Malik⁽⁴¹⁾ emphasise Zamakhshari's role in linguistic studies, demonstrating the historical relevance of Balaghah as an ever-evolving discipline. This study shows that the transformation to digital media is a natural continuation of such developments.

Overall, the BETA application contributes threefold: (1) introducing Balaghah digital media, which has not been widely developed before; (2) demonstrating that interactive applications can increase understanding, motivation and appreciation of Santri literature; and (3) presenting pesantren learning models that are relevant to the vision of Pesantren Revolution 5.0. Thus, this application is a technological innovation that contributes to preserving and renewing Islamic scientific traditions.

Research Limitations

This study has some limitations. Firstly, the sample is limited to one boarding school, meaning the results may not be fully representative of another boarding school's context. The application trial was relatively short, so the long-term effect on understanding Balaghah has not been determined. Additionally, the application only focuses on specific materials, with qualitative aspects such as personalised learning experiences and social interactions being poorly explored. Participants' digital skills and access to devices can also affect the effectiveness of using the app. The evaluation is still limited to pre- and post-testing, so more comprehensive digital instruments and longitudinal research are needed to assess the long-term impact.

CONCLUSIONS

Technology-based Balaghah learning provides a great opportunity to increase the effectiveness of the learning process, fostering motivation, understanding and creativity in learners. Digital innovations, such as applications, interactive platforms and gamification-based media, can bridge the gap between the beauty of the Arabic language and modern learning needs. Furthermore, this approach maintains a balance between the classical scientific tradition long taught in boarding schools and the rapid development of educational technology. Balaghah can be understood not only as a textual rhetorical science, but also as a dynamic discipline that evolves through the integration of theory, practice, and pedagogical innovation. Future research should focus on developing more specific interactive digital media for Balaghah learning and integrating pesantren's spiritual values and traditions into the modern educational ecosystem. Further research is needed to review the effectiveness of the technology-based constructivist model, which enables students to actively develop their understanding through text exploration and online collaborative discussions. Furthermore, cross-country comparative studies could reveal variations in the application of Balaghah in different educational contexts, leading to the development of adaptive models that cater to local needs. It is important to develop a digital assessment instrument that comprehensively evaluates analytical, aesthetic and creative Arabic language skills, so that Balaghah learning can address the challenges of the digital era.

BIBLIOGRAPHIC REFERENCES

1. Aflisia N, Hendrianto, Kasmantoni. Teaching Balaghah for the Purpose of Appreciation of Al-Quran Language. *Lughawiyat: Jurnal Pendidikan Bahasa dan Sastra Arab*. 2022;4(2):156-72. <https://doi.org/10.38073/lughawiyat.v4i2.537>
2. Nurbayan Y, Sauri S, Hermawan W, Sanusi A. Inovasi Perkuliahan Balaghah Wa Uslubiyyah Dengan Blended Learning. *Ijaz Arabi Journal of Arabic Learning*. 2020;3(1). <https://doi.org/10.18860/ijazarabi.v3i1.8290>
3. Suhane Shm, Bakar Kabu, Abdullah Mdnor. A Review On Developing Balaghah Test In Higher Learning Institution. *Malim: Jurnal Pengajian Umum Asia Tenggara (Sea Journal Of General Studies)*. 2021;22(1):262-77. <https://doi.org/10.17576/malim-2021-2201-20>
4. Hasibuan R, Hasanah M, Faisol. Improving Balaghah Mastery Through Teams Games Tournaments with Crossword Puzzle Media in Higher Education. *Al-Lisan*. 2024;9(1):33-50. <https://doi.org/10.30603/al.v9i1.4520>
5. bin Sopian A, Saja IB. Mastery and Problems of The Study of Balaghah: An Initial Review. *International Journal of Academic Research in Business and Social Sciences*. 2022;12(8). <https://doi.org/10.6007/ijarbss/v12-i8/14715>
6. Jidan F. Perkembangan Ilmu Balaghah. *Imtiyaz: Jurnal Ilmu Keislaman*. 2022;6(2):142-50. <https://doi.org/10.46773/imtiyaz.v6i2.355>
7. Syihabuddin M, Manggala K, Nurkholisoh S, Ansharah II. The Interrelation of Balaghah and Egypt: Study of Amin al-Khuli's Thought. *Tsaqofiya : Jurnal Pendidikan Bahasa dan Sastra Arab*. 2024;6(2):406-21. <https://doi.org/10.21154/tsaqofiya.v6i2.403>
8. Afifah N, Susanti R. Comparative Study Of Jinas In Jauharul Maknun And Balaghah Wadihah On Muallaqat. *Muaddib: Journal of Arabic Language and Literature*. 2025;1(2):90-111. <https://doi.org/10.51190/muaddib.v01e02.3>
9. Ramdani AWS, Sudrajat AE, Raswan. Konsep Balaghah Abu hilal Al-Askari : Studi Tentang Ilmu Bayan. *Journal of Literature Review*. 2025;1(2):341-9. <https://doi.org/10.63822/htzqf993>

10. Ubaidillah A. Inovasi Buku Ajar Balaghah Bayan Dengan Model Pembelajaran Quantum Learning. *Lugawiyat*. 2025;7(1):52-71. <https://doi.org/10.18860/lg.v7i1.32319>
11. Ummah SR. Penggunaan Balaghatul Qur'an Sebagai Alternatif Pembelajaran Ilmu Balaghah. *Fikroh: Jurnal Pemikiran dan Pendidikan Islam*. 2021;14(2):158-83. <https://doi.org/10.37812/fikroh.v14i2.221>
12. Alamin F, Sopian A. Wacana Filsafat Ilmu Balaghah : Kajian Ontologi, Epistemologi dan Aksiologi. *Rayah Al-Islam*. 2024;8(1):131-42. <https://doi.org/10.37274/rais.v8i1.906>
13. Awadin AP, Zuhdi A, Kafiyah FN, Sutardi E, Komarudin E. Epistemologi Ilmu Balaghah Dalam Al-Qur'an. *Lahjah Arabiyah: Jurnal Bahasa Arab dan Pendidikan Bahasa Arab*. 2025;6(1):87-102. <https://doi.org/10.35316/lahjah.v6i1.87-102>
14. Arianto, Munir MohB. Implementasi Metode Alabama (Alfiah, Balaghah, Mantiq) Dalam Membaca Kitab Kuning Di Pondok Pesantren Gedangsewu Kediri Jawatimur. *Inovatif: Jurnal Penelitian Pendidikan, Agama, dan Kebudayaan*. 2023;9(1):39-53. <https://doi.org/10.55148/inovatif.v9i1.316>
15. Bahri R. Religious moderation education: a comparative study of Islamic approaches in Indonesia and Malaysia with implications for faith-based education. *International Studies in Catholic Education*. 2025; <https://www.scopus.com/inward/record.uri?partnerID=HzOxMe3b&scp=105008960133&origin=inward>
16. Afifah N, Susanti R. Comparative Study Of Jinas In Jauharul Maknun And Balaghah Wadihah On Muallaqat. *Muaddib: Journal of Arabic Language and Literature*. 2025;1(2):90-111. <https://doi.org/10.51190/muaddib.v01i02.3>
17. Pangestu PS, Dardiri A, Raswan, Fudhaili A. Perjalanan Balaghah Dari Pengetahuan Menjadi Disiplin Ilmu (رحلة الإنسان والفرع علمي). *Jurnal Pendidikan Bahasa Arab*. 2025;3(1):1-9. <https://doi.org/10.59829/w0jkca82>
18. Wahdi S, Raswan, Dardiri A. Pandangan Kritis Amin Al-Khuli Terhadap Tradisi Balaghah Klasik. *Journal of Literature Review*. 2025;1(2):401-9. <https://doi.org/10.63822/xeqb9b38>
19. Majidi H, Ghaviandam M. Manifestation of some themes of Nahj al-Balaghah In the poems of Sharif Morteza and Mahyar Deilami. *Essays on Arabic literature*. 2020;2(3):51-60. <https://doi.org/10.52547/alr.286>
20. Parhan P, Isyanto N. Problematika Pembelajaran Balaghah. *Ta'limi | Journal of Arabic Education and Arabic Studies*. 2025;4(1):161-78. <https://doi.org/10.53038/tlmi.v4i1.220>
21. Kamal M. Research And Development (R&D). *Al-Afkar: Manajemen pendidikan Islam*. 2019;7(2):1-22.
22. Haryati S. Research and Development (R&D) sebagai salah satu model penelitian dalam bidang pendidikan. *Majalah Ilmiah Dinamika*. 2012;37(1):15.
23. Okpatrioka O. Research and development (R&D) penelitian yang inovatif dalam pendidikan. *Dharma Acariya Nusantara: Jurnal Pendidikan, Bahasa dan Budaya*. 2023;1(1):86-100.
24. Judijanto L, Muhammadiyah M, Utami RN, Suhirman L, Laka L, Boari Y, et al. Metodologi Research and Development: Teori dan Penerapan Metodologi RnD. PT. Sonpedia Publishing Indonesia; 2024. <https://books.google.co.id/books?id=y3INEQAAQBAJ>
25. Aliriad H, Da'i M, Priadana BW, Wigantara MR, Arifianto MR. Improving primary school children's motor skills: a physical education approach using circuit games with auditory sequencing. *Edu Sportivo: Indonesian Journal of Physical Education* . 2025 Feb 5;6(1):15-29. <https://journal.uir.ac.id/index.php/SPORTIVO/article/view/19149>
26. Strijker D. Research methods in rural studies: Qualitative, quantitative and mixed methods. *J Rural Stud*. 2020;78:262-70. <https://api.elsevier.com/content/article/eid/1-s2.0-S074301671830740X>
27. Creswell JW, Creswell JD. Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications; 2017.

28. Ashila M, Syahminan S, Ridha M, Abdullah A. Applying Cooperative Learning Using the Number Head Together Method in Teaching Balaghah. *El-Maqalah : Journal of Arabic Language Teaching and Linguistics*. 2024;5(1):74-89. <https://doi.org/10.22373/maqalah.v5i1.4864>
29. Nuryani N, Musyafaah N, Unsi BT, Nuha MAU. Student Team Achievement Division (STAD) and Cooperative Learning Model in Balaghah Learning. *An Nabighoh*. 2023;25(1):19. <https://doi.org/10.32332/an-nabighoh.v25i1.6446>
30. Ahmed BM. Poetry of The Lamiyyat 'Arabs in The Science of Balaghah | al Shier Lamiyyat al 'Arab Fii 'Ilm al Balaghah. *Mantiqu Tayr: Journal of Arabic Language*. 2022;2(2):110-31. <https://doi.org/10.25217/mantikutayr.v2i2.2359>
31. Mahliatussikah H. Development of Interactive Learning Media "Lectora Inspire" for Balaghah Learning. *Advances in Social Science, Education and Humanities Research*. 2021; <https://doi.org/10.2991/assehr.k.211212.024>
32. Ulum F, Hukom J, Haruna HA, Irawan B, Huda MM, Mariana M. Development of a Case Method-Based Balaghah Learning Module: A Solution to Improve Students' Understanding of Balaghah Science. *Jurnal Pendidikan Progresif*. 2025;15(3):1688-705. <https://doi.org/10.23960/jpp.v15i3.pp1688-1705>
33. Cahyono ME, Musyafa'ah N, Nuha MAU, Rosyad MuhS. Articulation Methods to Increase Student Understanding in Balaghah Learning. *Studi Arab*. 2022;13(2):62-84. <https://doi.org/10.35891/sa.v13i2.3918>
34. Musyafa'ah N, Munawar E, Rahmawati FN, Diantika DE, Rozi F. Development of a Balaghah Module with Interactive Assignments: Enhancing Literary Appreciation in Pesantren Environments. *An Nabighoh*. 2024;26(2):287-302. <https://doi.org/10.32332/an-nabighoh.v26i2.287-302>
35. Nuha MAU, Amrullah AF, Widayanti R, Nisa' IF, Murdiono M. Innovative Teaching Materials for Balaghah: Enhancing Literary Appreciation through Syawahid Adabiyah in Ilmu Badi'. *An Nabighoh*. 2024;26(2):231-50. <https://doi.org/10.32332/an-nabighoh.v26i2.231-250>
36. Muttaqin MI. Amin Al-Khouli's Views on The Two Branches of Balaghah: Logical and Literature. *IJAS: Indonesian Journal of Arabic Studies*. 2024;6(1):1. <https://doi.org/10.24235/ijas.v6i1.16790>
37. Sokip S, Nurcholis A, Kojin K, Faizin MZ, Hanifa A. The Contribution to Understanding the Study of Psycholinguistics in Facilitating Balaghah Learning. *Jurnal Al Bayan: Jurnal Jurusan Pendidikan Bahasa Arab*. 2023;15(1):133-50. <https://doi.org/10.24042/albayan.v15i1.14462>
38. soraya barzegarnezhad, hamid hoseini, ali hosein ehteshami. Lifestyle and its Obstacles in Nahj al-Balaghah. *Mirror of Wisdom*. 2021;21(2):111-32. <https://doi.org/10.52547/jipt.2021.220176.1016>
39. Tian Y, Pho KH, Mahmoudi MR. A Statistical View to Study the Aphorisms in Nahj al-Balaghah. *Center for Open Science*; 2022. <https://doi.org/10.31219/osf.io/mk9z3>
40. Arafah T, Sakti IJ, Hidayat M. The Transformation of Balaghah Theory in the Tradition of Qur'anic Interpretation. *Al-'Allamah: Journal of Scriptures and Ulama Studies*. 2025;2(1):1-27. <https://doi.org/10.70017/al-allmah.v2i1.28>
41. Malik K, Habibi N, Patrah I. Rhetoric And Balaghah: The Significance of Zamakhshari's Contributions to Linguistic Studies. *Ihya al-Arabiyah: Jurnal Pendidikan Bahasa dan Sastra Arab* 2025;11(1):9. <https://doi.org/10.30821/ihya.v11i1.23753>

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CONFLICT OF INTEREST

If the authors have any conflicts of interest to declare.

AUTHORSHIP CONTRIBUTION

Conceptualization: Nurul Musyafa'ah.

Data curation: Nurul Musyafa'ah.

Formal analysis: Ulfa Ulfa.

Research: Ulfa Ulfa.

Methodology: Amirul Kholid.

Project management: Rizka Widayanti.

Resources: Muhammad Afthon Ulin Nuha.

Software: Muhammad Afthon Ulin Nuha.

Supervision: Hilmy Aliriad.

Validation: Hilmy Aliriad.

Display: Nurul Musyafa'ah.

Drafting - original draft: Nurul Musyafa'ah.

Writing - proofreading and editing: Ulfa Ulfa.