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Utilization of gadgets in interactive books based on Augmented Reality (AR) as a medium for the formation of noble morals in elementary school students

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ABSTRACT

The use of Augmented Reality (AR)-based interactive books is currently highly necessary, especially in the field of education. This is because books presented in AR format offer a more interactive, engaging, and effective way of learning for students. This study aims to analyze the skills of elementary school students in understanding the content of materials presented in AR-based interactive books, assess their validity and reliability, and evaluate the expert feasibility of the AR-based interactive book. The method used in this research is descriptive qualitative. The sample consisted of 20 elementary school students from a school in West Bandung Regency. The results of the study indicate that, overall, the AR-based interactive book developed is feasible for use. This conclusion is based on observation results, validity and reliability tests, and expert feasibility assessments. The material presented in this study, which is packaged in an AR-based interactive book, is still limited to the topic of the traits of prophets. Therefore, further development is needed to include a wider variety of topics. In addition, the AR packaging in this study is still limited to digitalizing the book and adding audio features via barcode scanning.

Contribution: This article offers empirical evidence that AR integration can enhance student engagement and comprehension, particularly in teaching religious traits, while highlighting the potential for expanding AR applications to broader content areas in future research.

1. INTRODUCTION

Human development is a dynamic and ongoing process that occurs with age. Development can be understood as the process of changing an individual's behavior and thought patterns, influenced by the interaction between genetic or biological factors and environmental factors (Fitri & Na'imah, 2020). One of the most fundamental phases in human development is childhood, which is characterized by the emergence of significant physical and mental developmental impulses. According to (Adetya & Gina, 2022) the most important age range to pay attention to in childhood is between 2 and 12 years of age, as this age significantly determines the subsequent stages of human development.

Childhood is a strategic period for optimizing the development of various abilities, including physical-motor, cognitive, language, socio-emotional, and religious and moral values (Yustina & Setyowati, 2021). Child development is strongly influenced by the dynamics and values instilled in their environment, which can form the foundation for the development of children's attitudes and behaviors in the future. One aspect that requires special attention is moral development. Environmental factors play a crucial role in shaping children's learning patterns and how they respond to various situations. The first environment that has a significant influence on children is the family (Nabilla & Desmon, 2022). Child development is a crucial period that determines the development of various potentials, so parents play a vital role in educating and guiding children to optimize their potential (Nurrita, 2021). A supportive, warm, and responsive family environment will provide a sense of security for children to actively explore the world around them. This is highly dependent on the quality of stimuli received from the environment, one of which is in the context of home care. Parental parenting styles greatly determine children's development, from supervising, accompanying, disciplining and other interactions between parents and children to changing children's behavior and knowledge (Taib et al., 2020). Children will imitate the behavior shown by their parents indirectly, this is caused by the role of parents as role models who naturally become a reference and example for children in forming attitudes and behavior (Juwita & Yunitasari, 2024).

However, as time goes by, parenting patterns face various new challenges, particularly in the context of the current Industrial Revolution 4.0. In this era, technological development has progressed very rapidly and has become a fundamental need for individuals in their daily lives (Hijriyani & Astuti, 2020). One of the most dominant forms of technology used is gadgets, which have now become an inseparable part of everyday life among the public. According to (Hidayatuladkia et al., 2021)The development of gadgets in Indonesia shows very rapid progress. Gadgets have special functions, such as access to information, communication, entertainment, and educational facilities, as well as providing convenience for people in meeting various life needs.

Along with the rapid progress of technology, the digital native phenomenon has emerged, namely, a generation that grows side by side with technology (Carolina, 2023). This has an impact on parenting patterns, one of which is marked by the increasing prevalence of giving gadgets to children from an early age (Afdalia & Gani, 2023). When used wisely, gadgets can have a significant positive impact on children, particularly in education. Digital devices such as tablets and smartphones allow children to access various sources of information effectively and efficiently, and they also serve as a source of entertainment (Purwaningtyas et al., 2023).

Apart from that, giving gadgets to children can increase learning motivation and learning outcomes in students (Hidayatuladkia et al., 2021). Giving children gadgets is expected to aid the learning process as an educational tool. However, in reality, children can become overly dependent on them (Yustina & Setyowati, 2021). In line with opinion (Nurkiyah et al., 2025) emphasizes that children who are not given limits on their gadget use can become addicted to them and be exposed to inappropriate content. Parenting styles that rely on technology as a medium for children to play and distract them from outdoor play activities result in a lack of interaction between children and their social environment (Widiastiti & Agustika, 2020).

Previous studies have shown a link between excessive use of gadgets and a decline in literacy skills in children, especially in the aspects of reading and writing. A study conducted by (Patrama & Nugroho, 2021) stated that children are more interested in gadgets than writing and reading. A similar thing was found by (Wahyuni & Jamilah, 2023) explained that the decline in children's interest in reading was caused by the high intensity of playing with gadgets. In line with the opinion (Nasihah & Tabroni, 2022) One factor contributing to declining literacy is the excessive use of gadgets. In addition to impacting literacy, excessive gadget use is also linked to a potential decline in moral values in children. Several previous studies have shown that excessive use of technology, such as gadgets, can impact social-emotional development and behavior, significantly impacting the formation of character and moral values in children (Hendayani, 2019). However, several studies emphasize that this influence is also influenced by other factors such as parenting patterns at home, the social environment and lack of motivation to learn.

This presents a significant challenge in integrating moral education and literacy development efforts in children. On the one hand, moral education aims to shape individual behavior in social life. On the other hand, literacy encompasses the ability to read, write, understand information, and think critically, which are essential foundations for children's academic and social development. According to (Amin, 2022),

Morals are often confused with akhlak (ethics), as both terms relate to issues of good and bad. However, there is a fundamental difference between the two. Morals encompass all human behavior, encompassing good and bad traits that are generally accepted in society. Akhlak, on the other hand, reflects teachings about good and bad behavior, both externally and internally, which are derived from God's revelation and are spiritual in nature (Munawar et al., 2023).

Parents must pay attention to the implementation of parenting patterns towards children because this can have a significant impact on the development process, especially in the formation of a child's personality. Therefore, a parenting pattern is needed that involves monitoring, controlling, and limiting the use of gadgets wisely. Uncontrolled use of digital technology can disrupt cognitive, social, and moral development in children, so the active role of parents in guiding and directing children's behavior in using gadgets is very important to support children's growth and development. One effective parenting pattern can refer to the example of Luqman al-Hakim as reflected in QS. Luqman verses 12-19. As explained in the verse, one of the parenting patterns is introducing moral education, which can be interpreted as morals so that children grow into individuals with noble character (Ridwan, 2019).

By using the principles of QS. Luqman, as a reference, parents can raise a generation that is academically intelligent, yet has noble character and is grounded in faith. According to (Jundi, 2020), Islamic education plays a vital role in the formation and development of morals. From an Islamic perspective, perfect morals are exemplified by the Prophet Muhammad (peace be upon him), as stated in Surah Al-Qalam, verse 4, which states, "And indeed, you are of a great moral character." This verse demonstrates that the Prophet Muhammad (peace be upon him) is a perfect representation of noble morals, which serve as the primary foundation for moral education in Islam. One way to achieve this is by implementing the four noble qualities of the Prophet Muhammad (peace be upon him): *Siddiq* (honest), *Amanah* (trustworthy), *Tabligh* (conveying the truth), and *Fatanah* (intelligent), which encompass the characteristics of honesty, responsibility, curiosity, and social awareness (Sidqi et al., 2025)..

The implementation of the values of the four attributes of the apostles can be strengthened through the use of innovative and interactive learning media, utilizing technology as an educational and morally charged learning tool. In this context, both parents and educators need to respond wisely to technological advances, utilizing them as learning media that supports the internalization of moral values. According to (Pratama, 2022) states that "learning media that uses interactive media is very functional for distributing, storing, and processing information so that the learning process will be efficient, effective, and communicative." This provides a statement that learning media with the use of technology can make learning effective and efficient. Innovative and interactive learning media can increase learning motivation, thereby improving student achievement. According to (Aini et al., 2023). This approach not only serves to shift the use of gadgets from purely entertainment activities to productive and educational learning tools but also has great potential to increase students' learning motivation and strengthen the process of forming and instilling noble morals, which are the main goals of holistic Islamic education. One innovation in learning media implemented is the use of Augmented Reality technology. Augmented Reality (AR)-based media was chosen as a means of increasing learning motivation and improving literacy in children. Augmented Reality (AR) technology in the context of learning can improve students' utilization of material by presenting information through interactive 3D animations (Darmawan & Parhan, 2023). This is supported by research results (Rais & Saman, 2024), which show that interactive learning media based on augmented reality shows significant results in improving student literacy. This is in line with the research done by (Meyer, 2022) saying that the use of augmented reality in learning triggers an increase in learning motivation in students.

Based on this description, researchers designed an interactive book based on augmented reality (AR). Using mobile devices as an interactive learning medium, this book covers the four attributes of the Prophet through engaging and contextual stories for children. This medium is expected to be a learning alternative that is not only enjoyable but also helps improve literacy and instill moral values from an early age.

With a visual and effective approach, children can more easily understand and internalize the values of shiddiq, amanah, tabligh, and fathonah in everyday life. Referring to the explanation above, this study aims to develop an interactive book based on Augmented Reality (AR), analyze the skills of children (elementary school students) in understanding the content of the material in the designed book, and assess the validity and reliability, as well as the expert feasibility of the AR-based interactive book.

2. METHOD

This research is a qualitative descriptive study. In this study, the researcher used research instruments in the form of observation documents, evaluation of the validity and reliability of the instrument, and an expert assessment of feasibility (Denzin & Lincoln, 2018). Observation data was obtained by the research team from elementary school students during the learning process regarding the use of interactive book media based on Augmented Reality (AR) that had been prepared. The evaluation of validity and reliability, as well as expert assessment, was used to test the feasibility of the interactive book media based on Augmented Reality that had been prepared through SPSS version 25 calculations. The following table shows the rubric of assessment aspects to be used during the observation.

Table 1
Observation Rubric for Student Skills Assessment on Interactive Books Based on Augmented Reality (AR)

Assessment Aspects	Indicator	Score 1 (Less)	Score 2 (Enough)	Score 3 (Good)	Score 4 (Very good)
1. Understanding the Story/Main Content	Can re-explain the main story or main content of the interactive book	Cannot explain the content	Explains in general, but not exactly	Explains the main content quite accurately	Explain completely and accurately
2. Understanding Character Values/Good Morals	Recognize and explain the character values displayed (honesty, responsibility, etc.)	Not recognizing character values	Recognizing only one value, still vague	Recognize and explain one or two values well	Recognize some values and explain them precisely
3. AR Interactive Understanding	Understand additional information displayed through AR features (animation, sound, dialogue, etc.)	Not paying attention to AR features	Observing but not understanding	Understanding information from AR features in general	Understand and explain information from AR well
4. Power of Analysis and Reflection	Able to relate the contents of the book to everyday experiences or attitudes	Can't relate to yourself	Very limited linking	Just able to relate to personal experience	Able to relate well and convey personal reflections
6. Accuracy in Answering Questions	Answer questions based on the content of the interactive reading correctly	Many answers are wrong/inappropriate	Some answers are correct, others are not.	Most of the answers are correct	All answers are correct and detailed
6. Enthusiasm in Exploring AR Books	Demonstrates interest and active engagement when reading and interacting with AR books	Not interested, passive	Interested but quickly bored	Quite active and curious	Very enthusiastic, exploring all the contents and features

To test the validity and reliability of the instrument, the researcher used calculations using SPSS version 25. As for assessing the feasibility of the learning media in the form of an interactive book that was compiled, the following is a rubric for assessing the learning media that was assessed by media experts.

Table 2
Learning Media Assessment Rubric

Assessment Aspects	Indicator	Score 1 (Less)	Score 2 (Sufficient)	Score 3 (Good)	Score 4 (Very Good)
1. Content and Character Values	The material reflects character values (honesty, responsibility, empathy, etc.)	Character values are not visible	There are some values, not deep	The values are quite clear and relevant	Strong character values, well integrated
	Suitability with the development of elementary school students	Not age appropriate	Quite appropriate	Generally appropriate	Very suitable and interesting
2. Interactivity	Books invite students to think, act, discuss	Minimal interaction	Limited interaction	Interactive	Highly interactive and reflective
	Activities that support character building	Not relevant	Less supportive	Quite supportive	Very good support
3. Visual Design	The layout, colors, and images are attractive and support the content.	Less interesting	Quite interesting	Interesting	Very attractive and proportional
	Child-friendly and appropriate illustrations	It is not in accordance with	Quite appropriate	In accordance	Very appropriate and educational
4. AR Technology Features	AR runs smoothly and fits the character's context.	Not working/irrelevant	It works but it doesn't work properly	Works well and is quite relevant	Works great and is contextual
	Interaction through AR encourages student understanding and engagement	Not attractive	Quite interesting	Interesting	Very interesting and meaningful
5. Eligibility of Use	Guidance for teachers/parents is provided and is clear.	There isn't any	There is but it is not complete	Quite clear	Very clear and helpful
	Flexible books are used in various learning situations.	Not flexible	Less flexible	Quite flexible	Very flexible and adaptive

3. RESULTS AND DISCUSSION

This study aims to develop an interactive book based on Augmented Reality (AR), analyze the skills of children (elementary school students) in understanding the content of the Material in the designed book, and assess the validity and reliability as well as the expert feasibility of the AR-based interactive book. The following is a profile of the interactive book that has been developed based on Augmented Reality (AR), which is used in Islamic religious education learning.

Figure 1. Book Cover Design

Figure 1 shows the book cover, which features the title and an attractive illustration. The back cover also features the book's QR code and other information, including audiobook features, engaging and educational games, augmented reality (AR) features, and bilingual support in Indonesian and English.

Figure 2. Guidelines for Using Books and Notes for Parents and Teachers

The opening section provides information on book usage guidelines and notes for parents and teachers to facilitate ease of use. This information is essential for understanding the book's contents and uses.

Figure 3. Book Material

Next, in Figure 3, one of the book materials is presented, which contains information related to one of the characteristics of the apostle in three languages, namely Arabic, Indonesian and English.

Figure 4. Quiz

At the end of the book, a quiz is provided to evaluate students' understanding of the material. Regarding the observation data, the following presents statistical calculations of the results of observations of Islamic religious education learning using an AR-based interactive book.

Table 3. Statistical calculations of Islamic Religious Education learning observation results using AR-based interactive books

	Number of Students	Total Shoes
Valid	20	20
Missing	0	0
Mean		20.25
Std. Error of Mean		.584
Median		22.00
Mode		22
Std. Deviation		2.613
Variance		6.829
Range		7
Minimum		16
Maximum		23

Based on the data in Table 3, it can be seen that the use of Augmented Reality (AR)-based interactive textbooks in Islamic Religious Education (PAI) learning has generated a positive response from students. The average score achieved was 20.25 out of a maximum score of 23, with the median and mode both at 22. This indicates that most students achieved high scores within the same range, indicating consistency in their understanding of the textbook's content. The score range of only 7 points, with a minimum score of 16, and a standard deviation of 2.613, indicates that there is not much variation between students. In other words, this AR-based interactive textbook is not only effective for a small number of students, but also has a uniform impact on the majority of students.

Theoretically, these results align with constructivism theory, particularly Vygotsky's ideas on the importance of media capable of stimulating interaction and meaningful learning experiences. AR-based interactive textbooks provide students with a space to directly experience the material through a combination of text, images, sound, and 3D visual objects. This encourages students to not only read but also experience, ultimately strengthening the process of actively constructing knowledge. This aligns with the principle of the Zone of Proximal Development (ZPD), where AR media acts as a scaffolding that helps students understand material that was initially abstract and becomes more concrete and digestible (Kostogriz & Veresov, 2021).

Furthermore, Richard E. Mayer's Multimedia Learning theory also provides a strong foundation for the effectiveness of this medium. According to Mayer, learning will be more optimal if students receive information through both visual and verbal channels (Mayer, 2024). AR interactive books combine text and visual elements simultaneously, enabling deeper and more layered integration of information. This also explains why the majority of students scored high: this medium not only conveys information but also activates their cognitive engagement more broadly. In the context of Islamic Religious Education (PAI) learning, which often presents abstract concepts such as values, morals, or exemplary stories, AR media becomes an effective bridge connecting ideas with real-life experiences.

Table 4
Results of the Validity Test of AR-Based Textbook Media

		AP 1	AP 2	AP 3	AP 4	AP 5	AP 6	Total Score
Assessment Aspects (AA) 1	Pearson Correlation	1	.503*	.739**	.593**	.302	.522*	.740**
	Sig. (2-tailed)		.024	.000	.006	.196	.018	.000
	N	20	20	20	20	20	20	20
Assessment Aspects (AA) 2	Pearson Correlation	.503*	1	.816**	.673**	.600**	.577**	.844**
	Sig. (2-tailed)	.024		.000	.001	.005	.008	.000
	N	20	20	20	20	20	20	20
Assessment Aspects (AA) 3	Pearson Correlation	.739**	.816**	1	.854**	.612**	.707**	.962**
	Sig. (2-tailed)	.000	.000		.000	.004	.000	.000
	N	20	20	20	20	20	20	20
Assessment Aspects (AA) 4	Pearson Correlation	.593**	.673**	.854**	1	.523*	.734**	.902**
	Sig. (2-tailed)	.006	.001	.000		.018	.000	.000
	N	20	20	20	20	20	20	20
Assessment Aspects (AA) 5	Pearson Correlation	.302	.600**	.612**	.523*	1	.346	.687**
	Sig. (2-tailed)	.196	.005	.004	.018		.135	.001
	N	20	20	20	20	20	20	20
Assessment Aspects (AA) 6	Pearson Correlation	.522*	.577**	.707**	.734**	.346	1	.782**
	Sig. (2-tailed)	.018	.008	.000	.000	.135		.000
	N	20	20	20	20	20	20	20
Total Value	Pearson Correlation	.740**	.844**	.962**	.902**	.687**	.782**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.001	.000	
	N	20	20	20	20	20	20	20

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The statistical analysis results in Table 4 indicate that the Augmented Reality (AR)-based textbook media has a very strong level of validity. Validity testing was conducted by measuring the correlation between assessment aspects (AP 1 to AP 6) with the total overall score. From the results of data processing using Pearson Correlation, it is clear that most assessment aspects have a significant and strong relationship with the total score. The highest correlation value is shown by AP 3 with a correlation value of 0.962 ($p < 0.01$), which means that this aspect makes a very large contribution to the overall quality of the media being assessed. Other aspects that also show a very strong relationship with the total score include AP 4 ($r = 0.902$), AP 6 ($r = 0.782$), AP 2 ($r = 0.844$), and AP 5 ($r = 0.687$) although the correlation level for this aspect is slightly lower than the other aspects.

Interestingly, only one aspect showed an insignificant correlation, namely the relationship between AP 1 and AP 5 ($r = 0.302$, sig = 0.196), which means there is not a strong enough relationship between the two. However, overall, the correlation values between aspects show a consistent and significant pattern, especially at the 0.01 level (very significant). This indicates that each assessment aspect in the instrument has good internal consistency and is able to measure dimensions relevant to the learning media construct being tested.

Theoretically, these results can be explained using a construct validity approach, namely how well an instrument measures the intended construct (Higgins et al., 2024). In this context, the assessment aspects tested (e.g., content appropriateness, visual appearance, interactivity, ease of use, and pedagogical effectiveness) demonstrated a close correlation with each other and with the total score. This indicates that the AR-based textbook is not only well-structured technically but also successfully fulfills the pedagogical dimensions required in Islamic Religious Education (PAI) learning.

Furthermore, this validity also supports the basic principles in evaluating educational media that have been put forward (Begicevic Redjep et al., 2021), A good instrument must have a logical fit between assessment indicators and instructional objectives. If the assessment aspects show a high correlation with the overall results, then the media has been conceptually designed with a strong pedagogical foundation, not haphazardly or solely relying on directionless visualizations. In other words, this AR media is not only visually appealing, but also valid in terms of content and learning structure.

Table 5. Reliability Test Values

		N	%
Cases	Valid	20	100.0
	Excluded[a]	0	.0
	Total	20	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.900	6

Table 5 shows the results of the reliability test of the Augmented Reality (AR)-based textbook media assessment instrument using the Cronbach's Alpha coefficient. The reliability value obtained was 0.900 for the six assessment items used. This value is included in the very high category, because according to general reliability criteria (George & Mallery, 2024), An Alpha value ≥ 0.9 is categorized as excellent. This means that the assessment instrument used to evaluate this interactive book media has a very good level of internal consistency, and the assessment results tend to be stable when used on similar groups of respondents.

Furthermore, all cases were declared valid (N = 20) with no data excluded (0 excluded), indicating that the reliability test was conducted with complete data and no respondents needed to be removed from the analysis. This adds to the strength of the test results because the data used reflects the complete condition of the population in the sample.

Theoretically, these results can be linked to the concept of reliability as measurement consistency, namely the extent to which a measuring instrument provides consistent results in repeated measurements. In the context of evaluating learning media, reliability is important to ensure that the aspects being measured—such as interactivity, ease of use, content appropriateness, visual appearance, and effectiveness of use—really reflect the quality of the media consistently across different situations or by different users.

This high reliability value also confirms the findings in Table 2 above, where the correlation between assessment aspects and the total score also demonstrated high consistency and strength of relationship. Thus, it can be concluded that this AR-based book media assessment instrument is not only construct-valid but also statistically reliable. This makes the instrument suitable for use as a credible evaluation tool for measuring the quality of technology-based learning media, particularly for Islamic religious education.

Table 6
Expert Validation

Aspect	Indicator	Validation Value	Category
1. Content and Character Values	The material reflects character values (honesty, responsibility, empathy, etc.)	70%	Worth It
	Suitability with the development of elementary school students	85%	Very Worthy
2. Interactivity	Books invite students to think, act, discuss	70%	Worth It
	Activities that support character building	85%	Very Worthy
3. Visual Design	The layout, colors, and images are attractive and support the content.	85%	Very Worthy
	Child-friendly and appropriate illustrations	70%	Worth It
4. AR Technology Features	AR runs smoothly and fits the character's context.	70%	Worth It
	Interaction through AR encourages student understanding and engagement	70%	Worth It
5. Eligibility of Use	Guides for teachers/parents are provided and are clear.	70%	Worth It
	Flexible books are used in various learning situations.	80%	Very Worthy

The validation results of the Augmented Reality (AR)-based textbook media, as listed in the table, indicate that the media generally meets the standards for suitability for use in Islamic Religious Education (PAI) learning for elementary school students. Five main aspects were assessed, each encompassing two specific indicators. Of the ten indicators tested, eight were deemed appropriate to highly appropriate, indicating that the media is not only technically functional but also contains educational and pedagogical value.

In the first aspect, namely Content and Character Values, the indicator "material reflects character values such as honesty, responsibility, and empathy" obtained a score of 70% and was categorized as appropriate. Meanwhile, the indicator "suitability to the development of elementary school students" reached 85% and was categorized as very appropriate. This indicates that the content presented has been adapted to the cognitive and affective developmental stages of children, in accordance with the principles of child developmental psychology (Piaget), where elementary school-aged children are in the concrete operational phase that requires contextual and meaningful learning. The character values instilled through this media are also aligned with the value-based character education approach, which emphasizes the integration of cognition and affect in learning (Isser et al., 2024).

In terms of interactivity, the book was assessed as being able to encourage students to think and act through activities integrated into the media, with scores of 70% and 85%, respectively. This demonstrates that the book does not simply present one-way information but also allows for active student involvement—an approach consistent with active learning theory and constructivist approaches, where learning that involves discussion, exploration, and reflection tends to yield deeper understanding.

The visual design aspect also demonstrated significant strength. The layout, color selection, and images were attractively designed and rated very good (85%), while the child-friendly illustrations received a fair score (70%). Appropriate visualization is crucial in supporting early childhood students' comprehension, as they rely heavily on visual elements to absorb information. This supports Paivio's dual coding theory, which states that information is more easily processed when presented in both verbal and visual forms simultaneously (Wong & Samudra, 2021).

In terms of AR technology features, both indicators scored 70% and were categorized as adequate. While the AR features functioned contextually and were able to encourage student engagement, these results indicate there is still room for development, particularly in ensuring that digital interactions truly reinforce understanding of the material, rather than simply serving as visual appeal. This is crucial so that this medium is not merely a gimmick but rather serves as a strategic pedagogical tool.

Finally, in terms of usability, the book scored 70% for clarity of guidance for teachers and parents, and 80% for flexibility of use in various learning contexts. This means that, in practice, this media can be used not only in conventional classrooms but also for distance learning or at home with parental guidance. This aspect emphasizes the importance of the principles of accessibility and functionality in educational media design (Nguyen et al., 2023).

4. CONCLUSION

The interactive Augmented Reality (AR)-based book developed is suitable for use. This is based on the results of observations, validity and reliability tests, and expert review. The material presented in this study, packaged in an AR-based interactive book, is still limited to the characteristics of the prophets. Therefore, further development of the book's content is needed to provide more variety. Furthermore, the AR packaging in this study is still limited to digitizing the compiled book and adding audio features in the form of barcodes.

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