

# Development of an E-Book on Madrasah Principal Leadership Based on Pesantren Culture To Train Students' Digital Literacy

**Nur Khoiri**

Universitas Islam Negeri Walisongo Semarang, Indonesia

[nurkhoiri@walisongo.ac.id](mailto:nurkhoiri@walisongo.ac.id)

**Saifullah Hidayat**

Universitas Islam Negeri Walisongo Semarang, Indonesia

[hidayatsaifullah@walisongo.ac.id](mailto:hidayatsaifullah@walisongo.ac.id)

**Mashudi**

Universitas Islam Negeri Kiai Haji Achmad Siddiq Jember, Indonesia

[mashudi@uinkhas.ac.id](mailto:mashudi@uinkhas.ac.id)

Received April 24, 2025, Accepted June 1, 2025

## Abstract

**Purpose** - In the era of rapid digital transformation, madrasah principals are required not only to possess strong leadership skills but also to demonstrate digital literacy in managing schools and guiding the educational community. This study aims to develop a digital e-book on madrasah principal leadership rooted in the cultural values of pesantren, intended to foster digital literacy among students and school stakeholders. **Methods** - Employing a research and development (R&D) approach with the ADDIE model, the e-book was validated by material experts, media experts, and practitioners. **Findings** - The validation results revealed high feasibility scores: 90.1% from material experts, 89.2% from media experts, and 91.5% from practitioners, with an overall average of 90.26%, categorized as "very feasible." In terms of practicality, student users rated the e-book at 81.48%, indicating a "very practical" category, particularly in aspects such as ease of use, cognitive content, and information presentation. The e-book integrates pesantren values such as sincerity, discipline, and community-based leadership into digital learning, providing a culturally grounded yet technologically relevant tool. **Research implications / limitations** - This research offers practical implications for the development of educational media that aligns with Islamic educational culture, though further studies are needed to assess long-term impacts on leadership behavior and digital competence in diverse school contexts. **Originality/Value** - This study presents an innovative blend of pesantren-based leadership education and digital literacy training through an interactive e-book, addressing a gap in culturally contextualized digital resources for Islamic educational institutions.

**Keywords:** *e-book, digital literacy, leadership, effectiveness, Pesantren.*

## INTRODUCTION

The development of digital technology is currently increasingly rapid and has brought various changes to various aspects of life including in the world of education. However, the increasing development of digital technology also brings its own challenges for school administrators, especially madrasah principals in terms of digital literacy. Digital literacy problems in schools can occur due to various factors such as lack of understanding and limited knowledge and skills in using digital technology. In addition, madrasah principals also need to have sufficient digital literacy competencies in order to be able to manage and utilize digital technology in advancing education in schools. Therefore, madrasah principals need to improve digital literacy competencies through training and education related to digital technology in the field of education. In addition, madrasah principals also need to develop digital literacy policies that support the use of digital technology effectively and efficiently in school management. With the right and consistent efforts to improve digital literacy in schools, it is hoped that it will be able to produce human resources who are able to compete in the digital era and bring positive changes to education in Indonesia.

Several studies have indicated that limited understanding, lack of training, and insufficient access to digital resources contribute to poor digital literacy among school leaders. Therefore, madrasah principals must improve their digital competencies through structured training and continuous professional development. Additionally, they should be capable of formulating policies and strategies that promote the effective use of digital technology in the school environment. These efforts are vital to cultivate a digitally literate school culture and to produce human resources who are competitive in the global landscape.

Given this context, there is a need for relevant and accessible learning resources that support school leadership grounded in Islamic educational values—particularly the culture of *pesantren*, which emphasizes moral integrity, discipline, and community-oriented leadership. Such a resource should also address the practical challenges faced by principals in implementing digital tools in daily school operations.

To meet this need, this study aims to develop a digital e-book on madrasah principal leadership based on *pesantren* culture, with the specific purpose of enhancing digital literacy among school leaders. The e-book is designed as a practical and contextual guide for principals to improve their competence in educational technology while maintaining cultural and ethical values rooted in the *pesantren* tradition

## METHOD

The research method used in this study is research and development (R&D) using the ADDIE development model (Analyze, Design, Development, Implementation, and Evaluation). The ADDIE model development research procedure carried out in this development follows the procedure developed by Dick & Carey.

The research was conducted at MA NU Banat Kudus located on Jl. Kyai H. Raden Asnawi-Jl. KH Moh. Arwani, Pejaten, Krandon, Kec. Kudus City, Kudus Regency, Central Java 59314. This location was chosen because the climate and culture of the school supported the use of the e-book Leadership of Madrasah Principals Based on Islamic pesantren culture. Research Time The research time began with learning observations and interviews with the principal of MA NU Banat Kudus. Interview and observation activities were pre-research activities carried out in April 2024. Then, the development stage of learning media was carried out in July-August 2024 and the field test was carried out in September 2024 or the odd semester of the 2024/2025 academic year.

The research subjects came from 1. Students The research subjects taken were students of class XII MA NU Banat Kudus with a total of 45 students 2. Lecturers and Head of Madrasah The subjects in the research on the e-book Leadership of Madrasah Heads Based on Islamic pesantren culture were obtained through the Head of Madrasah who teaches in Class XII MA NU Banat Kudus and expert lecturers in material and media who are also validators of the feasibility test of the learning media developed.

The variables used are: 1. The independent variable (X) is a condition that if it appears will change other conditions<sup>73</sup>. The Development of an e-book on Madrasah Principal Leadership Based on Islamic pesantren culture is the independent variable used in this study. 2. The dependent variable (Y1 and Y2) is a variable that is influenced by the independent variable. Digital Literacy (Y1) and Religious Moderation (Y2) are the dependent variables used in this study.

Data and Data Sources come from 1. Qualitative data in the form of input and suggestions regarding the e-book of Madrasah Principal Leadership Based on Islamic pesantren culture from expert validators of material and media to be revised or evaluated for the development of learning media. 2. Quantitative data in the form of validation results from material and media experts and student response results regarding the e-book of Madrasah Principal Leadership Based on Islamic pesantren culture which has been tested. Data collection techniques using interviews, questionnaires, and documentation.

## RESULT AND DISCUSSION

Validation by expert lecturers aims to find out whether the e-book created is suitable or valid for use by users and to get criticism and suggestions so that the e-book becomes better. The results of the e-book validation are as follows:

### Material Eligibility

Validation by material experts includes content aspects, language aspects, and presentation aspects. The results of the e-book validation by material experts are shown in Table 1.

**Table 1.** Results of Material Expert Validation

Point	Evaluation Aspects	Percentage	Category	Description
1	Content	93,5%	Very Good	Not Revision
2	Language	89%	Good	Minor Revision
3	Display	88%	Good	Minor Revision
<b>Average</b>		90,1%		
<b>Category</b>		Very Good		Not Revision

The e-book assessment carried out by material experts on the material in the e-book resulted in an average percentage of eligibility or validity of 90.1% of the maximum percentage of 100% with a very good product category, meaning that based on the product validity conversion guidelines according to Koyan (2012), the percentage of 90.1% is between 90-100%, so it is categorized as very good, which means that the development of an e-book on madrasah principal leadership based on Islamic pesantren culture is declared very valid or does not need revision.

### Media Eligibility

Validation by media experts includes aspects of screen design appearance, ease of use, consistency, usefulness, and graphic aspects. The results of e-book validation by media experts are described in Table 2.

**Table 2.** Media Expert Validation Results

Point	Evaluation Aspects	Percentage	Category	Description
1	Screen Design View	86%	Good	Minor Revision
2	Ease of Use	89%	Good	Minor Revision
3	Consistency	89%	Good	Minor Revision
4	Benefits	92%	Very Good	Not Revision
5	Graphics	90%	Very Good	Not Revision
<b>Average</b>		89,2%		
<b>Category</b>		Good		Minor Revision

The e-book assessment conducted by media experts on the development of an e-book on madrasah principal leadership based on pesantren culture resulted in an average percentage of eligibility or validity of 89.2% of the maximum percentage of 100% with a good product category, meaning that based on the product validity conversion guidelines according to Koyan (2012), the percentage of 89.2% is between 75-89%, so it is categorized as good, which means that the development of an e-book on madrasah principal leadership based on pesantren culture is declared valid or slightly revised.

### Practitioner Eligibility

Validation by practitioners, namely H. Shohibul Huda, M.Pd., AH as the Head of Madrasah MA NU Banat Kudus. which includes aspects of material and media. The results of validation by practitioners are shown in Table 3.

**Table 3.** Validation results by practitioners

Point	Evaluation Aspects	Percentage	Category	Description
1	Content	93%	Very Good	Not Revision
2	Media	90%	Sangat Baik	Not Revision
Average		91,5%		
Category		Very Good		Not Revision

The e-book assessment conducted by practitioners on the development of an e-book on madrasah principal leadership based on pesantren culture resulted in an average percentage of eligibility or validity of 91.5% from a maximum percentage of 100% with a good product category, meaning that based on the product validity conversion guidelines according to Koyan (2012), the percentage of 91.5% is between 90-100%, so it is categorized as very good, which means that the development of an e-book on madrasah principal leadership based on pesantren culture is declared very valid or does not need revision.

### Revision of the Feasibility Test for the E-Book on Madrasah Principal Leadership based on pesantren culture

Suggestions and inputs show that there are various types of revisions from expert validators of material and media so that the leadership e-book becomes more feasible to use. Then the validator's input and improvements to the leadership e-book of madrasah principals based on pesantren culture can be presented by researchers in Table 4.

**Table 4.** Suggestions and Improvements for the e-book

Validator	Suggestion	Result
Subject Matter Expert Validator	Need improvement in Table and image display	Table and image display has been improved
	Tables that do not include sources	The table source has been listed
	There needs to be improvements to typos in sentences and the spacing and writing of equations can be tidied up.	Some sentences that were still typos have been corrected and the spacing has been adjusted accordingly.

Validator	Suggestion	Result
Media Expert Validator	On the cover menu, the BP leadership e-book can be made to look more attractive.	The appearance of the pesantren leadership e-book cover menu is made more proportional in accordance with the theme of the leadership e-book that was created.
	The arrangement of the page change icons can be based on the principle of convenience and practicality according to the function of the e-book.	The page change icon has been arranged so that the principles of convenience and practicality are achieved in accordance with the function of the e-book.
	The image and table features of the pesantren -Based Leadership e-book need to be given a source statement.	There is a description of the sources for tables and images used in the leadership e-book
	The font size of the leadership e-book needs to be fixed because it still looks small.	Some font sizes that appeared small were fixed by considering the proportionality aspect of the display.
	Need to add usage instructions to pesantren leadership e-book	In the pesantren leadership e-book that was created, instructions for use have been added.

### **Practicality of E-Book on Madrasah Principal Leadership based on pesantren culture**

The practicality test aims to determine the level of practicality and ease of the E-book on Islamic boarding school leadership based on pesantren culture by students as users. The practicality questionnaire created has 14 statements. The aspects contained in the practicality questionnaire are adjusted to the Evaluating Interactive Multimedia indicators which consist of aspects of ease of use and navigation, cognitive content, information presentation, and ease of re-learning. The results of the analysis of the practicality test of the E-book on Islamic boarding school leadership based on pesantren culture by students are in Table 5.

**Table 5.** Results of the Practicality Test Analysis of the E-book on Madrasah Principal Leadership Based on pesantren culture

Point	Practicality Indicator	Persentase	Criteria
1	Ease of Use and Navigation	80,05	Very Practical
2	Cognitive Content	79,67	Practical
3	Presentation of Information	83,66	Very Practical
4	Ease of Learning	82,55	Very Practical
	Average	81,48	Very Practical

Based on Table 5, the average percentage of the practicality test of the E-book on the leadership of the head of the madrasah based on the culture of the pesantren is 81.48% with the criteria of very practical. This shows that the E-book on the leadership of the head of the madrasah based on the culture of the pesantren is very practical to use in learning activities. Student responses to the indicators of ease of use and navigation obtained a percentage of 80.05% with the criteria of very practical. This indicates that the navigation buttons for each feature function well, making it easier for students in the learning process. In addition, the instructions for using the leadership E-book presented are easy for students to understand and easy to use and understand the flow.

Student responses to the cognition indicator obtained a percentage of 79.67 with practical criteria. This indicates that the use of language in the description of the material is communicative and in accordance with PUEBI, there are examples that are in accordance with the material experienced and implemented in learning activities in the classroom and outside the classroom, namely pesantren culture such as solidarity, role models, mutual cooperation and togetherness and achievement-based activities. This is in accordance with research conducted by Jailani (2018) that the use of simple language in learning makes the subject matter easier for students to understand.

Student responses to the information presentation indicator obtained a percentage of 83.66% with a very practical category. This indicates that the leadership E-book has a presentation of material that can help implement pesantren culture. These results are in accordance with those stated by Hanisah et al., (2022) that providing information in the form of student achievement of the material being tested as a follow-up to giving tests will greatly help students in correcting their shortcomings. Student responses to the ease of re-learning indicator obtained a percentage of 82.55% with a very practical category. This indicates that the leadership E-book can be accessed anytime and anywhere, the leadership E-book can also be used by utilizing the school's cellular network or WiFi. The results of student responses also indicate that the leadership E-book can be easily operated and accessed via smartphones, making it easier for students to relearn it. This is in line with Nofindra's research, (2019) that the use of learning media that can be repeated or can be used anytime and anywhere can affect learning activities. In addition, repeating material can help students process

information in short-term memory to long-term memory so that students can easily obtain a level of religious moderation and have good digital literacy.

## CONCLUSION

The development of an e-book on madrasah principal leadership based on pesantren culture is categorized as very feasible or very valid as a digital book, this is because the results of the validity test or feasibility test from the validators are as follows: the percentage of material feasibility test is 90.1%, media feasibility test is 89.2% and practitioner feasibility test is 91.5%. So the average of all validators (material, media, and practitioners) is 90.26% which means it is very feasible. The development of an e-book on madrasah principal leadership based on pesantren culture is categorized as very practical to use as a digital book, this is based on the results of the practicality test of 81.48% which means it falls into the very practical criteria.

## REFERENCE

- Abror, M. Moderasi Beragama Dalam Bingkai Toleransi: Moderasi Beragama Dalam Bingkai Toleransi. *Rusydiah: Jurnal Pemikiran Islam*, 1(2), (2020). 143-155.
- Ahmadi dan Ibda.. *Media Literasi Sekolah (Teori & Praktik)*. books.google.com. (2022) <http://www.tabayuna.com/2018/01/media-literasisekolah-teori-dan-praktik.html>
- Aiken, L. R. Content Validity and Reliability of Single Items or Questionnaires. <http://dx.doi.org/10.1177/001316448004000419>, 40(4), (1980). 955–959. <https://doi.org/10.1177/001316448004000419>
- Aziz, A. MODERASI BERAGAMA DALAM PERSPEKTIF AL-QUR'AN. *Al Burhan: Jurnal Kajian Ilmu dan Pengembangan Budaya Al-Qur'an*, 21(02), (2022). 218–231. <https://doi.org/10.53828/ALBURHAN.V21I02.383>
- Aziz, A. A., Masykhur, A., Anam, A. K., Muhtarom, A., Masudi, I., & Duryat, M. Implementasi Moderasi Beragama Dalam Pendidikan Islam. (2019). 1–192.
- Basri, J., Nurdin, D., Indriyani, I., & Bakhtiar, A. Kontribusi Kepemimpinan Dalam Menunjang Literasi Digital Bidang Pendidikan Di Daerah. *Edueksos Jurnal Pendidikan Sosial & Ekonomi*, 11(1). (2022). <https://doi.org/10.24235/EDUEKSOS.V11I1.9834>
- Berman, L. Leadership, by James MacGregor Burns. *Political Science Quarterly*, 94(2), (1979). 346–348. <https://doi.org/10.2307/2149858>
- Blanchard, K., & Hersey, P. Life cycle theory of leadership. *Training and Development*, January, (1996). 42–47. <https://psycnet.apa.org/record/1970-19661-001>
- BNSP. Rancangan Standar Sarana dan Prasarana . Jakarta: Badan Standar Nasional Pendidikan. (n.d.). Diambil 16 September 2024, dari <https://search.yahoo.com/search?fr=mcafee&type=E210>



- US91215G0&p=BNSP.+(2011).+Rancangan+Standar+  
Sarana+dan+Prasarana+.+Jakarta%3A+Badan+Standar +Nasional+Pendidikan.
- Borowski, A. Social Work Research and Evaluation. *Social Work*, 28(2), (1983). 165–166. <https://doi.org/10.1093/sw/28.2.165-b>
- Calvani, A., Cartelli, A., Fini, A., & Ranieri, M. (2008). Models and Instruments for assessing Digital Competence at School. *Journal of e-Learning and Knowledge Society*, 4(3), 183–193. <https://doi.org/10.20368/1971-8829/288>
- Fauzi, A. Pengembangan Media Pembelajaran E-Book Pada Materi Jenis Dan Karakteristik Bahan Baja Kelas X TGB SMK Negeri 1 Mojokerto. *Pendidikan Teknik Bangunan*, 1(1), (2015). 148–151.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. How to Design and Evaluate Research in Education. McGrawHill Higher Education, 0, (2009). 707.
- Greenleaf, R. K. The servant as leader : Greenleaf, Robert K : Free Download, Borrow, and Streaming : Internet Archive. (1970). <https://archive.org/details/20200601-the-servant-as-leader>
- Guilford, J. P. The phi coefficient and chi square as indices of item validity. *Psychometrika*, 6(1), (1941). 11–19. <https://doi.org/10.1007/BF02288569>
- Hidayatullah, M. *Digital imaging menggunakan Adobe Photoshop CS6* - Muhammad Hidayatullah - Google Buku. (2020). [https://books.google.co.id/books/about/Digital\\_imaging\\_menggunakan\\_Adobe\\_Photos.html?id=RgL6DwAAQBAJ&redir\\_esc=y](https://books.google.co.id/books/about/Digital_imaging_menggunakan_Adobe_Photos.html?id=RgL6DwAAQBAJ&redir_esc=y)
- House, R. J. A Path Goal Theory of Leader Effectiveness. *Administrative Science Quarterly*, 16(3), (1971). 321. <https://doi.org/10.2307/2391905>