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TEACHERS' NEEDS ANALYSIS FOR FLIPBOOK LEARNING MEDIA ON DEEP LEARNING IN MERDEKA CURRICULUM

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Abstract

This study aimed to analyze teachers' needs for developing flipbook-based learning media to support the implementation of Deep Learning within the Merdeka Curriculum. A descriptive survey was conducted involving 30 teachers from various educational levels in Indonesia. Data were collected using a needs analysis questionnaire developed based on the Deep Learning Academic Framework and the Merdeka Curriculum guidelines. The data were analyzed using descriptive statistics. The findings revealed that teachers still experienced difficulties in understanding and implementing Deep Learning concepts in classroom practice. Limited learning resources, inadequate supporting media, and insufficient professional development opportunities were identified as major challenges. The results showed that the current utilization of learning media was categorized as needed (76.3%), while the need for flipbook-based learning media was categorized as highly needed (82.4%). Teachers expected the flipbook to provide practical guidance on Deep Learning implementation, learning strategies, assessment practices, classroom examples, visual illustrations, and flexible accessibility. The findings indicate that the development of flipbook-based learning media is highly required to support teachers in implementing Deep Learning and strengthening pedagogical practices within the Merdeka Curriculum. The results of this study provide a basis for the design and development of teacher-oriented digital learning resources.

Keywords: Deep Learning; Flipbook; Learning Media; Merdeka Curriculum; Needs Analysis

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INTRODUCTION

The world of education is moving towards digitalization. These changes, which were originally slow, are now taking their most tangible forms, such as unlimited classrooms, textbooks transforming into interactive modules, and teachers being challenged to not only teach, but to facilitate meaningful learning experiences. This shift is not just about tools or platforms, but touches deeper layers on how we define competencies, skills, and the goals of education itself. It is in this context that the demands of the 21st century are becoming increasingly relevant: the ability to think critically, communicate effectively, collaborate, and Creativity (4Cs) are no longer additional propositions, but rather basic prerequisites in a complex knowledge-based society (Andayani et al., 2023; Budiarto et al., 2024; Fadillah et al., 2023). Furthermore, the shift towards the era of Society 4.0 and Society 5.0 encourages the education system to actively develop digital literacy, data literacy, and

reflective thinking skills as an overarching part of the curriculum (Ayub et al., 2023; Teräs et al., 2020; Yuliatun et al., 2024). At that point, the need for interactive learning media that is able to answer the complexity of these demands can no longer be postponed.

The development of educational technology has encouraged the birth of various learning media innovations, such as STEM-based e-modules, Problem-Based Learning (PBL), interactive multimedia, digital infographics, simulations, Augmented Reality (AR), Virtual Reality (VR), Android-based media, and Learning Management System (LMS), which offer various approaches to increase student engagement, independence, and depth of learning (Budiarto et al., 2024; Mufit et al., 2022; Riswanto et al., 2022; Sukadari et al., 2023; Sutarto et al., 2022; Wijayanto et al., 2023; Yurniwati & Kustandi, 2023). A number of studies have also shown that media that integrate local wisdom and ethnomathematics are able to increase cultural relevance, learning interest, and science literacy more effectively than general media (Anggraeni et al., 2023; Fitriah et al., 2025; Sukadari et al., 2023; Sutarto et al., 2022; Wulandari et al., 2025). However, the effectiveness of these innovations still depends heavily on the readiness of teachers to understand, adopt, and implement them pedagogically, so that teachers become key actors in the success of digital education transformation (Budiarto et al., 2024; Cvetković et al., 2024; Nisa et al., 2021).

The role of teachers is becoming increasingly important in the implementation of deep learning that emphasizes conceptual understanding, metacognitive reflection, data-driven analysis, and the ability to transfer knowledge to real-world situations through problem-based, inquiry, and STEM approaches (Amin et al., 2024; Mufit et al., 2022; Rahman et al., 2023; Wijayanto et al., 2023). However, conditions in the field show that many teachers in Indonesia still rely on conventional learning media that are oriented towards texts and one-way communication, so they are less able to accommodate the diversity of learning styles and develop the Higher-Order Thinking Skills (HOTS) of students (Azizah et al., 2022; Budiarto et al., 2024; Mufit et al., 2022; Usman et al., 2024; Yuliatun et al., 2024). The limitations of conventional media do not only affect students; It also shapes the limits of the pedagogical imagination of the teachers themselves. When the available media is not able to accommodate a deeper and more reflective approach, it is difficult for deep learning practices to truly materialize in the classroom. These challenges are exacerbated by structural barriers in the form of limited ICT infrastructure, a lack of sustainable professional development programs, and real concerns about increasing workloads without comparable learning impacts (Andayani et al., 2023; Anggraeni et al., 2023; Yuliatun et al., 2024).

Responding to the complexity of these problems, the solution needed is not just to present new technologies, but to design learning media that is truly born from real needs, based on cultural contexts, and able to bridge the gap between digital potential and meaningful pedagogical practices. In this regard, the literature consistently shows that a thorough needs analysis is a foundation that cannot be ignored before developing any digital learning medium (Andayani et al., 2023; Anggraeni et al., 2023; M. F. A. Hamid et al., 2024). Without this foundation, the development of digital media is prone to slipping into what Teräs et al. (2020) Referred to as edtech solutionism, the adoption of technology that seems solutive but is actually not rooted in real pedagogical needs, and even has the potential to increase the workload of teachers without producing commensurate learning changes (Teräs et al., 2020; Yuliatun et al., 2024). Therefore, a combination of digital transformation and an in-depth learning approach must be built on a solid needs analysis, product feasibility validation, and adjustment to the context of the national curriculum and Indonesia's local cultural richness so that the media produced is not only academically relevant, but also truly applicable.

In the context of a more specific search for solutions, digital flipbook-based learning media has emerged as an alternative that deserves serious consideration. Conceptually, a flipbook is a digital format that brings together text, images, videos, and interactive elements in a single container that can be accessed through mobile devices or computers, a characteristic that inherently answers the needs of multimodal and flexible learning (Istanti et al., 2024; Karudin et al., 2025; Rahardjo et al., 2025). The integration of these modalities has been shown to increase the variety of sensory stimulation, which in turn strengthens learning engagement and interactivity over monolithic conventional approaches (Masie et al., 2025; Rahardjo et al., 2025). Flipbooks designed using elements of cognitive conflict, problem-based learning, and explicit reflection structures have the potential to stimulate high-level thinking organically encouraging users to not just read, but to analyze, evaluate, and design solutions in a structured visual narrative flow (Amin et al., 2024; Azizah et al., 2022; Usman et al., 2024). When this potential is then enriched with ethnomathematical content and local wisdom, the resulting cultural relevance is proven to be able to increase learning motivation and depth of concept understanding more substantially (Anggraeni et al., 2023; Fitriah et al., 2025; Sukadari et al., 2023; Supriyadi et al., 2024; Sutarto et al., 2022).

The potential of flipbooks as a medium to support deep learning, however, is not born automatically from the technology alone. The success of this media implementation depends heavily on the quality of the design process. The ADDIE (Analysis, Design, Development, Implementation, Evaluation) framework and the 4-D (Define, Design, Develop, Disseminate) model are widely recognized in the literature as the most reliable approaches to ensure that the developed media has content validity, media validity, and practical feasibility before being applied on a broader scale (Anggraeni et al., 2023; Galván-Cabello et al., 2025; Mufit et al., 2022; Sanjaya et al., 2022). A number of previous studies have consistently found that integrated digital media-based interventions in the form of HOTS e-modules, AR/VR, video analytics experiments, and flipbooks are able to significantly improve HOTS and science literacy, especially when the design adopts a problem-based approach and strong metacognition (Astuti et al., 2025; Azizah et al., 2022; Usman et al., 2024; Wijayanto et al., 2023). However, one thing that is still not adequately answered is: the extent to which flipbooks, as a specific medium, can be an effective instrument to improve the understanding and implementation of deep learning not in students, but in the teachers themselves, in the context of Indonesian education which is rich in diversity and complexity.

A search of the literature that most closely related to the focus of this study actually clarifies where the empty spots are. First, although research on flipbooks as a digital learning medium has undergone quite rapid development, including the dimensions of accessibility, multimodality, and the potential for increasing HOTS almost entirely places students from elementary school to college levels as study subjects, not teachers (Apriwijayanti et al., 2025; Masie et al., 2025; Rahardjo et al., 2025; Sukardi et al., 2025). Teachers are still often positioned as passive users of the media, not as active actors whose needs need to be understood in depth. Second, the study of deep learning in the Indonesian context has indeed developed well, but most of it focuses on its impact on students rather than on how teachers understand, internalize, and are able to implement it consistently in the classroom (Amin et al., 2024; Mufit et al., 2022; Rahman et al., 2023; Wijayanto et al., 2023). Third, although needs analysis has been recognized as an important prerequisite for the development of effective digital media (Anggraeni et al., 2023; Galván-Cabello et al., 2025; Wijayanto et al., 2023; Yuliatun et al., 2024), Until now, there has been no study that explicitly directs the analysis of these needs to the development of flipbooks to improve teachers' competence in deep learning in Indonesia. These three gaps, if read together, form

a significant empty space and at the same time are the fundamental reasons why this research needs to be conducted.

Departing from the research gaps that have been identified, this study aims to conduct a comprehensive needs analysis of the development of flipbook learning media specifically designed to improve conceptual understanding and deep learning implementation capabilities in teachers in Indonesia. Operationally, this research pursues five specific objectives: (1) what is the level of understanding and implementation of the independent learning-based curriculum among teachers?; (2) what are the conditions for the use of learning media in supporting the implementation of the independent curriculum and deep learning?; (3) what is the level of teacher labor for the development of flipbook learning media based on deep learning?; (4) what characteristics and features are needed by teachers in the development of flipbook media to support the implementation of deep learning?; (5) What are the implications of the results of the needs analysis on the design of the development of the flipbook for teachers in the implementation of the independent curriculum?.

The novelty of this research lies in the shift in focus that has been rarely done so far: placing teachers who are not students as the main subject of needs analysis, as well as bridging two streams of study that have been running separately, namely flipbook media studies and in-depth learning studies in the context of teacher professional development. Methodologically, this study adopts an ADDIE-based needs analysis approach enriched with a contextual perspective of local culture, as recommended by the current literature (Andayani et al., 2023; Anggraeni et al., 2023; Galván-Cabello et al., 2025; Sanjaya et al., 2022; Teräs et al., 2020). The novelty of this research lies in the shift in focus that has been rarely done so far: placing teachers who are not students as the main subject of needs analysis, as well as bridging two streams of study that have been running separately, namely flipbook media studies and in-depth learning studies in the context of teacher professional development. Methodologically, this study adopts an ADDIE-based needs analysis approach enriched with a contextual perspective of local culture, as recommended by the current literature.

METHODS

This study uses a quantitative descriptive approach with a survey research design, which was chosen because it allows the measurement of the level of respondent needs systematically and measurably through numerical data as the basis for media development (Patton, 2014). More specifically, this study applies need analysis as a fundamental stage before product development, a step that places the identification of gaps between the actual conditions of learning in the field and the ideal conditions of the implementation of the Independent Curriculum and Deep Learning as the starting point of the entire process (Azmi et al., 2020; Lee & Owens, 2004). This position of needs analysis as an initial stage is in line with the instructional development model of Lee and Owens (2004), which expressly places it before the design and production phases. The research sample consisted of 30 teachers who were selected through purposive random sampling based on criteria that have been set by the researcher, to ensure the relevance and representativeness of the data to the context being studied (Patton, 2014).

The instrument used is in the form of a needs analysis questionnaire developed by the researcher by referring to three sources: a review of similar research literature, the Ministry of Education and Education's Academic Deep Learning Academic Manuscript, and the Ministry of Education and Culture's Independent Curriculum Implementation

Guide. Data analysis was carried out in stages: the first stage calculated the frequency and percentage distribution using the formula P = (f/N) × 100%, where P is the percentage, f is the frequency of the answer, and N is the total number of respondents; the second stage calculates the average score ($\bar{X} = \Sigma X/n$) and the percentage of eligibility/need with the formula P = ($\bar{X}/\bar{X}max$) × 100%, with $\bar{X}max$ valued at 5 as the maximum score of the scale; and the third stage is to interpret the results of the eligibility percentage using predetermined criteria. The interpretation of the percentage of needs refers to the criteria, namely 0-20% = not needed; 21-40 = less needed; 41-60% = enough needed; 61-80% = needed and 81-100% = needed (Riduwan, 2022). The choice of descriptive statistical analysis techniques is in line with the purpose of the study, which is to empirically describe the conditions, tendencies, and needs of respondents without manipulation or intervention of variables.

RESULTS & DISCUSSION

Results

Respondent Profile

This research involved 30 teachers spread across various school levels, educator levels, and working periods as respondents. Their full profiles are presented in Table 1.

Table 1.
Profile of Research Respondents

Aspects	Category	n	Percentage
Gender	Women	24	80.0%
	Male	6	20.0%
	Total	30	100%
Age	Less than 30 Years	3	10.0%
	30–40 Years	11	36.7%
	41–50 Years	13	43.3%
	More than 50 Years	3	10.0%
	Total	30	100%
Final Education	SMA	4	13.3%
	D3	2	6.7%
	S1	21	70.0%
	S2	3	10.0%
	Total	30	100%
School Level	Junior High School/MTs	13	43.3%
	SMA/MA/SMK	16	53.3%
	Others	1	3.3%
	Total	30	100%

Tenure	< 5 Years	4	13.3%
	5–10 Years	7	23.3%
	11–20 Years	17	56.7%
	> 20 Years	2	6.7%
	Total	30	100%
Employment Status	Honor/GTT	21	70.0%
	Foundation Permanent Teacher	3	10.0%
	PPPK	5	16.7%
	PNS	1	3.3%
	Total	30	100%
School Status	Private	22	73.3%
	Negeri	8	26.7%
	Total	30	100%

Source: Researcher (2026)

Table 1 shows that eight out of ten respondents were female (80.0%). In terms of age, the 41-50 year old group is the most represented (43.3%), followed by the 30-40 year old group (36.7%) which reflects teachers with mature teaching experience. The educational background is dominated by S1 graduates (70.0%), although there are 10.0% who have taken S2. In terms of level, the majority teach in SMA/MA/SMK (53.3%) and junior high school/MTs (43.3%). Of particular interest is the employment status: seven out of ten respondents have honorary/GTT status (70.0%), and most of them teach in private schools (73.3%). The longest tenure was in the range of 11–20 years (56.7%), indicating that respondents who were not new teachers had sufficient experience to assess needs in the field contextually.

Understanding and Implementation of the Independent Curriculum

The picture of teachers' understanding of the Independent Curriculum shows a situation that is not yet fully encouraging. The majority of respondents (60.0%) admitted that they understood the curriculum quite well, but 36.7% only understood a small part and only 3.3% said they understood it very well. This figure raises the question: has the distribution of training so far been sufficiently even? Almost half of the respondents (46.7%) have only participated in the Independent Curriculum training 1-2 times, and more worryingly, one in five teachers (20.0%) has never participated in the training at all. This is consistent with the findings of a number of studies on the implementation of the Independent Curriculum in Indonesia which show that the dissemination of training is still very uneven (Mujiburrahman et al., 2025; Wijayanti et al., 2024).

The obstacles that teachers most often mention in implementing the Independent Curriculum are: (1) limited time for independent learning (60.0%); (2) lack of supportive learning media (50.0%); (3) inadequate condition of school facilities (40.0%); and (4) lack of easy-to-understand guidance (33.3%). The most difficult aspects to understand are the Pancasila/P5 Student Profile Strengthening Project (53.3%) and Differentiated Learning (46.7%), although 23.3% of respondents stated that they did not experience difficulties.

Understanding and Applying Deep Learning

If the condition of understanding the Independent Curriculum is still limited, the picture of Deep Learning questions according to the Academic Manuscript of the Ministry of Education (2025) is even more worrying. Only 16.7% of teachers stated that they understood this concept well and were ready to apply it. As many as 46.7% admitted to understanding some of it, 33.3% had heard but had not understood, and 3.3% did not know this concept at all. This data clearly confirms that the socialization of Deep Learning to teachers in the field is still far from adequate (Ministry of Primary and Secondary Education of the Republic of Indonesia, 2025). In terms of classroom implementation, more than half of respondents (56.7%) stated that they have tried to implement a small part, 16.7% have implemented consistently, 16.7% have implemented most of them, and 10.0% have never tried at all. This means that there is implementation but it is still very partial.

When asked to assess their understanding of the three principles of Deep Learning, the Mindful principle (conscious) was most understood by respondents (66.7%), followed by Meaningful (meaningful) at 56.7%, and Joyful (encouraging) at 46.7%. The most difficult components to implement are building a teacher-student-parent learning partnership (60.0%), effective use of digital technology (50.0%), and creating a conducive learning environment (50.0%). Regarding the type of media or resources needed to understand Deep Learning, face-to-face training is still the most choice (76.7%), followed by video tutorials/webinars (70.0%). Relevant to this study: a concise and visual print guide (Flipbook) came in third, chosen by 60.0% of respondents a fairly strong signal about the potential of this medium (Roemintoyo & Budiarto, 2021).

Conditions of Use of Learning Media

The conditions of using learning media consisted of eight statements (D1–D8) which were measured using a five-point Likert scale. The results of the descriptive statistical analysis are presented in Table 2 below.

Table 2.
Conditions of Use of Learning Media

Item	Statement	SS	S	RR	TS	STS	Mean	%	Category
D1	Regular use of learning media in each teaching session	7	16	6	0	1	3.93	78.7%	Required
D2	Availability of media in schools that support the implementation of the Independent Curriculum	6	15	4	4	1	3.70	74.0%	Required
D3	Utilization of digital media (e-books, videos, animations) in learning	3	19	8	0	0	3.83	76.7%	Required
D4	The ability of the media to encourage students' critical thinking	5	22	3	0	0	4.07	81.3%	Much Needed
D5	Media Capabilities Help Students Learn Meaningful Learning	6	16	8	0	0	3.93	78.7%	Required

D6	Difficulty finding media that suits the Deep Learning approach	1	15	6	7	1	3.27	65.3%	Required
D7	The ability of media to encourage joyful learning	4	18	8	0	0	3.87	77.3%	Required
D8	The need for new media that can be accessed flexibly (anytime, anywhere)	4	21	4	0	1	3.90	78.0%	Required
	Overall average						3.81	76.3%	Required

Source: Researcher (2026)
*Remarks: SS = Strongly Agree, S = Agree, RR = Doubtful, TS = Disagree, STS = Strongly Disagree

Overall, the average score of Part D was 3.81 (76.3%), which was in the Required category. Of the eight items, D4 obtained the highest score (Mean = 4.07; 81.3%; Very Needed) shows that teachers have a strong awareness of the importance of media that is able to encourage students' critical thinking. On the other hand, D6 achieved the lowest score (Mean = 3.27; 65.3%), but it was still in the Needed category. What needs to be observed from D6 is that 50.0% of respondents agree or strongly agree that it is difficult to find media that is in accordance with the Deep Learning approach, a gap that is real and needs to be responded to immediately. Two other things are noteworthy: 26.7% of teachers are still hesitant or disagree that the existing media supports the implementation of the Independent Curriculum (D2), and a similar proportion (26.7%) doubt that the available media is able to encourage joyful learning (D7). This condition strengthens the argument that learning media that are truly designed for the context of Deep Learning are not yet adequately available (Amanullah, 2020; Perdana et al., 2021).

Flipbook Learning Media Needs (Part E)

Part E contains ten statements (E1–E10) that directly measure the level of teachers' need for the development of Flipbook media. Full results are presented in Table 3.

Table 3.
Flipbook Learning Media Needs

Item	Statement	SS	S	RR	TS	STS	Mean	%	Category
E1	The need for guidance on the implementation of the Independent Curriculum in an attractive and easy-to-understand format	6	23	1	0	0	4.17	83.3%	Much Needed
E2	Flipbooks as the right medium to help teachers understand the concept of Deep Learning	5	20	5	0	0	4.00	80.0%	Required
E3	Flipbooks need to present real examples (best practices) of implementation in the classroom	5	23	2	0	0	4.10	82.0%	Much Needed

E4	Flipbooks need to be equipped with infographics and visual illustrations to make it easier to understand	6	23	1	0	0	4.17	83.3%	Much Needed
E5	The need for a Flipbook that contains a guide to designing a teaching module based on Deep Learning	5	23	2	0	0	4.10	82.0%	Much Needed
E6	Flipbooks need to include assessment guides that are aligned with the Independent Curriculum	6	22	2	0	0	4.13	82.7%	Much Needed
E7	Flipbooks should be accessible offline or online	8	20	2	0	0	4.20	84.0%	Much Needed
E8	Flipbooks need to present ready-to-use rubrics/evaluation instruments for teachers	8	19	3	0	0	4.17	83.3%	Much Needed
E9	The Utilization of Flipbooks in Learning Communities (KKG/MGMP) in Schools	7	18	5	0	0	4.07	81.3%	Much Needed
E10	The development of Flipbooks is important to improve teachers' pedagogical competence	7	19	4	0	0	4.10	82.0%	Much Needed
	Overall average						4.12	82.4%	Much Needed

Source: Researcher (2026)
*Remarks: SS = Strongly Agree, S = Agree, RR = Doubtful, TS = Disagree, STS = Strongly Disagree

This is the most prominent finding in the entire study. All ten items of Part E exceeded the 80% threshold, with an overall average of 4.12 (82.4%) in the Urgently Needed category, the highest achievement of any instrument section. Item E7 achieved the highest score (Mean = 4.20; 84.0%): teachers really expect Flipbooks that can be accessed both offline and online. Items E1 and E4 followed with identical scores (Mean = 4.17; 83.3%), respectively, indicating the need for guidance on the implementation of the Independent Curriculum in an attractive format, as well as the need for infographics and visual illustrations that facilitate understanding.

One thing that cannot be ignored: none of the respondents gave a Disagree (TS) or Strongly Disagree (STS) answer to all of the Section E items. Results that have been analyzed in this way are rarely found in the survey data and indicate a very strong unity of view among teachers regarding the urgency of developing this Flipbook (Juliani & Ibrahim, 2023).

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Discussion

The Urgency of Flipbook Media Development for Teachers

What stands out most about the overall data of this study is not just the high numbers, but the very consistent pattern: teachers need the right media to understand and apply Deep Learning, and those media are not yet available. The two most obvious indicators show this: 50.0% of teachers cited the lack of supportive learning media as a real obstacle to the implementation of the Independent Curriculum, and half of the respondents admitted that it was difficult to find media that was in accordance with the Deep Learning (D6) approach (Standards Agency, Curriculum et al., 2024; Inscription & Anas, 2023).

These findings are in line with what Kunaifi & Wahyudi (2024) reported: teachers' readiness to implement Deep Learning still varies and requires special attention. Mujiburrahman et al. (2025) also emphasized that strengthening teacher professional development through innovative and easily accessible learning media and resources is one of the keys to the successful implementation of the Independent Curriculum in the field, not just training, but media that can be taken home and used independently.

Media Use Conditions and Digital Patterns of Teachers

The average score of Part D of 3.81 (76.2%) reflects decent conditions, but it is not enough. The use of conventional media is still very dominant, LKPD (80.0%), printed textbooks (73.3%), and PowerPoint (66.7%) while Flipbooks or e-books only touch 10.0%. There is a fairly wide gap between the technologies that are available and those that are actually used. The highest D4 score (81.3%; Very Needed) is quite interesting to criticize: teachers are aware of the importance of media that encourages critical thinking, but that awareness has not been accompanied by the availability of appropriate media. This phenomenon is exactly what Roemintoyo and Budiarto (2021) describe: Flipbooks as digital media innovations can bridge this gap, as they inherently support 21st century learning, including critical and collaborative thinking. The D8 score (78.0%) which reflects the need for flexibly accessible media shows the readiness of teachers to shift to the digital ecosystem at least at the level of preference. The fact that 93.4% of respondents chose an interactive digital format or both (digital+print) reinforces that Flipbooks, which technically meet those criteria, have strong relevance to develop (Roemintoyo & Budiarto, 2021).

Strong Consensus on Flipbook Media Needs

The average 82.4% (Highly Needed) in Section E is not only the highest number in the instrument, it is also supported by the absence of a single negative response across the item. This is not common in survey data, and it sends a fairly strong signal: teachers don't

just need Flipbooks, they want them (Juliani & Ibrahim, 2023). The highest E7 score (84.0%) tells the story of geographical reality. The respondents of this study were spread from Papua to Aceh, contexts where internet connectivity was not always reliable. The need for offline access is not a luxury; That is the minimum requirement for this media to really be used. Supriatna et al. (Supriatna et al., 2025) found the same thing in the study of social studies media based on local wisdom: cross-platform accessibility is a determining factor in the adoption of learning media in the field.

The identical E1 and E4 scores (83.3%) require an Independent Curriculum guide in an engaging format, and the need for infographics/visual illustrations illustrate something that is often missed: teachers not only need the right content, but content that they can quickly understand and apply without having to read dozens of pages of dense text. Prasasti and Anas (2023) prove that digital flipbooks equipped with visual elements significantly improve critical thinking skills and in the context of teachers, visualization of abstract curriculum concepts has been proven to accelerate understanding that has been hampered (Wahyuni et al., 2023).

Implications for Flipbook Design

Triangulation of data from the four parts of the Independent Curriculum (B), Deep Learning (C), media conditions (D), and the need for Flipbooks (E) resulted in quite clear and layered design implications. In terms of content, three topics must be the top priority: CP Independent Curriculum Concept, ATP, Teaching Modules (83.3%), Principles of Deep Learning (76.7%), and Innovative Learning Strategies (56.7%). This sequence is not a coincidence; He reflects a logical sequence of needs: teachers need to understand the curriculum first, then be able to internalize their approach, and then choose a strategy. The Ministry of Education's Deep Learning Framework places the understanding of the right principles as a foundation before practical implementation, and this data confirms this (Ministry of Primary and Secondary Education of the Republic of Indonesia, 2025).

In terms of format and accessibility, 93.4% of respondents want a digital format or a digital-print combination. It's not just a matter of preference that reflects a real need for media that can be used at any time, with or without an internet connection. Roemintoyo and Budiarto (Roemintoyo & Budiarto, 2021) emphasized that this flexibility of access is what makes digital Flipbooks relevant for preparing for 21st century education. In terms of pedagogical features, three elements must be present concretely: assessment guidelines in line with the Independent Curriculum (E6: 82.7%), ready-to-use evaluation rubrics/instruments (E8: 83.3%), and examples of real best practices from the classroom (E3: 82.0%). Teachers are not looking for new theories, they need something that can be immediately applied tomorrow in class (Inscription & Anas, 2023). Flipbooks that only contain conceptual explanations without operational examples run the risk of not being used. Finally, the E9 score (81.3%) opens up an interesting dimension: teachers plan to use Flipbooks in the KKG/MGMP learning community. This shifts Flipbook from just an individual media to a collaborative medium, a potential that, if designed well, can strengthen teachers' professional learning networks organically.

Teacher Profile as a Context of Needs

Respondent profile data is not just background information; it provides context that is important for interpreting the entire findings. Seven out of ten teachers have honorary/GTT status and teach in group private schools that structurally have more limited access to formal government-funded training (Mujiburrahman et al., 2025; Wijayanti et al., 2024). In fact, they are the group that needs independent media the most: media that can be learned on their own, at any time, without waiting for their turn to train.

This is where the relevance of digital Flipbooks becomes very strong. Its flexible, portable, and non-dependent nature on training organizers makes it a realistic solution rather than an ideal solution that only works under ideal conditions (A. Hamid & Alberida, 2021; Roemintoyo & Budiarto, 2021; Supriatna et al., 2025). The fact that 83.3% of respondents have never used Flipbook but are very interested actually increases the chances of adoption: there is no negative bias from previous bad experiences, only enthusiasm that needs to be responded to with a well-designed product. Rogers et al. (2014) reminded that openness to innovation is a prerequisite for the adoption of educational technology and this data shows that these prerequisites have been met among the respondents.

CONCLUSION

This research reveals that teachers' need for flipbook learning media in an effort to improve understanding and implementation of deep learning is at a very high level. Teachers face various challenges that are considerable in understanding and applying deep learning pedagogy. Although the use of flipbooks is still limited, teachers show a high interest and positive acceptance of its development. The results of this needs analysis study are expected to form the basis for developing flipbooks that meet teachers' needs and support their understanding and implementation of the independent curriculum in learning activities.

The researchers' findings imply that future flipbook designs will need to integrate interactive multimedia features, practical learning guides, authentic assessments, and flexible accessibility to effectively support meaningful, conscious, and fun learning practices in the context of digital education. The limited sample size in this study potentially resulted in variations in teachers' actual needs not being comprehensively identified. Therefore, future research should further verify this with a larger sample.

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