

STRENGTHENING STUDENTS' UNDERSTANDING OF ISLAMIC MONEY AND CAPITAL MARKET INSTRUMENTS THROUGH AN INTERACTIVE FLIPBOOK: A COMMUNITY SERVICE PROGRAM AT FEBI UIN SUNAN GUNUNG DJATI BANDUNG

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Abstract.

The development of interactive digital learning media provides an opportunity to strengthen students' understanding of financial topics that are abstract and technical in nature. This community service program was conducted in partnership with the Management Study Program, Faculty of Islamic Economics and Business (FEBI), UIN Sunan Gunung Djati Bandung, in response to several learning challenges identified among students, including reliance on static and text-heavy printed materials, a gap between theoretical concepts and practical applications in financial markets, and limited access to learning materials beyond the classroom. A preliminary learning-preference needs assessment involving 93 students indicated a strong preference for Reading/Writing and Kinesthetic learning activities, which informed the development of an interactive, web-based flipbook covering money market and Islamic capital market instruments, including sukuk and Islamic mutual funds. The program involved 115 fifth-semester students from three parallel classes and consisted of the introduction and development of the digital media, guided use of the flipbook, mentoring activities, and program evaluation. Evaluation was conducted using a one-group pretest–posttest assessment with a 25-item objective test, complemented by a six-item 1–5 Likert-scale questionnaire assessing students' responses to the learning media, including perceived usefulness and perceived ease of use based on the Technology Acceptance Model (TAM). Students' average scores increased from 77.50 before the activity to 95.72 after the activity, with a mean difference of 18.23 points (95% CI [15.85, 20.60]; $t(114) = 15.22$; $p < .001$; Cohen's $d \approx 1.42$). The standard deviation also decreased from 17.711 to 7.942, indicating more consistent post-activity performance. Because the program did not employ a control group, these results are interpreted as an increase in students' understanding associated with participation in the program rather than evidence of a causal effect attributable solely to the flipbook. Students' overall responses to the media were highly positive, with a mean score of 4.39 out of 5.00, particularly regarding its usefulness and ease of use. Overall, the program demonstrates that an interactive flipbook can serve as a practical community-service learning medium for strengthening students' understanding of Islamic money and capital market instruments and supporting more accessible, interactive, and contextualized financial learning.

Keywords: *interactive flipbook; community service; Islamic capital market; digital learning media; TAM; CTML.*

Higher education in the field of economics and finance plays a strategic role in preparing human resources capable of understanding, developing, and implementing financial instruments in accordance with applicable principles. This need is becoming increasingly important given that the level of Islamic financial literacy among the Indonesian population still lags behind general financial literacy. Based on the 2024 National Survey of Financial Literacy and Inclusion (SNLIK), organized by the Financial Services Authority (OJK) together with the Central Statistics Agency (BPS), the Islamic financial literacy index reached 39.11%, while the general financial literacy index reached 65.43%. This condition indicates that strengthening Islamic financial education needs to be carried out continuously, including through higher education institutions that play a role in shaping future practitioners, academics, and educators in the field of economics and finance.

The higher education sector, particularly State Islamic Religious Higher Education Institutions (PTKIN), has an institutional responsibility to contribute to narrowing this literacy gap. Students trained at these institutions are prospective capital market practitioners, academics, regulators, and public educators who will help shape the development of the Islamic economic ecosystem. Therefore, the quality of the learning process at the university level is relevant to the broader goal of improving financial literacy in society.

One of the topics with a relatively high level of complexity in financial education is the money market and capital market. Students are required not only to understand the concepts and mechanisms of financial markets, but also to distinguish the characteristics of various instruments, understand transaction principles, securities trading mechanisms, returns, risks, and the application of Islamic principles in investment activities. Material that is technical in nature, involving specific terminology, charts, transaction flows, and calculations, can be challenging when delivered predominantly through lecture methods and text-based printed materials. Prior to this activity, an internal identification of learning problems in the course confirmed several concrete constraints: (1) course handouts and printed modules were static and text-heavy, and could not keep pace with fast-changing market dynamics; (2) students were largely passive recipients of the material, with limited opportunity to experiment or practice; (3) there was a persistent gap between theoretical material and applied trading practice; and (4) printed materials could only be accessed on campus, limiting flexible, anytime-anywhere learning. This condition has the potential to create differences in the level of understanding among students and reduce engagement in the learning process.

The development of digital technology provides an opportunity to present learning media that are more suited to the characteristics of today's students. One alternative that can be used is the interactive digital flipbook, an electronic learning medium that replicates the experience of virtually flipping through a book, enhanced with multimedia features such as text, images, animation, audio,

hyperlinks, and video. Nurrita (2022) explained that digital flipbooks have flexibility because they can be used independently across various devices, such as smartphones, tablets, and laptops. In the study of the money market and the Islamic capital market, these characteristics can be leveraged to visualize transaction schemes, instrument characteristics, trading flows, and calculation examples that are difficult to understand when presented only in text form.

Theoretically, the use of multimedia in flipbooks can be explained through the Cognitive Theory of Multimedia Learning (CTML) developed by Mayer (2021). CTML is based on three main assumptions, namely the dual-channel assumption, the limited-capacity assumption, and the active-processing assumption. The first assumption explains that humans process information through separate visual/pictorial and verbal/auditory channels. The second assumption asserts that each channel has a limited processing capacity, while the third explains that meaningful learning requires active engagement in selecting, organizing, and integrating new information with existing knowledge. Placing related information close together can also help reduce unnecessary cognitive load and facilitate the formation of conceptual understanding.

Beyond the cognitive perspective, the success of implementing digital media is also influenced by user acceptance, which can be explained through the Technology Acceptance Model (TAM) developed by Davis (1989). TAM explains that technology acceptance is primarily influenced by perceived usefulness (PU) and perceived ease of use (PEOU). In the context of the interactive flipbook, PEOU can be reflected through ease of access, navigation, readability, and use of media features, while PU can be seen from students' perceptions that the flipbook helps them understand technical material.

A number of previous studies have shown that flipbook media and interactive learning media have the potential to improve learning quality. Awaludin and Yulianto (2024) found an increase in cognitive achievement after the use of digital flipbooks, while Novitasari, Listiani, and Prasasti (2023) demonstrated the benefits of this medium in supporting structured learning skills. Roemintoyo and Budiarto (2021) as well as Vikiantika, Primasatya, and Erwati (2022) showed that flipbook media can respond to the characteristics of learners who require material to be presented visually and dynamically. In the context of financial literacy, Aprayuda et al. (2026) showed that interactive learning media based on the Stock Rising game simulation can improve students' financial literacy, while Arzeman et al. (2025) and Farida et al. (2024) showed that interactivity, flexibility of access, and visual design are important elements in driving student engagement. Nevertheless, the use of interactive flipbooks that specifically integrate cognitive and technology-acceptance perspectives in teaching the money market and Islamic capital market within PTKIN remains relatively limited.

This article reports a community service (Pengabdian kepada Masyarakat/PKM) program.

The institutional partner was the Management Study Program, Faculty of Islamic Economics and Business (FEBI), UIN Sunan Gunung Djati Bandung, through the Money Market and Capital Market course. The direct beneficiaries were 115 fifth-semester students enrolled in the course across three parallel classes (A, B, and C), while the study program and course lecturers benefit from a reusable digital learning medium.

The main output of the activity is an interactive, web-based digital [flipbook on money market and Islamic capital market material](#), including sukuk and Islamic mutual funds, which remains usable by the Management Study Program beyond the duration of this activity. A secondary output is the evaluation data set (pre-test/post-test scores and the perception questionnaire) summarized in this article, which is intended to inform further refinement of the media and to serve as a reference for similar community service activities in other courses.

Based on the problems and review outlined above, this community service program aims to: (1) support students' understanding of the concepts and instruments of the money market and the Islamic capital market through an interactive flipbook designed on the basis of a learning-needs assessment; (2) provide mentoring in the use of the media during the course; (3) evaluate changes in students' learning outcomes before and after implementation; and (4) describe students' acceptance of the media based on the dimensions of perceived usefulness and perceived ease of use within the TAM framework. The results are expected to provide a practical contribution to the development of digital learning media relevant to Islamic financial material in higher education.

II. METHOD

This community service activity used a quantitative program-evaluation approach to assess the implementation of learning based on an interactive flipbook medium. The evaluation used a one-group pretest–posttest design, that is, measuring participants' cognitive ability before and after the use of the media within the same group, without a separate control group. This design was chosen because the flipbook was part of the regular learning activities provided to all students enrolled in the course, so no group of students was withheld from the media for comparison purposes. Because this design does not isolate the flipbook from other concurrent influences on learning (e.g., regular lectures, independent study, prior knowledge), findings from the pre-test/post-test comparison are described throughout this article using associative language (e.g., "is associated with," "is followed by," "indicates an increase after implementation") rather than causal language (e.g., "causes," "proves"), consistent with the limitations of the design discussed in Section IV.E. The activity was carried out in the Management Study Program, FEBI, UIN Sunan Gunung Djati Bandung, in the Money Market and Capital Market course during the odd semester of the 2025/2026 academic year.

The participants of the activity consisted of all fifth-semester students of the Management Study Program taking the Money Market and Capital Market course across three parallel classes (A, B, and C), all of whom were included in the activity and its evaluation. The number of participants included in the pre-test/post-test evaluation was 115 students. The media evaluation questionnaire was completed by 100 of these students (42% male, 58% female). A subset of 93 students from the same three classes additionally completed the preliminary learning-style preference survey described in Section I.

The implementation of the activity was carried out through five main stages.

1. Needs assessment: learning-style preference survey

The learning material was compiled based on the Semester Learning Plan (RPS), integrating money market and capital market topics, including Islamic financial instruments such as sukuk and Islamic mutual funds. The material was then developed into an interactive, web-based digital flipbook format equipped with text, illustrations, charts, links, and supporting multimedia content.

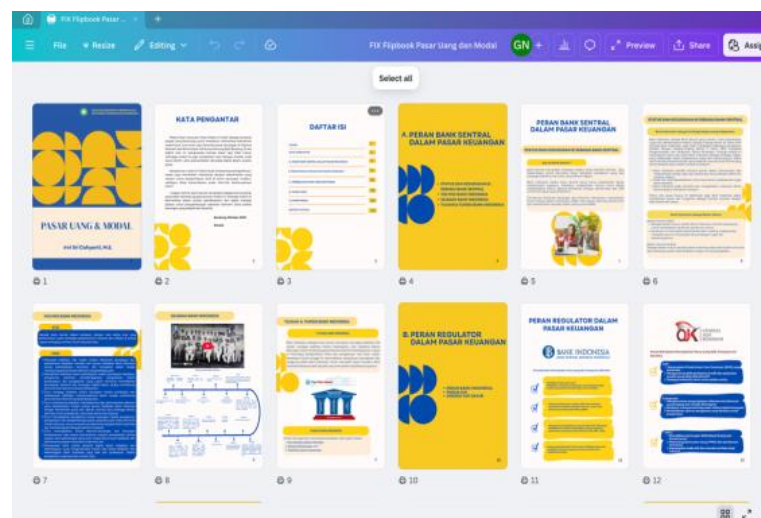


Figure 1. Preparation and Development of the Flipbook

2. Pre-test

Before using the flipbook, participants completed 25 multiple-choice questions to identify their initial ability and obtain a baseline picture of their understanding of the material to be studied.

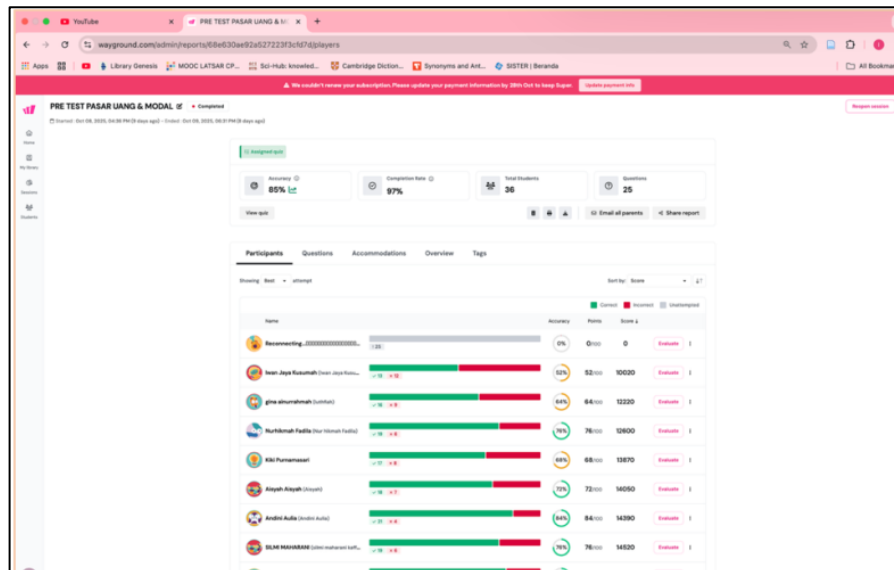


Figure 2. The result of Pre-test

3. Implementation of the media

The flipbook was used as a supporting learning medium over one course cycle. Students obtained independent access, allowing them to study the material at their own pace (self-paced learning), both during class sessions and through available digital devices.



Figure 3. Implementation of the media

4. Post-test and evaluation of participant responses

After using the media, students completed 25 questions with indicators and difficulty levels equivalent to the pre-test in order to determine the change in their level of understanding. Subsequently, students completed a media-evaluation questionnaire using a Likert scale and provided feedback through open-ended questions.

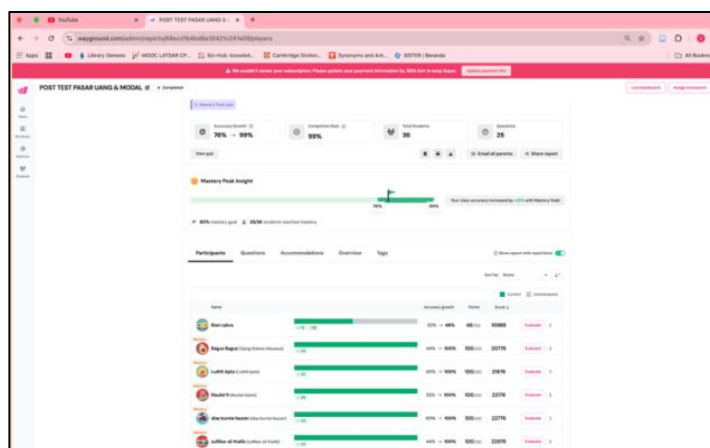


Figure 4. The result of Pre-test

Data Collection Instruments

1. Learning-style preference questionnaire

A 19-item instrument adapted from the VARK framework (Fleming & Mills, 1992; four visual items and five items each for the auditory, reading/writing, and kinesthetic dimensions), used only as a preliminary needs-assessment tool to inform media design, not as an outcome measure.

2. Cognitive test

The instrument consisted of 25 multiple-choice questions measuring conceptual understanding, transaction mechanisms, and the ability to perform simple calculations related to money market and capital market instruments. The item indicators were developed based on cognitive levels C2–C4 of Bloom's Taxonomy (Anderson & Krathwohl, 2001).

3. Media evaluation questionnaire

The questionnaire consisted of six closed statements using a 1–5 Likert scale (1 = strongly disagree - 5 = strongly agree), plus one open-ended question, and was completed by 100 students. To ensure the questionnaire is not over-interpreted as a full TAM instrument, each item is explicitly classified below as belonging to a core TAM construct or to a supplementary, non-TAM indicator added for program-evaluation purposes:

Table 1. Classification of Media Evaluation Questionnaire Items

No.	Statement (summarized)	Classification
1	Usefulness of the module for understanding the material	TAM - Perceived Usefulness (PU)
2	Presentation of the material (structure and visuals)	Additional indicator (non-TAM): presentation quality
3	Ease of accessing and using the module	TAM - Perceived Ease of Use (PEOU)
4	Clarity and simplicity of language	TAM - Perceived Ease of Use (PEOU)
5	Alignment of the module with the RPS (curriculum)	Additional indicator (non-TAM): curricular alignment
6	Usefulness of the module for course development	TAM - Perceived Usefulness (PU)

Accordingly, only four of the six items (Nos. 1, 3, 4, and 6) map onto the two core TAM constructs (two items for PU, two for PEOU); the remaining two items (presentation of the material and curricular alignment) are treated as supplementary program-evaluation indicators rather than as TAM constructs, and are interpreted separately from the TAM-based discussion in Section IV.B.

Data Analysis

Learning outcome data were analyzed descriptively and inferentially using SPSS software. The descriptive analysis included the mean, standard deviation, minimum, and maximum values of the pre-test and post-test scores. Prior to testing the difference between the pre-test and post-test scores, the normality of each set of scores was examined using the one-sample Kolmogorov–Smirnov test with Lilliefors significance correction, which is appropriate given the sample size ($n = 115$), as a prerequisite for determining whether a parametric or non-parametric difference test should be used.

The Kolmogorov–Smirnov test (Lilliefors correction) indicated that neither the pre-test scores were not normally distributed, as both significance values were below 0.05.

Table 2. One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test		Pre Test	Post Test
N		115	115
Normal Parameters ^{a,b}	Mean	77.50	95.72
	Std. Deviation	17.711	7.942
Most Extreme Differences	Absolute	.150	.427
	Positive	.102	.295
	Negative	-.150	-.427
Test Statistic		.150	.427
Asymp. Sig. (2-tailed)		.000 ^c	.000 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Because the normality assumption required for the parametric paired-sample t-test was not met, the Wilcoxon signed-rank test was used as the non-parametric alternative to examine the difference between the pre-test and post-test scores.

Because the normality assumption was not satisfied, the difference in achievement before and after the use of the media was analyzed using the Wilcoxon signed-rank test, a non-parametric alternative to the paired-sample t-test, at a 5% significance level ($\alpha = 0.05$), reported together with the Z statistic, its significance level, and an effect size (r, computed as Z divided by the square root of the number of paired observations).

$$r = Z / \sqrt{N}$$

where Z is the Wilcoxon signed-rank test statistic and N is the number of paired observations (N = 115).

H₀: there is no difference in the distribution of learning outcomes before and after the use of the flipbook (median difference = 0)

H_a: there is a difference in the distribution of learning outcomes before and after the use of the flipbook (median difference $\neq$ 0)

Perception questionnaire data were analyzed descriptively by calculating the mean score and standard deviation for each aspect and classifying it according to Likert-scale interpretation criteria (1.00–1.79: Strongly Disagree; 1.80–2.59: Disagree; 2.60–3.39: Somewhat Agree; 3.40–4.19: Agree; 4.20–5.00: Strongly Agree). The two non-TAM items (presentation of the material; curricular alignment) were analyzed and reported separately from the PU/PEOU items.

III. RESEARCH FINDINGS

A. Learning-Style Preference Survey (Preliminary Needs Assessment)

The preliminary survey completed by 93 students prior to the intervention (Class A = 39/41.9%; Class B = 20/21.5%; Class C = 34/36.6%; female = 59.1%, male = 40.9%) showed the following distribution of learning-style preference scores:

Table 3. Distribution of Learning-Style Preference Scores

Learning Style	Total Score	Rank
Reading/Writing	1,415	1
Kinesthetic	1,380	2
Auditory	1,342	3
Visual	1,093	4

These results indicate that the surveyed students were, on average, more inclined toward reading/writing- and kinesthetic-based learning than toward purely visual or auditory learning. As

noted in Section II, this finding was used as the basis for combining structured text and interactive/simulation-style elements in the flipbook, rather than designing the medium around visual content alone.

B. Improvement in Students' Cognitive Learning Achievement

The evaluation results show an increase in students' cognitive achievement following the use of the interactive flipbook media in the Money Market and Capital Market course. Based on the descriptive statistical analysis, the average student score increased from 77.50 on the pre-test to 95.72 on the post-test, an increase of 18.22 points. The standard deviation also decreased from 17.711 to 7.942, indicating that student achievement after the learning activity was not only higher, but also had a narrower spread of scores.

Table 4. Descriptive Statistics of the Pre-Test and Post-Test

Evaluation Group	N	Mean	Std. Deviation	Std. Error Mean
Pre-Test	115	77.50	17.711	1.652
Post-Test	115	95.72	7.942	0.741

The decrease in the standard error of the mean from 1.652 to 0.741 indicates that the estimate of students' average achievement on the post-test has a higher level of precision. To determine the significance of the difference in achievement before and after the use of the media, a paired-sample t-test was conducted. The results, including the effect size, are presented in Table 4.

Table 5. Paired-Sample t-Test Results (with Effect Size)

Mean Diff.	SD of Diff.	SE of Diff.	95% CI	t	df	Sig. (2-tailed)	Cohen's d
-18.226	12.838	1.197	[-20.598, -15.854]	-15.224	114	p < .001	≈ 1.42 (large)

The paired-sample t-test results show a mean difference of -18.226 points (95% CI [-20.598, -15.854]), $t(114) = -15.224$, $p < .001$. The effect size, Cohen's $d \approx 1.42$, indicates a large effect by conventional benchmarks (Cohen, 1988). Consistent with reporting conventions for very small p-values, the significance level is reported as $p < .001$ rather than $p = 0.000$. Substantively, these results indicate that an increase in student achievement is associated with participation in learning that used the interactive flipbook media; because this activity used a one-group design without a control group, the results do not by themselves establish that the flipbook was the sole cause of the increase.

C. Consistency of Improvement Across Parallel Classes

An increase in the mean score was observed in all three parallel classes, although its magnitude varied, as presented in Table 5.

Table 6. Comparison of Learning Achievement by Class

Parallel Class	N	Pre-Test Mean	Post-Test Mean	Increase (%)
Class A	38	76.84	95.26	23.97%
Class B	39	78.20	96.15	22.95%
Class C	38	77.46	95.75	23.61%

All three classes showed a relatively consistent pattern of improvement. Class A experienced an increase of 23.97%, Class B of 22.95%, and Class C of 23.61%. The difference in the percentage increase between classes was relatively small, at around 1.02 percentage points between the highest and lowest increases. This finding indicates that the improvement in achievement did not occur in only one class, but was observed across all groups of participants in the activity.

This consistency also shows that the media can be applied to three learning groups with different class characteristics. However, this finding is positioned as an illustration of the consistency of the activity's implementation and is not intended as a specific test of the instructional reliability of the media.

D. Equalization of Students' Comprehension Achievement

In addition to the increase in the mean score, the change in standard deviation is an important finding in the evaluation of the activity. The standard deviation decreased from 17.711 on the pre-test to 7.942 on the post-test. Based on this calculation, there was a decrease in score variation of approximately 55.16%.

The decrease in standard deviation indicates that the distribution of student achievement after the learning activity became more homogeneous compared to the initial condition. At the time of the pre-test, students' initial abilities showed relatively large variation. After using the flipbook, most students achieved post-test scores that were relatively close together at a higher level of achievement.

This finding indicates an equalization of comprehension achievement following the learning activity. Nevertheless, this change cannot be directly interpreted as evidence that the flipbook causally eliminated the gap in students' abilities. The decrease in score variation is more appropriately understood as an indication that, after the activity took place, the differences in achievement among students became smaller.

E. Student Acceptance of the Interactive Flipbook Media

Based on the 1–5 Likert-scale questionnaire completed by 100 students, an overall mean of 4.39 was obtained, which falls into the strongly agree category.

Assessment Aspect	Mean (1–5)	Interpretation	Classification
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Usefulness for understanding the material	5.00	Strongly Agree	TAM - PU
Innovation and interactivity	4.50	Strongly Agree	Non-TAM indicator
Ease of accessibility	5.00	Strongly Agree	TAM - PEOU
Clarity and simplicity of language	5.00	Strongly Agree	TAM -PEOU
Alignment with RPS	4.00	Agree	Non-TAM indicator
Usefulness for course development	5.00	Strongly Agree	TAM - PU
Overall mean	4.75	Strongly Agree	-

Table 7. Student Perceptions of the Interactive Flipbook Media

Four indicators obtained the highest score of 5.00, namely the usefulness of the media for understanding the material, ease of accessibility, clarity of language, and the usefulness of the media for course development. Meanwhile, the innovation and interactivity aspect obtained a score of 4.50, and the alignment of the media with the RPS obtained a score of 4.00. All indicators fell within the agree to strongly agree category.

These results indicate that students generally showed a high level of acceptance of the flipbook as a learning medium. The high score on the usefulness aspect indicates that students perceive the media as helpful for the learning process, while the high score on the ease-of-use aspect indicates that the media is relatively easy to access and use in the learning process.

F. Qualitative Findings and Input for Media Development

Student responses to the open-ended question generally showed appreciation for the more visual presentation of the material, ease of access, and the media's ability to be used independently. Students also suggested optimizing the size and compression of graphic elements to shorten loading time, particularly on lower-specification devices or limited internet connections, and improving navigation so that the chapter structure could be more easily aligned with the sequence of material and the meeting schedule in the RPS.

IV. DISCUSSION

A. Learning Gains Following Flipbook Use from the Perspective of CTML

The increase in students' cognitive achievement following the use of the interactive flipbook can be understood through the framework of the Cognitive Theory of Multimedia Learning (CTML) developed by Mayer (2021). The characteristics of the Money Market and Capital Market material securities transaction mechanisms, the characteristics of sukuk, Islamic mutual funds, the relationship between risk and return, and the flow of financial market transactions contain concepts that are relatively abstract and not always easy to understand through textual explanation alone. As

shown by the learning-style survey (Section III.A), students in this activity showed relatively balanced preferences with a slight inclination toward reading/writing and kinesthetic learning; the flipbook's combination of structured text, illustrations, charts, and interactive elements was designed to offer more than a single mode of presentation, which is consistent with CTML's dual-channel and active-processing assumptions.

The findings of this activity are consistent with the research of Awaludin and Yulianto (2024), Novitasari, Listiani, and Prasasti (2023), and Roemintoyo and Budiarto (2021), which showed that flipbook media can support the learning process through a more visual and interactive presentation of material. In a more specific context, the findings of Aprayuda et al. (2026) regarding interactive learning media in capital market material also showed that a more interactive presentation of learning is associated with an increase in student financial literacy.

B. Student Acceptance of the Flipbook from the Perspective of TAM

The evaluation results show an overall perception score of 4.39 out of 5.00 ($n = 100$). As detailed in Section III.E, the items mapped onto the TAM constructs obtained the highest scores, with Perceived Usefulness (PU) averaging 4.47 and Perceived Ease of Use (PEOU) averaging 4.40. This indicates that students not only found the media easy to access and understand, but also perceived a direct benefit from its use in understanding the material. The two supplementary, non-TAM indicators (presentation of the material and curricular alignment) scored somewhat lower (4.35 and 4.23, respectively) and are interpreted here only as descriptive program-evaluation feedback, not as part of the TAM analysis. The relatively lower score for curricular alignment is consistent with students' suggestion to align the chapter structure more closely with the sequence of meetings in the RPS.

Nevertheless, the interpretation of TAM in this activity needs to be limited to the descriptive aspect. The high PEOU and PU scores indicate that students have positive perceptions of both aspects, but because only descriptive statistics on six items were collected, without a validated multi-item TAM scale or inferential path analysis the data cannot be used to test the relationships between PEOU, PU, and behavioral intention to use the technology that a full TAM model specifies. Thus, the TAM findings in this activity are more appropriately understood as a description of students' level of acceptance of the flipbook media, informed by, but not a full statistical test of, the TAM framework.

C. Consistency of Findings and Equalization of Comprehension Achievement

Another finding is that an increase was observed in all three parallel classes, with the largest gain in Class C (33.2%), which had the lowest initial mean, compared with Classes A (21.5%) and

B (18.5%). In addition, the decrease in the standard deviation from 17.711 to 7.942 indicates a narrowing of the variation in student achievement, which can be linked to the principle of active processing in CTML: when students have the opportunity to revisit information, select relevant sections, and organize information according to their own needs (self-paced learning), the process of forming understanding can take place more actively for students with varying initial abilities.

However, this finding does not, by itself, establish that the flipbook functions as a pedagogical equalizer in a causal sense. The absence of a control group and the lack of measurement of other factors that may influence student achievement mean that this interpretation needs to be limited. The decrease in standard deviation is more appropriately positioned as an indication of the equalization of achievement associated with the activity, which can serve as a basis for further research.

D. Implications for Understanding of Islamic Financial Market Instruments

The use of the interactive flipbook in this activity has implications beyond students' scores on the 25-item cognitive test. The material covers the money market and capital market with an emphasis on Islamic financial instruments such as sukuk and Islamic mutual funds. The instruments used in this activity the 25-item cognitive test and the six-item perception questionnaire—measured students' understanding of money market and capital market instruments and their perceptions of the media, not Islamic financial literacy as a multidimensional construct. The contribution of this activity is therefore framed as strengthening students' understanding of Islamic financial market instruments, which is one foundational component of Islamic financial literacy and is relevant to the national literacy gap reported in the 2024 SNLIK.

In this regard, the contribution of this activity is in line with the research of Aprayuda et al. (2026), which showed that interactive learning media can be used to support students' financial literacy development. The difference is that this activity uses a flipbook that integrates visual and interactive presentation in teaching the money market and capital market, with an emphasis on the Islamic finance context, within a community-service program rather than a controlled experiment.

Practically, the results of this activity have several implications. For lecturers, the flipbook can be used as a complement to face-to-face learning and as a tool for independent learning. For students, the media provides flexibility in re-accessing technical material, consistent with the students' reported preference for text-based and practice-oriented learning and for materials accessible through their own devices. For the study program, the use of digital media informed by a learning-style needs assessment can be part of the development of learning that is oriented toward students' needs and the digital transformation of higher education. Nevertheless, the development of the media still needs to take into account the technical aspects raised by students, particularly file size, loading speed, device compatibility, and navigation structure.

Consistent with the program-evaluation nature of this community service activity, the following limitations should be taken into account when interpreting the findings above:

1. Absence of a control group

A one-group pretest–posttest design was used because the flipbook was part of the regular course delivered to all enrolled students; consequently, the increase in scores cannot be attributed solely to the flipbook and may also reflect regular instruction, independent study, or maturation over the course of the semester.

2. Single-institution, single-course setting

The activity was carried out with one cohort of Management students taking one course (Money Market and Capital Market) at a single institution (FEBI, UIN Sunan Gunung Djati Bandung), which limits the generalizability of the findings to other courses, study programs, or institutions.

3. Intervention duration

The flipbook was used over a single course cycle (one semester); the durability of the observed gains beyond this period was not assessed.

4. Reliance on self-report questionnaires

Student perceptions of usefulness, ease of use, and the two supplementary indicators were collected through a self-report Likert questionnaire, which is subject to social-desirability and response-style biases.

5. Potential testing effect

Because the same 25-item cognitive test format (with indicators and difficulty levels held equivalent) was administered at both pre-test and post-test, part of the score increase may reflect familiarity with the test format (a practice/testing effect) rather than learning attributable to the flipbook alone.

6. No measurement of long-term retention

Understanding was measured immediately after the intervention; whether the gains in understanding are retained over the longer term was not examined and would require a follow-up measurement.

These limitations do not negate the value of the activity as a community service intervention, but they do mean that the findings should be read as evidence that the flipbook is associated with, and plausibly contributed to, an increase in students' understanding and a positive perception of the media rather than as proof of a causal effect. Future iterations of this activity are recommended to incorporate a quasi-experimental design with a comparison class where feasible, a validated Islamic

financial literacy instrument if literacy (rather than course-specific understanding) is the intended outcome, and a delayed post-test to assess retention.

Overall, the integration of CTML and TAM provides complementary perspectives for understanding the results of this activity. CTML explains how the combination of verbal and visual elements, designed with reference to students' reported learning preferences, can support students' cognitive processes, while TAM (interpreted descriptively, per Section IV.B) helps describe student acceptance of the media in terms of usefulness and ease of use. Taken together with the stated limitations, the findings of increased learning achievement, narrower score variation, and positive student acceptance indicate that the interactive flipbook has the potential to be a relevant learning medium for supporting the teaching of the money market and Islamic capital market at FEBI UIN Sunan Gunung Djati Bandung.

V. CONCLUSION

This community service activity, carried out in partnership with the Management Study Program of FEBI, UIN Sunan Gunung Djati Bandung, developed, implemented with mentoring, and evaluated an interactive flipbook for the Money Market and Capital Market course, informed by a preliminary learning-style needs assessment ($n = 93$) that showed relatively balanced learning preferences, with a slight inclination toward reading/writing and kinesthetic learning. The average student score increased from 77.50 on the pre-test to 95.72 on the post-test, a mean difference of 18.23 points (95% CI [15.85, 20.60]), $t(114) = 15.22$, $p < .001$, Cohen's $d \approx 1.42$, with a decrease in the standard deviation from 17.711 to 7.942. Given the one-group design used, this increase is best described as being associated with the use of the flipbook rather than proven to be solely caused by it.

In terms of technology acceptance, students gave a very positive response, with an overall mean of 4.39 out of 5.00 ($n = 100$) and the highest scores on the items mapped to the TAM constructs of Perceived Usefulness and Perceived Ease of Use. This finding is consistent with the principles of CTML in supporting the process of understanding, and with the descriptive use of the TAM framework in explaining perceptions of usefulness and ease of use of the media.

In the context of Islamic economics and finance education, the interactive flipbook has the potential to become an educational medium that supports students' understanding of Islamic financial market instruments and mechanisms; such understanding is one foundational component of broader Islamic financial literacy. Further development needs to pay attention to optimizing media size, access speed, device compatibility, and navigation, as well as addressing the limitations discussed in Section IV.E - particularly through a quasi-experimental comparison design and a delayed post-test in future iterations of this community service activity.

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