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Development of a Textbook on the History of Economic Thought with a Combination of Barcode Video in the Application of Differentiated Learning

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ABSTRACT
Objectives: *This research is to facilitate the diversity of student conditions in learning and can even be used simply for students with special needs at a low level such as deaf students and other limitations that can still be facilitated with a combination of audio visual media.* ***Method:*** *The type of research method used in this study is a research and development design . Reaserch and development is a research method used to produce a certain product and test the effectiveness of the product. The development model used in this study is a development research model by proposing a series of stages that must be taken in this approach, including research and information collecting, planning, developing preliminary form of product, preliminary field testing, main product revision, main field testing, operational product revision, operational field testing, final product revision, and dissemination and implementation.* ***Results:*** *Based on the results of validation that have been carried out by experts in media, language, and materials, as well as in limited trials, this book is considered very good and worthy of application in learning. The integration of technology in this textbook reflects significant developments in the development of interactive and digital educational resources.* ***Novelty****: A combination of video barcodes in diverse learning contexts This innovative approach combines digital technology with traditional teaching materials, so students can choose the most effective way of learning according to their learning style. Either visually, auditory, or kinesthetic. Thus, the ADDIE model is used to develop textbooks in getting positive assessments from each expert and limited trials. This shows that the approach is not only innovative, but also effective and suitable for application in the field of education.*

INTRODUCTION

Education has a very important role in shaping a competent and competitive generation (Darman, 2017; Robiatul Adawiyah et al., 2017). In the context of economic education, understanding the history of economic thought is a crucial foundation for students and students to understand the current economic dynamics. Learning the history of economic thought not only requires a conventional approach, but also the need for the integration of technology that can improve the quality of learning (Khairi et al., 2022).

The government continues to improve the quality of education from the elementary level to higher education. At the elementary to secondary school levels, the government issues a curriculum known as the Independent Curriculum which was developed to give freedom to students in learning (Widiastuti et al., 2023). In higher education, the curriculum used is called Independent Learning-Independent Campus, in its implementation, learning in higher education prioritizes student-focused learning or

what is called *student-centered.* This thinking is based on the thinking of students as adult individuals who have critical thinking and to foster student creativity.

The implementation of the Independent Curriculum can vary according to the school level. Lecturers are professional educators who have the main task of transforming, developing, and disseminating science, technology, and the arts through education, research, and community service (Nusantari, 2022). The learning methods used in the lecture process can be carried out in various forms, such as group discussions, simulations, case studies, collaborative learning, cooperative learning, project-based learning, problem-based learning, or other learning methods that can effectively facilitate the fulfillment of graduate learning outcomes (Sitorus et al., 2023). Each course can use one or a combination of several learning methods, and be accommodated in a form of learning.

The History of Economic Thought course is a theoretical-based course. Studying the history of economic thought requires not only an understanding of economic theories, but also high analytical, critical, and synthesis skills. Over the past few years, conventional learning approaches have often been considered inadequate in meeting these needs (Andaur Navarro et al., 2021; Zalat et al., 2021). Students and students often face challenges in connecting economic theory to real-world contexts (Degner et al., 2022) Some of the challenges commonly faced in learning the history of economic thought include: (1) Limited Visual Resources: Available textbooks often have limitations in presenting visual resources that support the understanding of economic concepts. (2) Difficulties of Students in Understanding Abstract Concepts: Abstract concepts in economics are often difficult for students to understand, and they need a more tangible and applicable approach (Finbråten et al., 2022). (3) Differences in Understanding and Interest Levels (Hardi & Mudjiran, 2022): Each individual has a different level of understanding and interest in economics learning materials. An approach is needed that is able to meet these diverse needs.

Based on this reality, textbook development is a strategic need to create a more interesting and effective learning experience. One of them is by combining the development of printed books in which learning videos are also provided that can be accessed in the form of barcode videos. By utilizing barcode videos, textbooks can be transformed into interactive and engaging learning tools, while also enabling the implementation of differentiated learning strategies. The use of video as a learning medium can also achieve learning efficiency combined with barcodes which can later help to effectively combine physical media and learning video media (Hughes et al., 2022; Sondermann et al., 2024; Xie et al., 2024). This research aims to facilitate the diversity of student conditions in learning and can even be used simply for students with special needs at a low level such as deaf students and other limitations that can still be facilitated with a combination of audio visual media.

Some of the challenges commonly faced in learning the history of economic thought include: (1) Limited Visual Resources: Available textbooks often have limitations in presenting visual resources that support the understanding of economic concepts. (2)

Difficulties of Students in Understanding Abstract Concepts: Abstract concepts in economics are often difficult for students to understand, and they need a more tangible and applicable approach (Finbråten et al., 2022). (3) Differences in Understanding and Interest Levels (Hardi & Mudjiran, 2022): Each individual has a different level of understanding and interest in economics learning materials. An approach is needed that is able to meet these diverse needs.

The implication of this phenomenon is a problem that will be solved in research in the form of the absence of teaching materials that facilitate various student needs in learning the History of Economic Thought. The existence of this innovation is considered very important to achieve various learning outcomes optimally.

However, if you review from previous research, there have been several studies that discuss the context of textbook development with the integration of digital tools, especially using QR codes. Research from Fatwa, et al. (2023) indicates that the integration of QR codes in textbooks is able to improve students' social attitudes with the materials and learning needs presented (Capraro et al., 2008; Drushlyak et al., 2023; Yahya et al., 2018). Meanwhile, in the realm of learning economic materials, the most relevant is the thesis from Aisyah (2022). In this research, it is known that teaching materials in the form of QR Code-based booklets can be declared effective in improving learning outcomes in economics subjects (Al-Sababha, 2024; Saputri et al., 2021). While in other countries, textbooks with QR code integration are able to improve academic success and independent learning in a secondary school in the Karaman City in Turkey (Gulec, 2021).

Researchers have not found research on the development of textbooks for the History of Economic Thought course. Especially at the State University of Surabaya, there has never been a preparation or development of non-digital or digital textbooks. Learning activities are carried out using reference books that are generally available. Textbooks and reference books The history of economic thought in general is in the form of printed books and digital books are only in the form of electronic books by converting printed books into pdf format that is disseminated. There is no book on the History of Economic Thought that has been developed by combining the form of printed books with a combination of audio and visual to accommodate the diversity of students' different learning styles with their diverse learning styles (Abdulrahaman et al., 2020; Lisa et al., 2021; Sudarmo et al., 2021).

With the concept of developing an interactive book on the History of Economic Thought, in addition to better student involvement in the classroom, it will also lead to the achievement of learning outcomes of related courses in the form of a comprehensive understanding of various learning models according to course outcomes, the ability to analyze economic thinking concepts in depth, and also think critically about the implications of economic thought better.

RESEARCH METHOD

Research Type

The type of research method used in this study is a research and development design. *Research and development* is a research method used to produce a specific product and test the effectiveness of that product (Sadiman, 2014; Sugiyono., 2013) The development model used in this study is a development research model (Borg, 1983) propose a series of steps that must be taken in this approach, namely "*Research and Information Collecting, Planning, Develop Preliminary Form of Product, Preliminary Field Testing, Main Product Revision, Main Field Testing, Operational Product Revision, Operational Field Testing, Final Product Revision, and Dissemination and Implementation*". Conceptually, the research and development approach includes 10 general steps, as outlined as the model below:

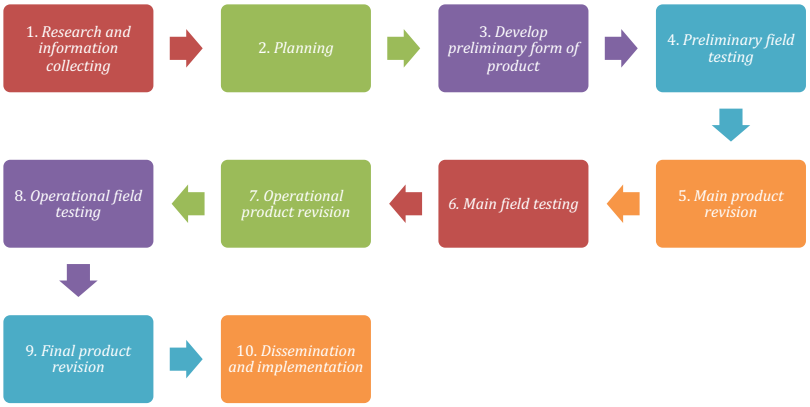

Figure 1. Schematic development procedure resulting from adaptation of development procedure (Borg, 1983).

While it can be explain that The development research model adopted in this study is systematic as Borg (1983) phrases product development research as a system. The first is Research and Information Collecting, in which data from research, surveys, reports, existing literature, or interviews, to establish the problem and understand the users/customers (Ya-feng et al., 2022). This is followed by Planning stage which involves identification of goals, resource, and preliminary conception of the product. This is initiated in the develop preliminary form of Product where the actual product is developed in a rudimentary form of the planned product (Ibrahim et al., 2023; Z. Wang et al., 2024). This prototype is then introduced to Preliminary Field Testing, here the prototype is tested on a small population with a view of getting feedback on the same (De Fino et al., 2023; Reibenspiess et al., 2022). From the above feedbacks, the product goes through Main Product Revision, as it needs slight changes on the above mentioned areas. The new product is then subjected to Second Uses Tests and finally to Main Field Testing where a large sample of users is taken to test the improvement. This is followed by Operational Product Revision that seeks to accomplish the improvement of the product to meet operational standards. The penultimate version of the product is tested in field conditions during Operational Field Testing where a wider population and environment are used. After this, the product goes through a Final Product Revision upon consideration of the operational results of the testing. Last of all is the

Dissemination and Implementation stage where the product is freely spread to users, and usually training of users or construction of guidelines is entailed. This makes certain that the outcome of the product is succesfully developed, improved and fit for the purpose it was intended for.

Data Collection and Analysis

Data collection in this study uses 3 methods. Among them are interviews, observations, and through questionnaires. The purpose of the interview is to identify the problems experienced by students during the lecture process in the History of Economic Thought course. In further assessments related to the books that have been prepared, questionnaires are made according to the following indicators in table 1, related to indicators in the assessment by media, language, and material experts. The assessment criteria used are to use the Likert scale, with details of a value of 1 is very bad, a value of 2 is not good, a value of 3 is for moderate, a value of 4 is for good, and a value of 5 is for very good. Furthermore, the use of observation was carried out in 2021, researchers have conducted research by developing an android-based digital Economics subject book that can be used by high school teachers (Rafsanjani et al., 2021). The following year in 2022, the next research researcher developed a digital module for schools that will implement the SKS system (Putra & Andriansyah, 2022; Sholikha et al., 2022). While the sample is Economic Education student in State University of Surabaya, which take History of Economic Thought Course in that semester, the sample was choose randomly in 4 classes, which in that 4 classes there was divided into 3 regular classes and also an international class. Then we give them a questionnaire to know how they respond and how the book running effectively during the course.

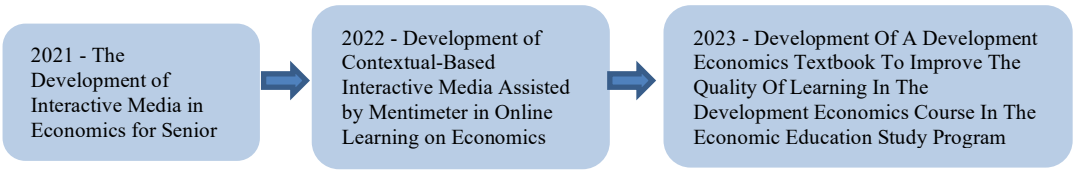

Figure 2. Research Roadmap

Figure 3. Research Roadmap in 2022-2027

Table 1. Material Expert Validation Instrument

No	Assessed aspects	SCORE				
		5	4	3	2	1
I	**Eligibility**					
A.	**Scope of Materials**					
1.	The completeness of the material is in accordance with the learning objectives.					
2.	Conformity material with RPS Lecture on the History of Economic Thought					
3.	Depth material with RPS Lecture on the History of Economic Thought					
B.	**Material Accuracy**					
4.	Accuracy of facts					
C.	**Up-to-date**					
6.	Compatibility with the development of science and technology					
7.	Interest/packaging of features (examples) in teaching materials electronics developed.					
8.	Examples Concrete from local/national/international environment.					
D.	**Compliance with Laws and Regulations**					
9.	Free of racial issue, pornography, and bias (gender, region, and profession).					
10.	Scope of skills.					
11.	Accuracy of activities.					
12.	Characteristics of the activity.					
II	**Eligibility of Serving**					

A.	**Serving Technique**
13.	Consistency of the systematics of presentation in chapters.
14.	Presentation logic.
15.	Presentation Demand.
16.	Balance between chapters/sub-chapters.
B.	**Material Presentation Supporters**
17.	Suitability and accuracy of the example with the material.
18.	Case studies on each learning chapter
19.	Practice questions in each learning chapter
20.	Formative test questions in each learning chapter
21.	References/reference sources include for text, images, and tables.
22.	Stipulation of numbering tables/pictures and attachments.
C.	**Presentation of Learning**
23.	Active involvement of students and student-centered.
24.	Interactive communication.
25.	Scientific approach.
26.	Variety of presenters.
27.	The part of the ceremony.
28.	Contents section.
29.	Bibliography.
30.	Glossary.

Source : BSNP Adoption (2014)

Table 2. Graphics Expert Validation Instrument

Aspects	Indicators	Description	Input/Suggestions
Size of Teaching Materials	1. Suitability of the size/format of teaching materials with ISO standards.	The size of the electronic teaching materials developed is in accordance with ISO standards.	
	2. The suitability of the size with the content of the teaching materials.	The size of the electronic teaching materials developed is in accordance with the teaching materials.	
Teaching Material Cover Layout	3. Placement of layout elements on the The face, back, and back covers have unity.	The placement of the elements of the developed teaching materials meets the elements of unity and harmony.	
	4. The placement of the layout of the elements on the back	The embodiment of the teaching materials developed meets the	

	and back is appropriate / harmonious and gives a good sense of rhythm.	elements of harmony and a good sense of rhythm.
	5. Displaying *a good and clear* cover point.	The embodiment of the developed teaching materials displays a good and clear center of view.
	6. Composition layout (title, author, and illustrations) balanced and in rhythm with the layout.	The composition of the layout of the developed electronic teaching materials is balanced and in tune with the layout of the content.
	7. The size of the layout elements is proportional to the size of the teaching materials.	The teaching materials developed have proportional layout and size elements.
	8. Color elements, harmonious layout and clarify the function (material).	The electronic teaching materials developed have a harmonious layout and clarify the material.
	9. It has good contrast.	The electronic teaching materials developed have good contrast,
Typography of Teaching Materials Cover	10. The font size of the title of the teaching material is more dominant than the author's name.	The electronic teaching materials developed have a more dominant title size than the author's name.
	11. Material title color Teach contrast with the background.	The electronic teaching materials developed have a title color that contrasts with the background.
	12. Size letters are proportional to the size of the teaching material.	Font size on the material an the teaching developed is proportional to the size of the teaching materials
	13. Not using too	The typefaces used are

		many combinations typeface.	not too many.
	14.	Do not use ornamental/decorative types.	The electronic teaching materials developed do not use ornamental/decorative letters.
	15.	In accordance with the typeface for the content of the learning media (material, content, learning media).	The type used is according to the content of the teaching material.
	16.	Shape color, size. The picture on the teaching material is proportional to the reality of the object.	Electronic teaching materials have shapes, colors, and image sizes that are proportional to the reality of the object.
Layout of Teaching Contents	17.	Placement of consistency layout elements based on patterns.	The placement of elements of the layout of teaching materials has consistency based on patterns.
	18.	The separation between paragraphs is clear.	Material Teach has clear separation between paragraphs.
	19.	Distance between paragraphs that fit and none	The electronic teaching materials developed have appropriate spacing between paragraphs and there are no *orphans*.
	20.	Placement of chapter titles that are equivalent / consistent.	Placement of equivalent chapter titles (preface, table of contents, etc.) and in teaching materials uniform/consistent.
	21.	Space between text and illustrations is appropriate.	Spaces between texts and illustrations in teaching materials are appropriate.
	22.	Suitability of shapes, colors, and layouts.	The electronic teaching materials developed have a suitable shape,

		color, and layout.
	23. The margin between two pages is proportionally side-by-side.	Teaching materials have a margin between two proportionally side-by-side pages.
	24. Placement and appearance of illustration layout elements and image captions.	Teaching materials have placement and the appearance of illustration layout elements.
	25. Placement and appearance of the layout elements of chapter titles and page numbers.	Teaching materials have placement and the appearance of the right chapter title layout elements and page numbers.
	26. Room white *(white space)*.	Room white in teaching materials is not too much
	27. The placement of decorations/illustrations as a background does not interfere with the title, text, and outline of the page.	Teaching materials have the placement of decorations/illustrations as a background that does not interfere with the title, text, and page numbers.
Typography of Teaching Materials	28. Not using too many typefaces.	Teaching materials do not use too many typefaces.
	29. Do not use ornamental/decorative typefaces	Teaching materials do not use ornamental/decorative typefaces.
	30. The use of letter variations is not excessive.	The use of letter variations is not excessive in the teaching materials developed.
	31. Big appropriate letters with the level of student education.	The capitalization used in the material is in accordance with the student's education level.
	32. Kind of appropriate letters with the level of student education.	The typeface used in the teaching materials is in accordance with the

		content of the teaching materials.
	33. Text structure sheets according to the comfort of reading at the student level.	The electronic teaching materials developed have a sheet of reading comfort at the student level.
	34. Space between array lines normal text.	Material teach has spaces escort Normal text order lines.
	35. Space between letters/normal kerning.	Material teach has spaces escort letters/ normal kerning.
	36. Title level/hierarchy clear, consistent, and proportional.	Teaching materials have a clear, consistent, and proportional title level/hierarchy.
	37. There are no white lines in the order of the text.	There is no white flow in the text arrangement of the developed teaching materials.
Illustration of Teaching Materials	38. Able to reveal meaning/meaning of the object.	Illustrations of teaching materials are able to grasp the meaning/meaning of objects.
	39. Proportional shape.	Illustration material Teach to have proportional shape.
	40. The shape and scale correspond to reality.	Illustrations of teaching materials have a shape and scale according to reality.
	41. The overall illustration is compatible.	Sum illustration in the teaching materials of harmony.
	42. Stroke lines and rester and clear.	Illustrations of teaching materials have bold and clear lines and resters.
	43. Creative and dynamic.	Illustration material Teaching contains creative and dynamic elements.

Source : Data Processed (2024)

Table 3. Linguist Validation Instrument

No.	Assessed aspects	SCORE				
		5	4	3	2	1
A.	**Teaching Materials Cover Design**					
A1.	**Teaching Material Cover Layout**					
1.	The placement of layout elements on the face, back, and back covers has unity					
2.	The placement of the layout of the elements on the back and back is appropriate/harmonious and gives a good sense of rhythm.					
3.	Displaying *a good and clear* cover point.					
4.	The composition of the layout (title, author, illustrations, etc.) is balanced and in tune with the layout.					
5.	The color of the layout elements is harmonious and clarifies the function (material).					
6.	It has good contrast.					
A2.	**Typography of Teaching Materials Cover**					
7.	The font size of the title of the teaching material is more dominant than the author's name.					
8.	The color of the title of the teaching material contrasts with the background.					
9.	The font size is proportional to the size of the teaching material.					
10.	Not using too many combinations of typefaces.					
11	Not much use of ornamental/decorative typefaces.					
12.	In accordance with the typeface for the content of the teaching materials.					
16.	The shape of the color, the size is proportional to the reality of the object.					
B.	**Design of Teaching Materials Content Section**					
B1	**Layout of Teaching Materials**					
17.	Placement of consistency layout elements based on patterns.					
18.	The spacing between paragraphs is appropriate and there are no *windows* or *orphans*.					
19.	Equivalence/uniform/consistent placement of chapter titles.					
20.	Print plane and margin proportional to material size teach.					
21.	Space between text and illustrations is appropriate.					
22.	Conformity of shapes, colors, and layouts					
23.	The margin between two pages is proportionally side-by-side					
24.	Placement and appearance of the layout elements of chapter titles and page numbers.					
25.	White space .					
26.	Placement decoration/illustration as Background, it					

	doesn't interfere with page titles, text, and numbers.
B2.	**Typography of Teaching Materials**
27.	Not using too many typefaces.
28.	Do not use ornamental/decorative typefaces.
29.	The use of letter variations is not excessive.
30.	The capital letters correspond to the student's education level.
31.	The typeface is in accordance with the content of the teaching material.
32.	Text structure sheets according to the comfort of reading at the student level.
33.	The spacing between the lines of the text is normal.
34.	The level/hierarchy of titles is clear, consistent, and proportional.
35.	There are no white lines in the order of the text.
B3.	**Illustration of Teaching Materials**
36.	Able to reveal the meaning/meaning of the object.
37.	Proportional shape.
38.	The shape and scale correspond to reality.
39.	The overall illustration is compatible.
40.	Creative and dynamic.

Source : BSNP Adoption (2014)

Analysis Data Technique

The data analysis used in this study is qualitative and quantitative descriptive analysis. Qualitative analysis is carried out at the initial stage (needs analysis) and the validation stage, while quantitative descriptive analysis is only carried out at the validation stage. The qualitative analysis technique refers to the *Miles and Huberman* model which includes 3 stages, namely data reduction, data presentation and conclusion drawn. Data reduction is the process of selecting and focusing attention on raw data that arises from written records in the field. Data presentation is the presentation of information to provide the possibility of drawing conclusions and taking actions. Drawing conclusions is the final interpretation of the entire data collected.

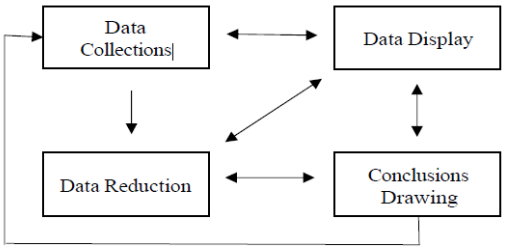

Figure 4. Milles and Huberman Model Qualitative Data Analysis (Miles et al., 2014)

For the purposes of quantitative descriptive analysis, the validator's answers on the questionnaire assessment scale will be scored. The criteria for each assessment scale are as follows:

Table 4. Criteria of the Assessment Scale

Score	Information
1	Not good/inappropriate/unworthy/unattractive/disagreeable
2	Not good/less suitable/less worthy/less attractive/less agreeable
3	Good/appropriate/worthy/interesting/agree
4	Very good/very suitable/very decent/very interesting/very agreeable

Source : Data Processed (2024)

Furthermore, the score is processed in the form of percentages with the following formula:

$$P = \frac{\sum^{X}}{\sum^{Xi}} \, x \, 100\%$$

Keterangan:
P : Percentage
$\sum^{X}$: Number of answers of all respondents in 1 item
$\sum^{Xi}$: The number of ideal answers in 1 item

The interpretation of the percentage results to determine the conclusion of the feasibility of the development product is shown in the table below :

Table 5. Interpretasi hasil persentase

Percentage	Interpretation of Assessment
80-100%	Valid/eligible
60-79%	Quite valid/quite feasible
50-59%	Less valid/less feasible
<49%	Invalid/unworthy

Source : (Sudjana, 2012)

The research activities that will be carried out this year are only limited to the module development stage, while the implementation stage will be carried out in the following year.

So that the research flow is very useful to show the relationship between the stages of activities, indicators and outputs. The research flow of the development of this module can be seen in figure 5 as follows related to the research flow.

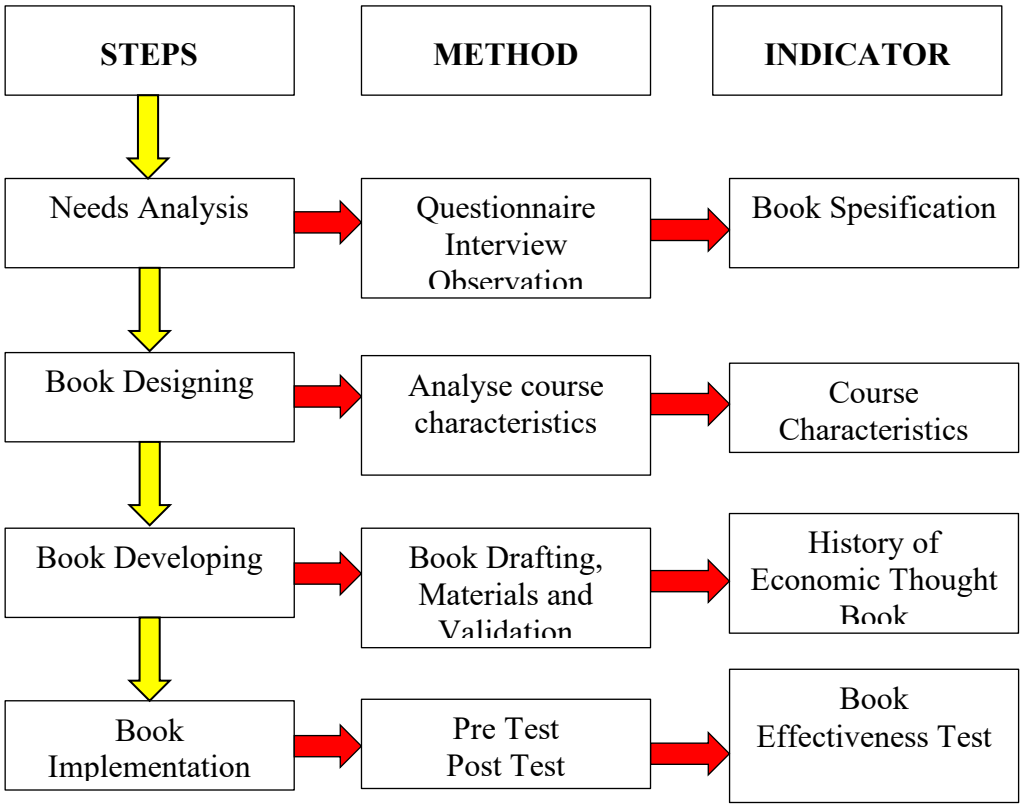

Figure 5. Research Flow

RESULTS AND DISCUSSION

Results

This study uses the ADDIE model. Development using the ADDIE model consists of several stages. Among them are the analysis stage, design stage, development stage, implementation stage, and evaluation stage (Mar'atussolichah et al., 2024; Misbah et al., 2024). In this study, the results of the development of teaching materials in the form of electronic textbooks on the History of Economic Thought are as follows:

Analysis Phase

Problem Analysis

The development of an electronic-based textbook with the title "History of Economic Thought" begins with the analysis stage. This is done to analyze the learning needs of students and identify problems (Aditya et al., 2024) experienced by lecturers and students during the learning process in the History of Economic Thought course. In addition, *the problem analysis process is also used* (Vinarti et al., 2024), this aims to ensure and thoroughly identify the results of observation and evaluation in the learning of the History of Economic Thought course both from the lecturer and student side.

The results of interviews conducted with lecturers in the History of Economic Thought course stated that learning on development theory still uses various reference books and there have been no updates on new cases, so books that are practical and up-to-date and relevant to real conditions are needed. This will allow

students and learners to gain a learning experience by being faced with challenges in connecting economic theory with real-world contexts (Degner et al., 2022) Some of the challenges commonly faced in learning the history of economic thought include : 1) Limitations of Visual Resources; 2) Available textbooks often have limitations in presenting visual resources that support the understanding of economic concepts (Metwally et al., 2024; Swanzy-Impraim et al., 2023); 3) Difficulties of Students in Understanding Abstract Concepts; 4) Abstract concepts in economics are often difficult for students to understand, and they require a more tangible and applicable approach (Finbråten et al., 2022); 5) Differences in Understanding and Interest Levels (Hardi & Mudjiran, 2022)

Each individual has a different level of understanding and interest in economics learning materials. An approach is needed that is able to meet these diverse needs.

Material Analysis

Material analysis is based on the final learning objectives and learning demands of the independent campus with the OBE curriculum which directs learning by teachers not only on the material but also *on the outcome*. Based on the results of the study of the supporting lecturers and lecturers of the Economics group based on the Learning Outcomes of the Economics Education Study Program, the final ability, assessment, learning method and weight that have been documented in the Semester Learning Plan are determined. Learning is planned using *the case based learning method,* this is done so that the material in the textbook is material that leads to a theoretical description that has a connection with the actual conditions of the economic world that occurs. Meanwhile, the Final Goal and other components that will be achieved by students can be presented in table 4.2 related to Basic Competencies as follows :

Table 6. Basic Competencies (KD)

Final ability of each stage of learning	Topic
Able to Study and Contextually Describe the History of Pre-classical Economic Thought (CPMK 1, CPMK 2 and CPMK 3)	Pre-Classied Economy: The Views of Physiocratists Mercantilism
Able to study and contextually describe the history of classical economic thought (CPMK 1, CPMK 2 and CPMK 3)	History of Classical Economic Thought: The Views of Adam Smith, Maltus and Ricardo
Able to Study and Contextually Describe the History of Neoclassical Economic Thought (CPMK 1, CPMK 2 and CPMK 3)	Neoclassical thought (Carl Mengerand William Stanley Jevons)
Able to Study and Contextually Describe the History of Socialist Economic Thought (CPMK 1, CPMK 2 and CPMK 3)	History of Socialist Economic Thought (Marxism)
Able to Study and Contextually Describe the History of Scientific Economic Thought (CPMK 1, CPMK 2 and CPMK 3)	History of Scientific Economic Thought: Mahzab Austria

Able to Study and Contextually Describe the History of Institutional/Institutional Economic Thought (CPMK 1, CPMK 2 and CPMK 3)	Institutional economic thought: the thought of Veblen, Weber & Fisher, Mises & Wicksell
Able to Examine and Contextually Describe the History of Macro/Modern Economic Thought (CPMK 1, CPMK 2 and CPMK 3)	History of Macro/Modern Economic Thought: Samuelson's Thought Concept
Able to Study and Contextually Describe the History of Islamic Economic Thought (CPMK 1, CPMK 2 and CPMK 3)	History of Islamic Economic Thought : Islamic Economics Ibn Khaldun

Source : Data Processed (2024)

Design Phase

At this stage, it is carried out with the aim of making product planning and design. There are 3 stages that are carried out in the design stage and can be presented as follows:

Collecting Content References

The researcher collects references sourced from books on the History of Economic Thought, scientific articles, print/online mass media, and other relevant sources.

Book Design

1) Theme and Colors. The color used in the developed textbook is brown. This color was chosen based on the preference of the most votes from students as many as 87%. The color brown in the selection of books on the history of economic thought has several relevant meanings. Brown is a color associated with stability, comfort, reliability, and simplicity. This color is often associated with the earth and natural elements, giving it a grounded and stable impression. This color can also give a classic and earthy impression, suitable for deep and serious topics such as the history of economic thought.

The color brown is symbolically associated with important historical events, such as Brown v. Board of Education, which symbolizes the end of segregation and a commitment to colorblind justice (Golub, 2013). In literature and language: In Old Norse-Icelandic literature, the use and evolution of the color brown, coded with terms such as brúnn and jarpr, reflects contextual limitations and gradual application to a wider range of objects (Wolf, 2017). On perception and science: The perception of brown color is influenced by a complex combination of chromatic and achromatic signals, with variations in chromaticity and lighting affecting the way it is perceived (Shinomori & Werner, 2023). Using brown on the cover of a book on the history of economic thought can give a solid and believable impression, which is crucial for attracting readers who are looking for in-depth and structured content

The color composition chosen to design the textbook in this study is complementary colors are colors that face each other in a circle of colors (J. Wang et al., 2010). Here are the images of the colors used in the design in the development of this textbook:

Figure 6. Kode Warna

2) Format and Font. At this stage, the developer determines the types of fonts that will be used in the developed application. The selection of font types is divided into three, namely fonts for *heading*, *sub-heading*, and *body text*. This selection aims to make each section choose a different font.

The choice of typeface is very important in development because the choice of letters will affect the readability of the text presented. The typeface used in the *heading* is *pagkaki* with a size of 32. *Pagkaki* is a letter with Latin and Greece characters, this typeface has the property of *a fun display font*. This typeface was designed by Konstantina Louka and published by *Nantia.co* which is a website that publishes font designs.

The font used in the sub-heading is the letter Atma. This typeface has 5 types, namely light, regular, medium, semi bold, and bold. In this development, it uses a semi-bold and bold type with a size of 28 located on the onboarding screen. Atma was designed by Black Foudry, this typeface is Bengali and Latin.

The typeface used in the body text is Poppins with Geometric sans serif and Latin characters designed by Jonny Pinhorn, the typeface used is Poppins Extrabold, Poppins Medium and Poppins. The font size used is 16. The following is an image of the typeface used in the Teaching Materials :

Figure 7. Types and Typefaces (Font)

3) Media Design. This part is carried out by developing the design of teaching materials media by determining the specifications of the learning media in the form of menus, features and content to be studied. In this initial design stage, the development also makes *storyboards*, textbook designs, and *flowcharts* with the aim of making it easier to develop media.

A flowchart is a chart that depicts the flow of a process from start to finish (Jamaluddin, 2018). While *a storyboard* is a series of images that are made in detail to illustrate a story (Samsudin, 2015).

Development Phase

At this stage, a review of the initial product draft that has been made is carried out. The assessment was carried out by validation experts, including validation from material experts, graphic experts, and linguists, with the aim of providing input and suggestions on the History of Economic Thought textbook products that are still in the process of being developed. The first validation is carried out by material experts. The material expert who acted as a validator was Mr. M. Rudi Irwansyah, S.Pd., M.Pd. from Ganesha University. Then Graphic Validation was carried out by Vina Budiarti Mustika Sari, M.Pd., from the State University of Malang and language validation was carried out by a Linguist, namely Mrs. Dr. Putri Retnosari from IKIP Widya Darma Surabaya. At this stage, validation is carried out by each expert in order on the *draft* of the History of Economic Thought book.

The assessment of the validation sheet of the experts was then prepared and adjusted based on the existing indicator standards at the National Standards Agency in 2014 which included components of content and presentation feasibility, graphics, and grammar and language. The results of the experts' study will be used as a benchmark for researchers to make improvements and improvements to the developed textbooks. The revised electronic textbook then becomes *a draft* of product II which will be assessed for feasibility or validity by validation experts. The results of the validity assessment of the experts at the next stage will be analyzed and interpreted according to the percentage results obtained. The eligibility criteria for the electronic textbook History of Economic Thought can be said to be feasible to use if it obtains a value of ≥61% and the product will be very feasible if it obtains a value of ≥81% (Riduwan, 2016). The following are the validation results on the electronic-based History of Economic Thought Textbook product that has been developed.

Table 7. Material Expert Validation Results

No.	Aspects	Percentage (%)
1	Eligibility	95
2	Eligibility of Serving	90
Average Category Assessment		**92,5 (Very Feasible)**

Source : Data Processed (2024)

Based on table 4.3, the results of the validity of the material have a percentage of 92.5% with details of aspects including the feasibility of the content that reaches a result of 95% and the aspect of the feasibility of presentation that reaches a result of 90%. These results show that the electronic-based History of Economic Thought Student Textbook product developed is very feasible to use.

Table 8. Graphic Expert Validation Results

No.	Aspects	Percentage (%)
1	Display Design Layout	92
2	Layout Design of Electronic Student Textbook (BAM) Content	85
Average Category Assessment		**88,5 (Very Feasible)**

Source : Data Diolah (2024)

The results of the graphic validation have a percentage of 88.5% with the interpretation category being very feasible to use. This validation assessment uses two aspects of assessment, including the layout of the display design and the layout of the design of the content of the Student Textbook (BAM). In the assessment of the layout of the display design, a score of 92% was obtained, while in the aspect of the layout design of the content of the electronic Student Textbook (BAM) was 85%. Overall, the electronic-based History of Economic Thought Student Textbook (BAM) developed has been in accordance with the graphic feasibility indicators according to BSNP (2014), which includes the cover layout component, the layout of the content of the Electronic-based History of Economic Thought (BAM) Student Textbook, and the illustration of the Electronic-based History of Economic Thought (BAM) Student Textbook.

Table 9. Linguist Validation Results

No.	Aspects	Percentage (%)
1	Suitability to the level of development and emotional development of students	100
2	Readability	100
3	Motivational Ability	90
4	Simplicity	85
5	Coherence and Collapse of the Thinking Flow	100
6	Familiarity with Language Rules	95
7	Serving Technique	100
Average Assessment Category		**95,71 (Very Feasible)**

Source : Data Processed (2024)

The assessment of language validation in the development of the Electronic History of Economic Thought Student Textbook (BAM) includes 7 aspects of assessment, namely, the aspect of suitability of students' developmental and emotional levels with a percentage of 100%. Readability aspect with a percentage score of 100%. Aspect of motivation ability with a percentage of 90%. The aspect of straightforwardness with a percentage of value of 85%, the aspect of coherence and collapse of the flow of thinking between alenia, sub-chapters, and chapters with a percentage of 100%. The aspects of

language rules include the accuracy of the use of Indonesian Language grammar and spelling with a score percentage of 95%, as well as the aspect of presentation techniques with a score percentage of 100%. Thus, the average result of language validation in the development of the Electronic-based History of Economic Thought Student Textbook (BAM) has a percentage of 95.71% with the value interpretation category being very feasible to use.

Table 10. Validation Result Recapitulation

No.	Aspects	Percentage (%)
1	Material Feasibility	92,5
2	Graphics Feasibility	88,5
3	Language Eligibility	95,71
Average Assessment Category		**92,23 (Very Good)**

Source : Data Process (2024)

The results of the expert validation assessment, material, graphics, and language obtained an average percentage of 92.23% with a very feasible interpretation for use. These results have met the criteria for interpreting feasibility according to Riduwan (2016), which is to reach a value of ≥81%, so that the product of the Electronic Student Teaching Book (BAM) History of Economic Thought is very feasible to use.

Implementation Phase

The implementation phase is carried out by testing the Electronic Student Teaching Book (BAM) to find out how the role, function, and benefits of the Electronic Student Teaching Book (BAM) product that has been developed (Pradnyana, 2017). At this stage, the product of the Electronic Student Teaching Book (BAM) which has been revised and assessed by validators from material, language, and graphics experts will be carried out a limited trial of Economics Education Study Programme students in batch 2022 using a random sampling method. This is done to find out student responses to the Electronic Student Teaching Book (BAM) product developed. This trial process is carried out online by distributing the softfile of the Electronic Student Teaching Book (BAM) via google drive then students can use a google form that contains questions related to student responses after reading and studying the Electronic Student Teaching Book (BAM) History of Economic Thought that is being developed. The results of the trial were then analysed and interpreted according to the percentage results obtained. The results of responses and questionnaires given by students can be presented in table 11 as follows

Table 11. Results of Student Responses

No.	Aspects	Percentage (%)
1	Ease	96
2	Highlights	92
3	Impact on students	98
4	Student learning process	96

5	Quality of teaching materials	98
Average Assessment Category		**96,00 (Very Good)**

Source : Data Process (2024)

The results of the analysis of the limited trial conducted on students of the Economics Education Study Program class of 2022 using a random sample, obtained an average percentage of 96.00% with a very good interpretation because it obtained a value of ≥81% with details of the assessment aspects including, the aspect of convenience with a percentage value is 96%, the aspect of attractiveness with a percentage value is 92%, the aspect of the impact on students with a percentage value of 98%, the aspect of the student learning process has a percentage value of 96%, and the quality aspect of teaching materials has a percentage value of 98%. The results of the limited trial of the History of Economic Thought Electronic Student Teaching Book (BAM) showed that the developed Electronic Student Teaching Book (BAM) was in accordance with the learning objectives and final abilities in the RPS (Semester Learning Plan) History of Economic Thought, besides that it was also in accordance with the needs of students during online lectures.

Evaluation Phase

The evaluation phase carried out has the aim of knowing whether the Electronic Student Teaching Book (BAM) product developed is in accordance with the objectives and expectations or not. According to (Hadi & Agustina, 2016), the evaluation stage can be carried out formatively, which is carried out after each step is completed or a summative evaluation can also be carried out by conducting an evaluation at the end after all steps have been completed. In this research on the development of the Electronic Student Teaching Book (BAM), the evaluation stage is carried out formatively where improvements and evaluations are made directly after each step is taken (Tridane et al., 2015).

Discussion

Based on the results of the feasibility test that has been carried out by involving material, language, and graphics experts, it is found that the Electronic-based History of Economic Thought Student Teaching Book (BAM) has a very good average value, namely 96.00%. So it can be concluded that the Student Teaching Book (BAM) History of Economic Thought is very feasible to be implemented as the main teaching material in higher education (Akbar & Utama, n.d.). This is also supported by the results of the student response assessment on the aspect of impact on students who have a value of 98% and the quality of teaching materials that are weighted so that they get a value of 98% (Supriyanto et al., 2021). So that with this Electronic-based History of Economic Thought Student Teaching Book (BAM) can help students understand important concepts in the History of Economic Thought in a more interactive and easy-to-understand way, as presented in Figure 8 related to the content and content in the Electronic-based History of Economic Thought Student Teaching Book (BAM), where there is an interactive video explanation in the book at the end of each section in the book. This also makes students

with audiovisual learning types able to continue to understand the material thoroughly and reduce boredom in students with monotonous learning.

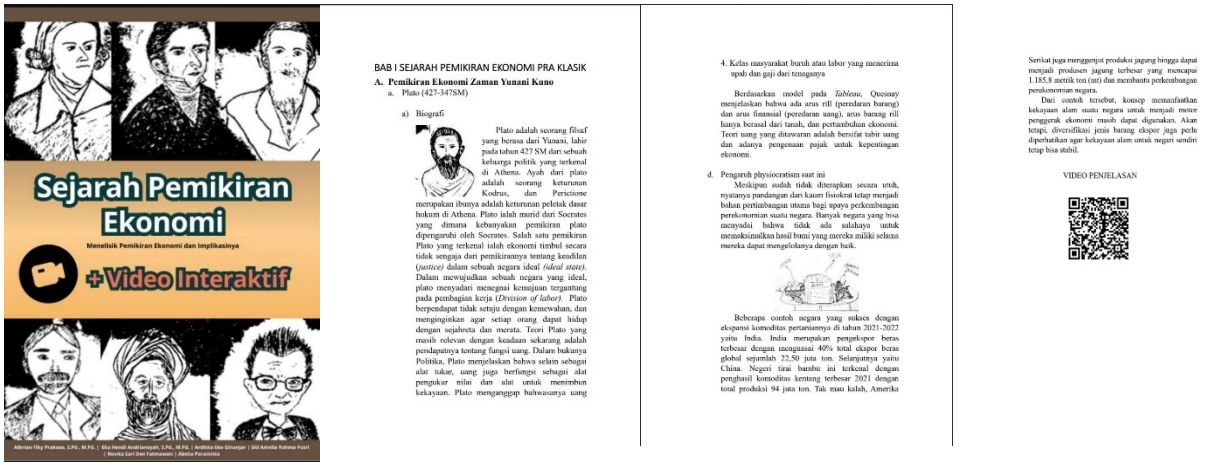

Figure 8. Book Contents

While based on the content aspect, the completeness of the material in the Electronic-based History of Economic Thought Student Teaching Book (BAM) is stated to be in accordance with the learning objectives and the coverage of the material is in accordance with the indicators and final abilities in the RPS (Semester Learning Plan) of the History of Economic Thought course. In addition, the Teaching Book developed can also increase learning motivation and make it easier for students to understand the core material in each learning activity. The Electronic-based History of Economic Thought Student Textbook (BAM) product developed has harmonious colour and layout elements and has a good level of contrast. In addition, the Electronic-based History of Economic Thought (BAM) Student Textbook also has elements of chapter title layout and the right page numbers and has a proportional size. Images and illustrations in the Electronic-based History of Economic Thought (BAM) Student Textbook have a good level of harmony and can represent the material being explained in sharp contrast to the images. This can make it easier for students to understand the History of Economic Thought course. In addition, the use of fonts is also well chosen and the selection of fonts in this book is also designed to ensure readability and reader comfort. The use of Pagkaki type fonts for headings with the nature of fun display fonts makes the title section attract readers to delve deeper and observe the readings in the chapter, while Atma with semi bold and bold type in sub-heading provides a clear contrast. Poppins for the body text with clean geometric sans serif characters at size 16 also creates the impression that the text is comfortable and easy for long reading durations. Ensuring the reader will continue to read for a long duration and the level of understanding and information obtained by the reader will increase.

In the language aspect, the Electronic Student Teaching Book (BAM) History of Economic Thought is designed to be easily understood by students, lecturers, and other readers. In addition, the presentation of material in this book is not wordy, straightforward, and does not cause multiple interpretations. The grammar used in this book also follows the correct grammar and is in accordance with the rules of the

Indonesian language, so that the message conveyed can be conveyed to the reader clearly and on target. In this book, each chapter begins with a general sentence, then followed by a contextual background, and finally explains the economic theory born from a figure. In addition, this book also outlines the implications of the teachings and theories conveyed by economic figures for subsequent economic thinkers. Thus, students can make this textbook a reference for further research. These advantages make the Electronic-based History of Economic Thought Student Textbook (BAM) an effective and relevant learning resource for students.

Based on the results of the validation of material, graphics, and language experts, the average percentage is 92.23% with a very good interpretation to be used in supporting online lectures for students. The results of this development research are in line with research conducted by Ricu Sidiq & Najuah (2020) in (Haka et al., 2021; Laraphaty et al., 2021; Rohmah et al., 2022) which shows that with the validation results of 86% and the interpretation is very feasible to use so that the Electronic Student Teaching Book (BAM) History of Economic Thought developed can increase student independence and interest in learning, and can make the lecture process more effective and efficient. Research on the development of the Electronic Student Teaching Book (BAM) for the History of Economic Thought conducted by Solihudin JH (2018) in the study (Nilyani et al., 2023; Sumarni & Dwitiyanti, 2022) which gives a very feasible interpretation by obtaining a validity percentage of 81.82% with the implication of the results can increase understanding and improve the achievement of learner competencies. Based on the reference to the results of previous research, it can be believed that the product of the Electronic Student Teaching Book (BAM) History of Economic Thought developed is valid and feasible to use. This is also supported by the results of a limited trial to students in the 2022 Economic Education Study Programme, using random samples (random sampling). Based on these results, a very good response was obtained. In the questionnaire and assessment, it was carried out by distributing questionnaires with the aspects assessed were ease, attractiveness, and ease of use, the impact on students, the student learning process, and the quality possessed by the Electronic-based History of Economic Thought Student Teaching Book (BAM). Students are then asked to assess these five aspects by providing a rating scale in the form of a Likert scale of 1-5, with details being value 1 for very inappropriate, value 2 for inappropriate, value 3 for neutral, value 4 for appropriate, and value 5 for very appropriate. So that the results show that students feel a significant impact after studying the Electronic-based History of Economic Thought Student Teaching Book (BAM), as evidenced by a value of 98% for the impact on students. In addition, students also give more credit for the quality of the Electronic-based History of Economic Thought Student Teaching Book (BAM), as evidenced by the 98% score on the quality of the History of Economic Thought Student Teaching Book (BAM). Students also gave very good responses to the Electronic-based History of Economic Thought Student Textbook (BAM) developed in accordance with the needs of students during the online lecture process in the History of Economic Thought course. According to students, the Electronic-based History of Economic Thought Student Textbook (BAM) developed is very interesting because it is equipped with illustrations, animated videos related to the explanation of the theory of each economic thinker,

summary material, attractive formative tests, and navigation buttons that make it easier for students to use the Electronic-based History of Economic Thought Student Textbook (BAM).

The material presented in the Electronic-based History of Economic Thought Student Teaching Book (BAM) is easy to understand and can assist students in learning the History of Economic Thought lecture material in accordance with the Basic Competencies in table 6, besides that in the History of Economic Thought Student Teaching Book (BAM) there is also an explanation through video and a QR Code of the video explanation is also provided. So that students can use it to study the History of Economic Thought lecture material in depth. The History of Economic Thought Student Teaching Book (BAM) can also be used offline via computer or laptop so that it can reduce students' internet quota. In line with this, the results of the development of the Student Teaching Book (BAM) History of Economic Thought also received a very good student response with a percentage of 96.00% with a practical category and feasible to use as a learning resource because it can facilitate students in understanding lecture material. Supported by the results of research by Abidin & Walida (2017) which states that e-modules can make it easier for students to learn, overcome space and time limitations that allow students to learn independently (Retnosari & Hakim, 2021), and conduct self-evaluation of their learning outcomes. Regarding this, a conclusion can be drawn that the developed Electronic Student Teaching Book (BAM) for the History of Economic Thought is very feasible to use and can be used as an alternative teaching material in the online and offline lecture process in the History of Economic Thought course.

CONCLUSION

Fundamental Findings: The development of a Textbook on the History of Economic Thought with the combination of Barcode videos has been able to be produced in the application of differentiated learning. Differentiated learning in this micro-book application trial was carried out on a variety of students' learning styles. This book accommodates the differences in children's learning styles so that it can be used for all students with diverse learning styles. This book was developed using the ADDIE model. In the feasibility test of books from the validation of Material, Graphics and Language experts, an assessment was produced in the very good category. In the limited testing to users (students), this book is considered feasible to be applied in the learning activities of the History of Economic Thought course. **Implications:** This study concludes that this textbook expands accessibility for students with various learning styles, both visual, auditory, and kinesthetic. It allows students with different learning preferences to access the material in the most effective way for them. The integration of technology with learning through video barcodes reflects progress in the development of educational resources. This could be a trend that will develop in the future, where textbooks are increasingly interactive and integrated with digital media. **Limitation:** The study was limited to microtrials, so the results may not fully represent effectiveness on a broader scale. In addition, the focus on student learning style differences and the integration of video barcodes has not fully accommodated various other educational needs and limited access to technology. Meanwhile, the direct and indirect results of learning along with

this innovation have not been explored further. **Future Research:** Further research is needed by conducting macro experiments on the application of the book to classroom learning. In the next development by adding additional features or gadgets to optimize the benefits of books in wider differentiated learning (not only seen from the difference in student learning styles). In addition, further investigations can be conducted on the implications of using QR code integrated textbooks on other learning outcomes such as long-term knowledge retention, analytical skills, and the potential for collaboration with various learning technologies.

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