

(Research/Review) Article

Development of Prezi-Based Audio-Visual Media to Improve Economics Learning Outcomes for Grade X Students at SMA X

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Abstract: This study develops Prezi-based audio-visual learning media aimed at improving motivation and economics learning outcomes for Grade X students at SMA X. The primary issue addressed is the low motivation and achievement among students due to the use of monotonous teaching methods and unengaging media. This research distinguishes itself by integrating Prezi's Zooming User Interface (ZUI) with economics content, aligning with the independent curriculum and the Pancasila student profile. The study follows the Four-D Research and Development (R&D) model, consisting of Define, Design, Develop, and Disseminate phases. Data were collected through needs analysis, expert validation, and a quasi-experimental pretest-posttest control group design. Two classes, each consisting of 36 students, participated in the study. The learning media developed integrates various components such as text, images, charts, animations, and audio explanations, creating a comprehensive and interactive learning experience. The media was validated and found to be suitable, practical, and flexible for classroom use. The experimental group using the Prezi-based learning media saw a significant improvement in their learning outcomes. The average score of this group increased from 43.472 to 86, showing a substantial gain. In contrast, the control group, which used traditional methods, showed a smaller increase in average score, from 43.056 to 66.389. These results indicate that Prezi-based media is an effective tool for enhancing students' motivation and learning outcomes. It provides an innovative and engaging alternative for teachers, making economics content more dynamic and accessible. The study suggests that integrating such audio-visual tools can play a crucial role in improving the quality of learning, fostering both student engagement and academic achievement.

Keywords: Audio-Visual Media; Prezi; Economic Learning Outcomes; Motivation; Educational Innovation

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1. Introduction

The digital era has accelerated the development of science and technology, resulting in increasingly intense global competition. High-quality human resources have become the main pillar in the digital era (Holisoh et al., 2023). One of the efforts made to improve the quality of human resources is enhancing the quality of education, as education plays an important role in intellectual transformation (Septiani and Wardhana, 2022).

The improvement of education quality produces intellectually capable and skilled individuals to face contemporary challenges, thus enabling them to excel in an era of global competition (Uloli et al., 2023). Education encompasses all life situations that influence individual growth (Ningrum et al., 2023).

The government has made efforts to improve the quality of education and teacher welfare through the provision of infrastructure, competency enhancement, certification, and curriculum improvement. Therefore, institutions related to education quality must adapt to the development of the times (Rahma and Sulistiyawati, 2024).

Educational institutions need to utilize technological advancements to be effective, efficient, and relevant to current needs. This facilitates access to education and prepares it to face future challenges, although the complexity of technology presents a major challenge for teachers in educating the nation's children in the global arena. One development in information and communication technology in the field of education is the development of educational platforms (Santoso and Istiqomah, 2023). Educational platforms play a role in improving the quality of learning, one of which is through learning media that function as carriers of messages from the communicator to the communicatee (Subekti et al., 2020).

Learning media are one of the important components in the learning process and serve as teaching aids for teachers in delivering messages to students (Holiso et al., 2023). Although acting as an aid, this component has a significant impact on improving the quality of education by facilitating the delivery of learning material.

Media are defined as anything that can be used to convey messages from the sender to the receiver (Sadiman, 2014), (Putri et al., 2022), thereby stimulating the thoughts, feelings, and attention of learners in such a way that learning occurs. Based on preliminary research that has been conducted, low learning outcomes are caused by uninteresting and non-interactive learning media, monotonous teaching methods, and an uncondusive learning environment.

This condition causes students to become easily bored and less enthusiastic, thus requiring improvement to increase learning outcomes. One solution to overcome these problems is the use of Prezi-based learning media. This media can present economics material in a more interesting, interactive, and relevant way, encouraging students to be active, increasing their curiosity, and helping them to better understand the lesson.

The use of audiovisual learning media based on Prezi is considered capable of significantly improving student learning outcomes. With its interactive and dynamic display, Prezi helps students understand the material more engagingly (Harahap et al., 2020). Strong visual elements, such as graphics and animations, allow students to grasp information more easily and quickly. Prezi supports active learning, in which students participate more in the learning process (Muhroji et al., 2020).

Students can explore content independently, collaborate with peers, and create more engaging presentations. This not only enhances students' understanding but also builds critical and creative thinking skills. Good media are those that have interactivity, meaning media that can foster two-way communication (Santoso and Harjono, 2022). Audiovisual learning media based on Prezi are expected to increase students' motivation in learning the material anytime and anywhere, as well as motivate students to improve their academic performance.

2. Literature Review

A. Learning Outcomes

Learning outcomes refer to the extent to which students succeed in achieving the learning objectives that have been set within an educational process. Learning outcomes are the abilities possessed by students after undergoing the learning process, which will later be expressed in the form of numerical scores (Kantun et al., 2020). According to (Rusmono, 2017), (Setiawati et al., 2022), the learning outcomes of a subject represent changes in individual behavior, including changes in cognitive, affective, and psychomotor abilities. Learning outcomes are the improvements in students' abilities after experiencing the learning process, encompassing cognitive, affective, and psychomotor aspects.

B. Prezi-Based Audio-Visual Learning Media

Prezi was originally developed by a Hungarian architect named Adam Somlai-Fischer as a tool for architectural visualization (Muktiadi et al., 2022). Prezi is an internet-based presentation software. In addition to being used for presentations, Prezi can also serve as a tool to explore various ideas on a virtual canvas (Indriani, 2024). Prezi is a cloud-based presentation application that allows users to create dynamic and interactive presentations (Karim & Agung, 2018; Solehudin, 2019), (Zaqiah et al., 2023). Prezi is one of the platforms that can be used for presentations with an engaging display and easy accessibility.

3. Proposed Method

This study employs the Research and Development (R&D) method to produce Prezi-based audio-visual learning media on the topic of "Commercial Banks" for Grade X students at SMA X. This method was chosen because it aims to generate a product that is not only feasible for use but also practical and effective in enhancing students' motivation and learning outcomes.

The development process follows systematic stages, starting from needs analysis, design, development, to validation and testing. Validation is carried out by subject matter experts and media experts to assess the feasibility of the content and the media's presentation. Subsequently, the media is tested in both limited and broader settings to determine the extent to which its use can improve students' motivation and learning outcomes during economics lessons. The researcher used three types of data collection methods: interviews during the initial survey, questionnaires during feasibility testing and product trials, and objective tests to assess the effectiveness of the product. The flowchart of the development of the Prezi-based Economics learning media can be illustrated as follows:

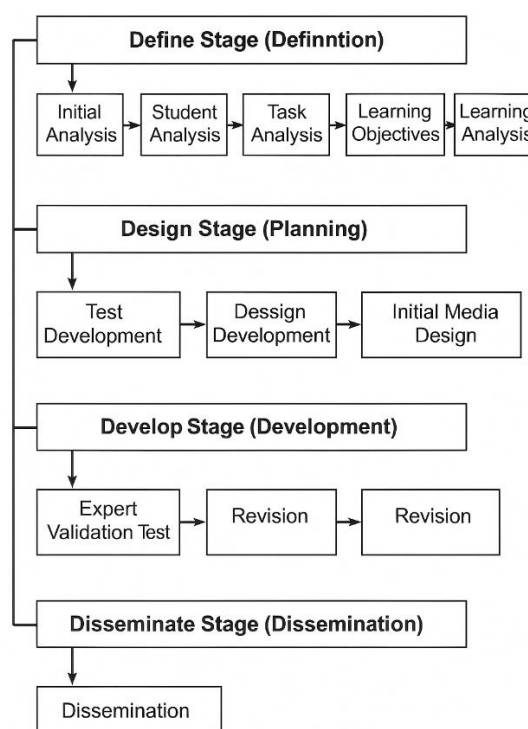


Figure 1. 4D Development Design by Thiagarajan

4. Results and Discussion

A. Product Trial Results

The Prezi media trial was conducted in two classes, namely the experimental class (X-1) and the control class (X-2), each consisting of 36 students. Effectiveness was measured using multiple-choice tests: a pretest (17 questions) and a posttest (19 questions) based on the topic of "Commercial Banks." The test result data were analyzed using Microsoft Excel and SPSS 25 to evaluate the impact of the media on learning outcomes.

Table 1. Normality Test Results

Identity	Sig. Value	Description
Test Result	Pretest_X1	0.143
	Posttest_X1	0.200
	Pretest_X2	0.174
	Posttest_X2	0.200

The normality test using the Kolmogorov-Smirnov method on the pretest and posttest of both the experimental and control classes showed a significance value > 0.05 , indicating that the data are normally distributed and suitable for analysis using parametric statistics.

Table 2. Homogeneity Test Results

Identity	Sig.	Description
Pretest	Based on Mean	0.699
	Based on Median	0.986
Posttest	Based on Mean	0.059
	Based on Median	0.101

The homogeneity test using SPSS showed that the significance values of both the pretest and posttest in both classes were > 0.05 , indicating that the data variances are homogeneous and meet the assumptions for parametric statistical analysis.

Table 3. Paired Sample T-Test Results

Description	t	df	Sig. (2-tailed)
Pair 1: Experimental Class Pretest - Posttest	-13.535	35	0.000
Pair 2: Control Class Pretest - Posttest	-8.860	35	0.000

The results of the Paired Sample T-Test showed a significance value of 0.000 (< 0.05), indicating a significant difference in learning outcomes before and after using the Prezi media in the experimental class. This media is effective in increasing motivation and economics learning outcomes, with the experimental class achieving better results compared to the control class.

Table 4. N-Gain Calculation

Identity	Pretest Average	Posttest Average	N-Gain	Description
Experimental Class	43.472	86	0.793	High
Control Class	43.056	66.389	0.427	Medium

The improvement in economics learning outcomes in the experimental class reached 74%, categorized as high, while the control class improved by 43%, categorized as medium. This indicates that the use of Prezi-based audio-visual learning media has a more significant impact compared to conventional methods. The Prezi media helps students better understand the material, increases active engagement in learning, and results in more optimal learning achievements in the experimental class.

B. Product Development Results

This development research refers to the 4D-Thiagarajan development model, which consists of several stages. These stages include: a) Definition Stage; b) Design Stage; c) Development Stage; and d) Dissemination Stage. Below is an explanation of each step carried out in this research and development:

**Figure 2.** Home Screen Display

This is the initial screen that welcomes users when the media is opened. This section displays general navigation as well as a list of content titles available within the media, allowing users to gain an overall understanding of the learning material.



Figure 3. Title Screen of the Product Media

The media title contains information about the name of the media, the main theme, and the subtheme of the material to be discussed, namely the “Commercial Bank” topic within the context of Economics learning. The title is designed to reflect the economics learning topic while also indicating that this media is Prezi-based, making it more relevant, communicative, and easier for users to understand.



Figure 4. User Guide Display of the Product Media

The user guide provides interactive instructions on how to use the media, such as the functions of the buttons: Next Button, Back Button, Zoom In Button, Zoom Out Button, and Exit Button (to exit the media).



Figure 5. Material Display on the Product Media

The learning material (core content) presents the learning objectives, dominant competency standards (CP), and indicators of learning achievement, followed by the delivery of visual and narrative content regarding the topic “Commercial Banks,” which is divided into several subtopics according to the Merdeka curriculum.



Figure 6. Material Display on the Product Media

The practice questions, in the form of multiple-choice items, are designed to measure students' understanding of the material with clear, structured, and easy-to-read presentation. Large, high-contrast fonts make them comfortable to view, while the question format aligns with learning objectives and supports interactivity to facilitate easier comprehension and responses from students.



Figure 7. Closing Display on the Product Media

The final section of the media contains a thank you message to the users, as well as the developer's contact information for those who wish to provide feedback or establish further communication.



Figure 8. Developer Profile Display of the Product Media

The developer profile display has been arranged informatively and appropriately according to needs. The profile includes complete developer identity details, such as name, role, originating institution, department, study program, and faculty. The design layout is also neatly organized, with clear font usage and balanced layout, making it easy to read and understand by users. Since the content and appearance meet the criteria, this section is considered feasible and does not require revision.

5. Conclusions

The conclusion of this study is that the Prezi-based audio-visual learning media with the topic “Commercial Bank” has been systematically developed and proven suitable for use in the economics learning process. Validation from content experts, media experts, teachers, and learning device assessments shows that this media meets feasibility standards in terms of content, appearance, language, technical aspects, and presentation, as well as compliance with the Merdeka Curriculum and Pancasila Student Profile. Additionally, this media is very practical for teachers and students to use without requiring complicated technical skills and is flexible to implement in various learning models such as face-to-face, online, or blended learning. The effectiveness of this media is demonstrated by the significant improvement in learning outcomes of the experimental class using Prezi media compared to the control class using conventional learning methods. This media helps students understand difficult economic concepts through interactive and engaging presentations while increasing student involvement and motivation. Thus, Prezi-based learning media contributes positively to creating a more enjoyable learning experience and optimal learning outcomes for students.

Suggestions in this study are that teachers are advised to utilize Prezi-based learning media as an innovation in economics learning to improve student motivation and understanding. Students are encouraged to actively use this media as an additional learning resource that facilitates material comprehension. Schools need to provide supporting facilities such as digital devices and internet connections, as well as conduct training for teachers to become more proficient in using technological media. Future researchers are advised to conduct broader testing of the Prezi media and combine it with other media to make learning more varied and effective.

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