

ASSISTED INTERACTIVE LEARNING MEDIA INNOVATION APPLICATION MICROSOFT SWAY

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ABSTRACT: This research aims to obtain validation of the development of interactive learning media assisted by applications Microsoft Sway to improve students' critical thinking skills. The type of research is Research and Development (R&D), using the Plomp model. This research involves expert validators are material experts, language experts, media experts, and IT experts. The development stages include preliminary research (preliminary research), level prototype/product development stage (prototyping phase), evaluation level (assessment phase), and systematic reflection and documentation. The data collection method uses sheets self-evaluation, validation sheet prototype, observation sheets, interviews, and sheets Focus Group Discussion (FGD). The collected data was analyzed using SPSS. The validity and usability of product designs are measured through formative evaluation, including self-evaluation. Summative evaluation is carried out at the assessment stage to determine product validity. The research product consists of interactive learning media assisted by applications Microsoft Sway and product use manuals. The research results show that the media Microsoft Sway The results generated are declared valid, where for the media value the Correlation Coefficient (ICC). The results obtained were very high = 0.968 from the average inter-agreement results rater, while for one rater the consistency is 0.400. For the guidebook, the value ICC obtained is also very high = 0.958 from the analysis of the average agreement between raters, while for one rater the consistency is 0.360. Overall it can be said to be an interactive learning media assisted by applications Microsoft Sway and a valid and usable Guidebook.

Keywords: Media, Microsoft Sway, IPS, Critical Thinking

1. INTRODUCTION

The National Education System which is regulated in Law No. 20/2003 states that national education is a conscious and planned effort to create a learning atmosphere and learning process so that students are active and proactive in developing their potential or competence to have spiritual strength, religious, devout, intelligent, personable, has noble morals, and has the skills and needs that are needed in society, the nation, and the state [1]. In line with the 21st-century education framework, human resources (educators) can communicate assertively, have the ability to collaborate, the ability to think critically, and have high creativity. This is because educators must be creative and innovative in creating breakthroughs in designing learning so that the implementation of learning becomes more meaningful.

To achieve all these hopes, the government is realizing it through the independent curriculum, where the independent curriculum is curriculum that focuses on essential material and developing critical, logical, and systematic thinking

competencies as well as character formation by strengthening the profile of Pancasila students. The Pancasila student profile is implemented in certain subjects and integrated into all subjects. Responding to the demands of an independent curriculum, teachers must make changes and innovate learning. Learning is no longer centered on teacher-centered learning centers on students (Student Centered). The role of the teacher in learning as Coach and Facilitator. Teachers as educators must use innovative and creative learning media so that learning becomes more meaningful and students can be active in the learning process because interactive and innovative learning media can increase students' motivation in learning, especially motivation for achievement and critical thinking skills [2]. [3] said that the level of ability of educators and students in critical thinking is also an important thing that must be possessed as a skill in facing global challenges. To realize students' ability to think critically, innovative learning media is certainly needed. Apart from that, the teaching and learning process using innovative media can motivate students to participate in learning

enthusiastically and provide space for thinking. Critical thinking skills are high-level thinking in depth and comprehensively to find solutions based on facts and phenomena, so that you can solve problems in detail.

However, based on an initial survey conducted at Junior High School (JHS) 1 Samudera, educators are still implementing learning conventional or still have not developed interactive learning media in particular, so learning is not only meaningless but also not in favor of students. Based on the phenomenon above, educators must make efforts that can make students more motivated in learning, and able to think critically and creatively by the demands of 21st-century learning. One of them is designing interactive learning media. In the context of the world of education, as stated by Gerlach & Ely in [4] media in general are people, materials, or events that create conditions that enable students to acquire knowledge, skills, or attitudes. A similar thing was also conveyed by Hambalik in [4] that the use of learning media in the teaching and learning process can generate new desires and interests for students, improve learning outcomes, and stimulate students to participate in learning activities, and can have an influence on their psychology. As we also know, the use of learning media at the learning orientation stage will help the effectiveness of the learning process and message delivery today. This is because besides being able to improve learning outcomes and learning motivation, the presence of media also has a positive impact in producing understanding, presenting data, and attractiveness in participating in each learning session, besides that media can also make it easier to interpret data and condense information. So we can conclude that by utilizing learning resources in the form of learning media, the process of delivering communication in the learning process can take place more effectively and efficiently.

To realize meaningful learning, a learning media is needed that can combine several other media into one unit that covers the whole and can record, store, and build certain objects which can then be used to make it easier for students to learn. To achieve these characteristics, interactive media is needed. [5] argue that interactive media is a media that combines various types of media aimed at achieving learning goals. Interactive media is learning media that contains text, video, audio, animated images, graphics, and so on. One application that can design interactive learning media is an application Microsoft Sway. This is as stated by [6]. Microsoft Sway is a new feature from Microsoft that was released in 2020 and according to him can be used as a learning medium and as an application in evaluating student learning achievement results. Application Sway is a digital trash count that stores various forms of content

(text, images, video, audio, etc.) to create interesting presentations, reports, resumes, or lessons.

2. METHODS

This research is development research (R&D). The product produced in this research is an interactive learning media assisted by Microsoft Sway called MSS. This learning media is designed to improve students' critical thinking skills in valid social studies subjects. The development design used is [7] development design which consists of several stages, namely: 1) Preliminary research; 2) Prototyping phase; and 3) Assessment stage. Data analysis was carried out descriptively qualitatively and quantitatively. Steps to test media validity using expert opinions (judgment experts). Validators/experts are asked for their opinions about the media and products being developed. The validation developed includes construct validity and content validation. Validation involved 5 experts or experts in their fields consisting of 2 material experts, 1 language expert, 1 media expert, and 1 technology expert. Next, the validity results provided by the validator/assessor, an intraclass correlation test ICC by using the program SPSS. Data collection techniques include observation, interviews, documentation, and FGD.

3. RESULTS AND DISCUSSION

After carrying out various development procedures which consist of several stages, namely: 1) Preliminary research; 2) Prototyping phase; and 3) Assessment stage [8-10] the following research results were obtained:

3.1 Preliminary Research

At the needs analysis stage, an analysis of the importance of interactive media is carried out by MSS in Social Sciences learning [11-13]. Needs analysis includes 1) analysis of problems and obstacles that occur during learning activities; and 2) curriculum analysis. The curriculum analysis carried out is the application of the curriculum, the scope of material and learning methods, as well as the objectives and strategies for achieving curriculum objectives to determine the problems that exist in the field. This data is intended as a basis for developing interactive learning media. Based on the results of preliminary research, it was found that in the implementation of the learning process teachers who teach Social Sciences subjects are still conventional. There are no teachers in the learning process using interactive media Microsoft Sway because besides requiring a long time, it also disrupts the modules that have been prepared

previously. In terms of curriculum, if viewed from the scope of the material, it is generally a collection of theories and concepts so that learning cannot make students think analytically. Students' critical power and reasoning power are weak. It can be seen that educators generally do not prepare learning tools properly, such as teaching modules, media, and other learning resources. At the same time, analysis of students revealed a feeling of boredom when taking social studies lessons because the learning was monotonous and did not involve students actively in the learning process. An innovative learning design or media is designed in the form of interactive media using an application Microsoft Sway along with a guidebook for media use based on searches and information obtained from teachers, students, and related parties. The media use guidebook is designed to contain learning components that are appropriate to the problems found in the field.

Application-assisted interactive learning media This Microsoft Sway is based on the results of preliminary research conducted on a study of learning theories along with interactive learning media equipped with syntax [14-16]. Syntax is one part of learning media that contains media references in activities that are arranged based on clear stages of the overall activity. Moreover, teachers carry out these stages in the learning process. The results of this study serve as a guideline in compiling the media syntax being developed. The media syntax is designed by paying

attention to how to invite students to be actively involved and feel directly part of the learning process. Apart from that, the syntax for interactive learning media is assisted by applications Microsoft Sway also based on theories about learning media, constructivist theory, and investigative principles. Based on the results of preliminary research, it was found that in the implementation of the learning process teachers who teach Social Sciences subjects are still conventional or have not yet developed interactive learning media so that the learning that takes place is not only impartial to the students but also does not provide meaningful meaning. Such a learning atmosphere causes the implementation of learning that is in favor of students not to be created so that educational goals are not achieved. Students are not motivated to learn, let alone achieve, resulting in graduates who are unable to think critically and creatively by the demands of 21st-century learning. An innovative learning design or media is designed in the form of interactive media using applications. Microsoft Sway along with a product user manual. Then the interactive media is given the name MSS.

3.2 Level Prototype (Prototyping Phase)

Interactive media development MSS [17, 18]. This is based on the independent learning model proposed in the media use guidebook which consists of several structures as shown in Table 2 below.

Table 1. Components of the Handbook

Guidebook
Foreword
List of contents
Introduction
I. RATIONALITY OF THE USE MANUAL MEDIA MICROSOFT SWAY
a. Runway Theoretical
b. Base Philosophical
c. Learning Media Using Applications Microsoft Sway
d. Important Elements in Learning Using the Application Microsoft Sway
e. Objective
II. MEDIA COMPONENTS
a. Syntax
b. Reaction Principles
c. Social Systems
d. Support System
e. Instructional Impact
f. Impact of Herding

Table 2. Media components Microsoft Sway

Media Microsoft Sway	
1.	Concept maps
2.	Learning Outcomes & Flow of Phase D Learning Objectives
3.	Theme 1 Material: Geographical Conditions and Resource Conservation Force of Nature
	A. Indonesia's Natural Diversity: Meeting 1&4
	B. Natural Resource Potential: Meetings 5, 6 & 7

3.2 Product Validation

Based on validation results of media products Microsoft Sway with supporting products in the form of media use guidebooks Microsoft Sway which was carried out by 5 experts consisting of 2

material experts, 1 language expert, 1 media expert, and 1 technology expert from the validation of 5 experts showed that Microsoft Sway Media Validation: Media Microsoft Sway declared valid and for value ICC obtained very high = 0.968 from the analysis of the average agreement between rater, while for onerater the consistency is 0.400.

Table 3. Microsoft Sway media ICC level (Intraclass Correlation Coefficient)

	Intraclass Correlation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Say
Single Measures	.400 ^a	.180	.851	31.021	4	176	.000
Average Measures	.968 ^c	.908	.996	31.012	4	176	.000

Source: Processed Primary Data.

Validate the Media Use Guidebook: Media usage guidebook Microsoft Sway based on the assessment of 5 experts it was also declared valid.

As for value ICC obtained was very high = 0.958 from the analysis of the average agreement between rater, while for one rater the consistency is 0.360.

Table 4. ICC levels of guidebook (Intraclass Correlation Coefficient)

	Intraclass Correlation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Say
Single Measures	.360 ^a	.153	.829	24.064	4	160	.000
Average Measures	.958 ^c	.881	.995	24.064	4	160	.000

Source: Processed Primary Data.

3.4 Discussion group FGD

Result of FGD There were several suggestions, input, and assessments from the participants FGD. Suggestions received from participants FGD namely improving the use of language/using good or more scientific language, the design on the cover needs to be improved as in the guidebook, the images used to support the description. Overall, the results of this FGD agreed to provide the view that the guidebook as a support system for this media is suitable for use. The results of revisions to this product are called product prototypes. After revision based on the results of the evaluation stages mentioned above and the results of the stages FGD then the product is refined again so that in the end the final product is obtained/Prototype final.

learning media Microsoft Sway Social studies learning is valid and can be continued at other stages. The cover of the guidebook before and after revision and the media display are shown in the Fig 1 below.

3.5 Product Revisions

Furthermore, more important suggestions from validators in revising products include the use of letters and language, the structure of media preparation. General assessment of interactive



Fig 1. Cover of the manual before FIG. 2 Cover of the guidebook after

4 CONCLUSION

Based on the results of research regarding the development of application-assisted internet media Microsoft Sway, interactive learning media Microsoft Sway using Plomp's steps are as follows: 1) Interactive media Microsoft Sway along with the media usage guidebook, after being validated by experts consisting of linguists, material experts, media experts and IT experts, declared valid and eligible for use; 2) Based on evaluation observer, practitioners of, and users of, interactive media Microsoft Sway along with a media usage guidebook stated that the media and guidebook were comfortable to use because learning was carried out well without any obstacles, and students enjoyed the learning process; 3) When observing learning activities, students' learning motivation and critical thinking abilities increase, as evidenced by very satisfying learning results; and 4) Interactive learning media Microsoft Sway along with a guidebook for using the media developed is called MSS so that it can be applied by educators in social studies subjects because this media and supporting products have been proven valid, and students can use this media and use it as a reference in further research. The development of interactive learning media has produced a product or novelty in the form of media interactive MSS which is valid and suitable for use and has an influence on social studies subjects. Application-assisted interactive media Microsoft Sway was developed and named MSS so that it can be applied by teaching staff, especially teachers of Social Sciences subjects because of interactive media MSS This has been proven valid and suitable for use in the learning process. For media researchers, this becomes a reference in subsequent research.

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5. REFERENCES

- [1] Republic of Indonesia Law No 20/2023 concerning the National Education System (Sisdiknas).
- [2] Sumanti, S., Efendi, Z. M., & Ridwan, R. Online group investigation by using facebook to improve students critical thinking on geography subjects. Prosiding 1st International Conference on Innovation in Education (ICoIE 2018), 2019, pp. 130-131.
- [3] Sumanti. Development of a Geography Learning Model. Central Java: Cv Pena Persada, 2021.
- [4] Arsyad, A. Instructional Media. Jakarta: Rajawali Press, 2002.
- [5] Crichton, S., & Kopp, G. Multimedia technologies, multiple intelligences, and teacher professional development in an international education project. *Innovate: Journal of Online Education*, 2(3), 2006, pp. 1-6.
- [6] Priyono, A., & Junanto, S. Pemanfaatan Microsoft Sway dan Microsoft Form Sebagai Media Pembelajaran Interaktif Pendidikan Agama Islam. *Muaddib: Studi Kependidikan dan Keislaman*, 12(2), 2022, pp. 240-265.
- [7] Plomp, T. Educational design research: An introduction. *Educational design research*, 2013, pp. 11-50.
- [8] Van den Akker, J., Gravemeijer, K., & McKenney, S. Introducing educational design research. In *Educational design research*, Routledge, 2006, pp. 15-19.
- [9] Nienke, N., & Plomp, T. Educational Design Research. Netherlands institute for curriculum development, 2013, p. 29.
- [10] Southerland, L. T., Kloos, A. D., Slattery, L., Tan, Y., Young, G., Rosenthal, J., & Kegelmeyer, D. A. Accuracy of the 4-stage balance test and sensor-based trunk sway as fall risk assessment tools in the emergency department. *Journal of Acute Care Physical Therapy*, 12(2), 2021, pp. 79-87.
- [11] Hermon, D., Putra, A., Erianjoni, E., & Oktorie, O. Social-Economic Changes of Society Post-September 30, 2009 Earthquake in Pariaman City. *Science and Environmental Journal for Postgraduate*, 2(2), 2020, pp. 71-81.
- [12] Fernandes, R., Susilawati, N., Muspita, R., Putra, E. V., Amri, E., Akbar, A., & Putra, A. Voter Education for The Deaf During The Covid-19 Pandemic. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(6), 2020, pp. 10518-10528.
- [13] Chandra, D., Wilis, R., Frananda, H., Rahmi, L., Arif, D. A., Wijayanto, B., & Putra, A. Pembuatan Peta Timbul Sebagai Media Pembelajaran Geografi. *PEDAGOGIA: Jurnal Pendidikan*, 8(2), 2019, pp. 211-221.
- [14] Chandra, D., Mariya, S., Nova, S., Edial, H., Rahmi, L., Putri, S., ... & Putra, A. Training in Making Interactive Learning Media (Cycle of Hydrology and Layers of the Atmosphere) SMAN 5 Pariaman and SMAN 1 Ulakan Tapakis, Padang Pariaman. *Sumatra Journal of Disaster, Geography and Geography Education*, 5(2), 2021, pp. 126-130.

- [15] Erianjoni, Beri, D., Sudiar, O., Komaini, A., Putra, A., Nelwatri, H., Yusra, A., & Santi, T. D. Online Learning Process During the New Normal Post COVID-19 in Indonesia: A Case Study at the Universitas Negeri Padang. *Journal of Higher Education Theory & Practice*, 23(16), 2023.
- [16] Suasti, Y., Barlian, E., Muchtar, B., Syah, N., & Putra, A. Insert Religious Model in the Construction Character of Care for the Environment to the Study of Geography in Padang City–Indonesia. *Journal of Islamic Studies and Culture*, 6(1), 2018, pp. 67-70.
- [17] Simanjuntak, S. F. Development of Interactive Multimedia Towards Economic Problems on Economic Subjects for Social Science Class X Students At Darma Yudha High School. *International Journal of Educational Best Practices*, 3(2), 2019, pp. 64-74.
- [18] Aboe, R. M., Thalib, S. B., & Bundu, P. The Role of Interactive Media in Teaching Pronunciation Through Communicative Language Teaching Approach. *International Journal of Integrative Sciences*, 3(7), 2024, pp. 1177-1190.