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Development of Digital Learning Media Based on *I Spring Suite 11* to Improve Students' Interest and Learning Outcomes in Economics Subjects at SMA Negeri 11 Malinau in the 2024/2025 Academic Year

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Abstract: *This research focuses on the development of digital learning media based on I Spring Suite 11 to assess: 10 t he feasibility of the digital learning media based on I Spring Suite 11; 2) the improvement of student interest in learning Economics at SMA Negeri 11 Malinau; and 3) the improvement of student learning outcomes in Economics at SMA Negeri 11 Malinau.The research method used is research and development (R&D) through the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model with quasi-experimental analysis. The subjects of the research were 10 students from grade X at SMA Negeri 11 Malinau. The instruments used in this study were questionnaires given to media experts, material experts, and teaching practitioners (Economics teachers) to validate the questionnaire instruments and student responses to the digital learning media using the same questionnaires and pretest-posttest learning outcome tests.The research findings are as follows: 1) The feasibility of the I Spring Suite 11-based digital learning media was evaluated by material experts with a score of 78%, categorized as "Feasible"; by media experts with a score of 80%, categorized as "Feasible"; and by teaching practitioners with a score of 85%, categorized as "Highly Feasible." The analysis of the scores showed that the material and media experts' evaluations fell within the "feasible" range (38 ≤ 2)There was a 50.86% increase in student interest in learning, with a pretest average score of 58 and a posttest average score of 91, which meets the product's effectiveness criteria. Based on the pretest-posttest analysis of student interest, the N-gain test resulted in a score of 0.5, which is categorized as "moderate" and falls into the "Good" category. The analysis of the ideal mean score (Mi) showed a value of 50 ≤ X, which means the I Spring Suite 11-based digital learning media is effective for use in the Economics subject. 3)There was a 46.8% improvement in student learning outcomes, with a pretest average score of 54 and a posttest average score of 85 after using the I Spring Suite 11-based digital learning media. Based on the pretest-posttest analysis, the N-gain score was 0.47, which is categorized as "moderate," indicating that the learning media is effective in improving student learning outcomes in Economics.*

Keywords *: I Spring Suite 11, Student Interest, Learning Outcomes, Lung Barang*

1. INTRODUCTION

Education is one of the important pillars in building humans to prepare for human life in the future. Quality human resources (HR) obtained through education can be obtained from anywhere such as formal education, non-formal education (Mas'ulah Siti, 2021) but currently education in Indonesia is experiencing problems in improving the quality of education such as students, teachers, school facilities, learning methods used and learning media used are limited, especially with teachers who teach in 3T areas. Teachers have limited knowledge in creating digital learning media so that learning is monotonous and does not arouse students' interest in learning while teachers have a very important role in creating successful learning in the classroom so that teachers need

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competency training and expertise in utilizing these learning media (Sulfem in Mas'ulah Siti, 2021). The rapid development of technology means that teachers should utilize digital learning media so that the material is easier to understand and creates students' interest in learning (Januarti Epifania Kurnia, 2019).

Learning media that is very easy to apply is the use of digital media such as the use of the *I Spring Suite application* which is *an add-in* for *PowerPoint* and can be connected to *gadget users. smartphones* , computers, laptops to help deliver material more quickly to students (Irsanti Shilvana Widi, 2017). The use of learning media can arouse new desires and interests in students, thereby increasing interest in learning. Based on the results of research conducted by Hanisah *et al (2022), I spring suite* products which was developed gave a positive impact in measuring learning outcomes as well as research conducted by Rhomadhoni & Sulaikho (2022) android-based *I spring suite learning media* in learning aqidah and akhlak with the material of the example of the Prophet Ibrahim in the assessment of the validation of material experts was 84.83% with a very feasible category, the validation assessment from media experts was 73% with a feasible category, and the validation assessment from language experts was 94% with a very feasible category, it can increase interest in learning.

One of the problems faced in the current learning process, such as low interest in learning itself, can be seen from direct observation where students do not pay attention to the material taught in class, students are busy with their own activities, some play with *cellphones* while studying, some fall asleep, chat with their friends and the learning process does not go well. Slameto in Irsanti Shilvina (2017) stated that indicators of interest in learning tend to pay attention to something that is learned with learning media. So it can be concluded that students do not pay attention because the learning media used by the teacher is not interesting so that students do not have an interest in learning. This is a concern for teachers to be able to develop teaching media used in the classroom as interesting as possible so that students are interested in the material presented. The development of this learning media also requires support from various parties, for example schools as providers of school facilities and infrastructure need to pay attention to the needs of teachers and students, for example the availability of internet networks, the availability of computers/laptops from schools, LCDs and others and the need for teacher development training in terms of the use of teaching media so that teachers understand the use and management of the media.

The daily test scores for the Economics subject did not meet the KKM <75. Where class X IPS consisted of 10 people with a percentage of 30% and did not complete 70%. This means that a small number of students have a good level of understanding of economic knowledge, so an evaluation of the low economic learning outcomes is needed. Learning outcomes are one indicator that can be used to determine success learning, good learning outcomes can describe good quality of education. Dalyono in Irsanti Shilvia Widi (2017) learning outcomes are influenced by many factors, both internal factors, namely from within the students such as health, talent, interests and learning methods while external factors such as the learning environment at home and at school.

Based on the description above and in an effort to improve students' interest and learning outcomes, it is necessary to develop digital learning media as well as a solution to the problems of learning Economics at SMA Negeri 11 Malinau, so it is necessary to conduct research with the title: **" Development of Digital Learning Media Based on *I Spring Suite 11* to Improve Students' Interest and Learning Outcomes in Economics Subjects at SMA Negeri 11 Malinau in the 2024/2025 Academic Year " .**

2. LITERATURE REVIEW

Instructional Media

Media is an intermediary or delivery tool that functions to convey messages or information from a source to the recipient of the message (Munawar Badri, 2020) while another opinion says that media is a physical tool that can present messages (Briggs in Sapriyah, 2019) so it is concluded that media is an intermediary or delivery tool that functions to convey, present messages or information from a source to the recipient of the message.

Learning media is a tool used to help the teaching and learning process so that the meaning of the message conveyed becomes clearer so that educational goals can be achieved effectively and efficiently (Nurrita, 2018) . Learning media is a tool in the teaching and learning process and teachers are required to use media in learning (Warkintin & Mulyadi, 2019) so it can be concluded that learning media is a tool used by a teacher in the teaching and learning process so that educational goals are achieved effectively and efficiently. Wina Sanjaya (Irsanti Shilvana Widi, 2017) Indicators of media success such as:

a. The media used by teachers must be appropriate to the learning objectives.
b. The media used must be appropriate to the learning material so that the media can be applied.

c. Learning media must be appropriate to the interests, needs and conditions of students in order to become a solution for effective learning.
d. The media used takes into account effectiveness in supporting the delivery of information to students.
e. The media used is in accordance with the abilities and skills possessed by the teacher so that it is easy to use the media for the learning process.

***I-Spring Suite* digital learning media**

Digital learning media is a tool used to display interesting and interactive contextual, audio, and visual learning materials (Kaiful Umam in Sari Dewi *et al* ., 2024) while (Latifah Nurul & Lazulva, 2020) argue that digital learning media is a technology-assisted learning media such as LCD and educational platforms such as *Canva, Powtoon, powerpoint* so that it can be concluded that digital learning media is a tool used in the learning process that is assisted by technology and has a network in the form of contextual, audio, and visuals that are interesting and interactive such as *Canva, Powtoon, powerpoint* and others.

I Spring Suite is a *PowerPoint- based tool* from *I Spring Solutions* that makes it easy to create media such as slides, multi-question quizzes, videos, recordings, multimedia simulations and other interactive learning materials (Mardiansyah et al., 2023). *I Spring Suite* is an add-in or additional application to the *Powerpoint presentation application* (Nurjanah & Erita, 2021). *I Spring Suite* is also a *Powerpoint application* that has additional presentation applications or *add-ins* in it. which makes it easy to create media such as slides, multi-question quizzes, videos, recordings and other interactive learning materials.

Irtawaty et al. (2018) *I Spring Suite* learning media is a learning media that combines audio, video, *quiz maker* into one unit so that it makes it easier for teachers to transfer teaching materials to students through the *powerpoint application program.* The learning media produced by *I Spring Suite* can be exported into several file formats such as *executable (exe), html5* (Hanisah, et al., 2022) so it is concluded that *I Spring Suite* is a learning media in the *powerpoint add-in application that makes it easy to transfer teaching materials and can be exported into executable (exe)* files , html 5. Researchers took the digital learning media *I Spring Suite* 11 because it is the latest version of the *I Spring Suite application* itself.

Interest in Learning

Interest in learning is one of the most important factors in the success of learning that students have, interest comes from within the students themselves (Yunitasari & Hanifah, 2020). Interest in learning is a driver of students in learning such as interest or pleasure and the desire of students to learn, interest is an aspect of building motivation (Yolviansyah et al., 2021)

. Interest is one of the most important factors for the success of learning that is owned such as interest or pleasure and the desire to learn.

Learning is an activity that has implications for a change towards progress regarding knowledge, attitudes and skills. To achieve learning success, motivating factors are needed, and one of them is interest in learning. Interest is an activity that is carried out with an interest because of realizing the importance of the activity (Irtawaty et al., 2018) while Yolviansyah et al., (2021) stated that interest is a tendency and high enthusiasm or great desire for something, if someone has a great desire for something then anything will be done. It can be concluded that interest is a tendency and high enthusiasm or great desire for something without anyone telling you to do it.

Learning interest is formed because it is influenced by various factors, several factors that can influence learning interest, namely: motives, attention, and learning materials and teacher attitudes (Korompot et al., 2020) while Fadillah (2016) stated that the factors that influence learning interest are: motivation, attitudes towards teachers and lessons, family, school facilities, and friends, learning interest is influenced by factors that are closely related and cannot stand alone while Fuad & Zuraini (2016) stated that the factors that influence learning interest are 1) internal factors, 2) external factors. It can be concluded that the factors that influence learning interest consist of two factors , namely :

1. **Internal factors consist of:**
    a. physical aspects, including the physical condition or physical health of individual students, prime physical condition greatly supports successful learning and can influence interest in learning
    b. psychological/mental aspects, including attention, observation, response, fantasy, memory, thinking, student talent
2. **External factors consist of:**
    a. Family is the first educational institution for children, parents must always be ready when children need help, provide the learning equipment needed by children, create a comfortable atmosphere to support children in learning.
    b. Schools, including teaching methods, curriculum, learning facilities and infrastructure, learning resources, learning media, student relationships with friends, teachers and school staff as well as various co-curricular activities.
    c. The environment, including relationships with friends, activities in society and the residential environment, academic activities, will be better if balanced with activities outside of school.

Learning outcomes

outcomes are the results obtained by students after the learning process which is indicated by the test scores given by the teacher after the learning material on one topic (Mufidah & Surjanti, 2021) while Sudjana (Wijaya Agi M, 2016) Learning outcomes are the abilities possessed by students after receiving learning experiences. Learning outcomes are used as a measure in determining the abilities or competencies possessed by students after receiving learning (Destyana & Surjanti, 2021) . Based on several definitions above, it can be concluded that learning outcomes are the results obtained by students after the learning process which is indicated by test scores as a measure in determining the abilities or competencies possessed by students after receiving learning. Bloom (Wijaya Agi M, 2016) learning outcomes are changes in behavior consisting of cognitive, affective, and psychomotor assessments. Learning outcomes consist of three aspects:

1. The cognitive aspect is an assessment of learning outcomes which consists of six indicators, namely knowledge, understanding, application, analysis, synthesis and evaluation.
2. The affective aspect is an assessment of attitudes which consists of indicators such as acceptance, response, organization and internalization.
3. The psychomotor aspect is an assessment of skills or actions consisting of reflex movements, basic movement skills, perceptual abilities, harmony or accuracy, complex skill movements, expressive movements.

The taxonomy of learning outcomes or Bloom's taxonomy (Purwanto in Sidabutar Marta, 2024) consists of:

1. The taxonomy of cognitive learning outcomes consists of six indicators, namely remembering (C1), understanding (C2), applying (C3), analyzing (C4), evaluating (C5), and creating (C6).
2. The taxonomy of affective learning outcomes consists of attitudes of accepting, responding, appreciating, internalizing, and practicing or paying attention to the form of problems, situations, phenomena and so on.
3. The taxonomy of psychomotor learning outcomes consists of perception, readiness, imitation, habituation, proficiency, natural, original.

The expected learning outcomes can meet the criteria in accordance with the objectives of learning Economics which are distinguished from various aspects of knowledge, attitudes and skills. The categories of learning outcomes in the cognitive process dimension (Bloom in Wijaya Agi M, 2016) are as follows:

1. Remembering (C1) is the process of taking the simplest knowledge such as recognizing, identifying, recalling.
2. Understanding (C2) is constructing the meaning of learning material such as interpreting, giving examples, classifying
3. Applying (C3) is the ability to carry out a learning concept such as carrying out, implementing
4. Analyzing (C4) is the ability to separate material into several components and to connect several components to gain a complete understanding of the concept.
5. Evaluating (C5) is the ability to make decisions based on criteria such as correcting and criticizing.
6. Creating (C6) is the ability to combine parts into a new form or make a product such as making plans and designs.

Economics Subject

One of the subjects given at the High School level is Economics. Economics comes from the Latin *oikonomos,* namely *oikos* and *nomos* , where oikos means household and nomos means rules. Paul Anthony Samuelson (Purba David Fernando, 2017) Economics has the following meanings:

a. Economics is a political economy *whose* activities include exchange transactions between humans.
b. Economics is the study of how to make the right choices in utilizing productive resources such as land, labor, capital goods which are scarce and limited.
c. Economics is a daily activity to earn and enjoy life.
d. Economics is the study of prosperity and ways to improve society.

Sukirno (Aisyah, *et al* ., 2017) Economics is a science that studies individuals and society in making choices with or without money, using limited resources, distributing current and future consumption needs. Based on the opinion above, it can be concluded that Economics is a science that studies human efforts to meet needs in order to achieve prosperity by making choices through certain considerations. In the 2013 curriculum, the Economics subject is included in the social interest group, the 2013 SMA/MA Curriculum provides opportunities for students to learn according to their interests. This interest group of subjects aims to provide opportunities for students to develop their interests in certain disciplines or skills. The Economics subject aims for students to have the following abilities:

a. Understand a number of economic concepts to relate economic events and problems to everyday life, both in the individual, household, community and national environment.

b. Demonstrate an inquisitive attitude towards a number of Economic concepts necessary to study Economics in depth.
c. Forming a wise, rational, responsible attitude by having knowledge of economic skills that are beneficial for oneself, household, society, and the country.
d. Making responsible decisions regarding socio-economic values in a pluralistic society, both nationally and internationally.

3. METHODOLOGY

This study is to develop digital learning media based on *I Spring Suite 11* to improve students' interest and learning outcomes, this study is a research and development that aims to develop and test digital learning media products. Borg & Gall (Wijaya Agi Ma'aruf, 2016) *educational research and development is a process used to develop and validate products* and can be interpreted as a process used to develop and validate products in a study. This study is a research *and development* (R&D) which aims to produce and develop a product and test the effectiveness of the product (Ariyanti et al., 2020) . Researchers first develop learning media, after the media is declared feasible, it can be implemented and continued to measure student interest and learning outcomes

The product to be developed is a digital learning media based on *I spring suite 11* with material on demand and price supply for class X of SMA Negeri 11 Malinau in the subject of Economics and this study uses the ADDIE model (*Analyze, Design, Development, Implementation, and Evaluation*) using several methods used such as descriptive methods, evaluation and experiments. Descriptive methods to collect data with existing conditions, evaluation methods to evaluate products in the trial process of product development such as evaluation of results and processes, and experimental methods to test the efficacy of products produced through experimental groups (Trianto in Wjaya Agi M, 2016)

4. RESEARCH RESULT

After conducted a trial field and done data analysis then obtained that digital learning media based on I Spring Suite 11 can increase interest and results Study participant educate class X of SMA Negeri 11 Malinau and fulfills criteria feasible and effective .

1. Eligibility

Product data analysis results with share questionnaire , data obtained through questionnaire Likert scale consists of from 4 answers Then score converted become mark with

scale 4 to expert material and media experts as many as 15 statement items whereas practitioner learning as many as 20 question items can seen in the table under This :

Table 1. Media Eligibility Conversion Results

Score Interval			Category
Subject Matter Expert	Media Expert	Practitioner Learning	
49<X≤ 60	49<X≤ 60	65<X≤ 80	Very worthy
38 <X≤ 49	38 <X≤ 49	50 <X≤ 65	Worthy
25<X≤ 38	25<X≤ 38	35<X≤ 50	Enough worthy
14<X≤ 25	14<X≤ 25	0<X≤ 35	Not worthy

Source : Processed data

Questionnaire questionnaire shared to expert materials and media experts from results analysis obtained ideal mean value (Mi) is in the score interval 38 <X, ≤ 49 namely 38 and falls into the "feasible" criteria, while learning practitioners obtained an ideal average value (M i) in the score interval 50 <X, ≤ 65 namely 50 and falls into the "feasible" criteria, which means that digital learning media based on I Spring Suite 11 is feasible. For applied in Economics learning .

2. Effectiveness

Product data analysis results with share questionnaire to participant educate to learning media products developed . Following questionnaire data analysis response participant educate:

Table 2. Media Effectiveness Conversion Results

Score interval	Category
65<X≤ 80	Very good
50 <X≤ 65	Good
35<X≤ 50	Pretty good
0<X≤ 35	Not good

Source : Processed data

Questionnaire questionnaire shared to participant educate as many as 10 people at State High School 11 Malinau , data obtained through questionnaire Likert scale consists of from 4 answers Then score converted become mark with scale 4. Analysis results obtained ideal mean value (Mi) is in the score interval 50 <X ≤ 65, namely 50 and falls into the "good" criteria,

which means that digital learning media based on I Spring Suite 11 is effective. For applied in Economics learning .

5. CONCLUSION

Based on the research results, it can be concluded:

1. The average results of the feasibility test assessment of digital learning media based on *I Spring Suite 11* from material experts were 78% with the category "Feasible", media experts were 80% with the category "Feasible", and learning practitioners were 85% with the category "Very Feasible" and the results of the analysis were obtained at a score interval of $38 < X \leq 49$, namely 38 and entered the "feasible" criteria for material experts and media experts, while for learning practitioners it was at a score interval of $50 < X, \leq 65$ namely 50 and entered the "feasible" criteria , so it means that digital learning media based on *I Spring Suite 11* is feasible to be applied to Economics subjects to improve the interest and learning outcomes of students at SMA Negeri 11 Malinau.
2. Digital Learning Media based on *I Spring Suite 11* in the implementation has an impact on increasing students ' interest in learning by 50.86% with an average *pretest of* 58 and an average *posttest of* 91 and has met the effectiveness of the product . Based on the results of the *pretest-posttest* analysis for interest in learning through the *N-gain test* , it was obtained 0.5 with the criteria of "moderate" and included in the "Good" category and the ideal average value analysis (M_i) is in the score interval $50 < X, \leq 65$namely 50 and falls into the "Good" criteria, which means that digital learning media based on *I Spring Suite 11* is effective for application in Economics subjects.
3. Digital learning media based on *I Spring Suite 11* in the implementation has an impact on increasing student learning outcomes by 46.8%, before being given treatment using digital learning media based on *I Spring Suite* 11 with an average *pretest score of* 54 and an average *posttest score of 85 after using* digital learning media based on *I Spring Suite 11* and Based on the results of the *pretest-posttest analysis* with the *N-gain test* , 0.47 was obtained with the criteria of "moderate", which means that the learning media is effective in improving student learning outcomes in the subject of Economics.

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