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Validity and Practicality of Android iSpring Suite Media with Problem-Based Learning in Pancasila Education

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ABSTRACT

This research originated from observations conducted in elementary schools, which revealed that no learning media had been developed utilizing the Android-based iSpring Suite combined with the Problem Based Learning model for Pancasila Education in Grade IV. The study employs a Research and Development (R&D) approach following the ADDIE model, which includes five stages: analysis, design, development, implementation, and evaluation. Data were gathered using validation sheets and response questionnaires. The validation instruments covered aspects of material, language, and media, while the response questionnaires involved feedback from both teachers and students. The study subjects included Grade IV students from SDN 16 Tanah Garam, SDN 20 Sinapa Piliang, and SDN 19 Tanah Garam. The findings indicated that the developed learning media was validated and considered highly valid, achieving an average validation score of 93.79%. Additionally, teacher and student responses showed that the media was practical for classroom use. Overall, learning through the Android-based iSpring Suite integrated with the Problem Based Learning model was confirmed to be both valid and practical for implementation in the learning process.

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INTRODUCTION

Education is the foundation for character building and improving the quality of human resources. In this digital era, technology has a central role in supporting the learning process. The development of education accompanied by increasingly rapid technological advances has led to increasing expertise in knowledge to utilize existing technology (Okdiansyah et al., 2021). The use of technology can present a new atmosphere in conveying information, especially information related to learning (Qazi et al., 2021). The use of technology in learning can create innovative and enjoyable classes for students (Meilani & Erita, 2023). The importance of learning that attracts students' attention cannot be separated from the role of teacher creativity. Teacher creativity is not only the key to creating a dynamic and interactive classroom atmosphere, but can also build

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teaching methods that are in accordance with the needs and interests of students which are the goals of education (Mastul, 2024).

Teachers play an essential role in influencing the learning process of students. They are responsible for creating innovative learning designs to help students achieve their competencies successfully (Kusmawan et al., 2025). Therefore, teachers are encouraged to apply various learning models to enhance the effectiveness of the learning experience. This is in line with the opinion of Yasin et al. (2024) that in teaching activities, teachers must be able to make students achieve the expected competencies by using a variety of approaches or models. One model that teachers can use in the learning process is the Problem Based Learning (PBL) model. Rahmah and Zainil (2021) argue that the Problem Based Learning (PBL) model is one of the learning models that is considered appropriate for improving student learning outcomes, because students are expected to be involved in the learning process and not only centered on the teacher. In addition, according to Reinita (2020) the Problem Based Learning (PBL) Model is a learning model with a student learning approach to authentic problems so that students can construct their own knowledge, develop higher skills and inquiry, make students independent and increase self-confidence. The Problem Based Learning model can enhance students' creative thinking skills, actively engage them in problem-solving activities, and encourage greater participation in the learning process. This model holds significant importance in the context of Pancasila Education (Widiastuti et al., 2023).

According to philosophy, Pancasila is the deepest thought or result of thinking of the Indonesian people which is believed, believed and considered as something that is the best, wisest, fairest, most correct and most appropriate for the Indonesian people (Akhyar & Dewi, 2022). Therefore, one way to instill the importance of Pancasila is to teach Pancasila Education to elementary school children according to their respective levels (Akhyar & Dewi, 2022). Schools strive to strengthen the values of Pancasila by changing their students from being better than before based on Pancasila (Triyanto & Fadhilah, 2020). Pancasila Education is very important to be taught to students in order to help students understand the basic values of the country and the philosophy of life, as well as help them understand and understand the importance of critical thinking skills and character in everyday life (Natalia et al., 2021). Therefore, learning Pancasila Education is very important to be taught in Elementary Schools.

To realize a good learning process, tools and media are needed to support the point, for example, the education process cannot run effectively if the classroom used as a place of learning is not maintained or even unsuitable for use (Salsabillah et al., 2023). Management of learning aids is very important and needed in formal educational institutions (Nurrita, 2018). Learning media has an important role as a tool in teaching and learning activities. A teacher holds the responsibility to achieve learning goals by utilizing learning media effectively (Taha & Abdulrahman, 2023).

Learning media is constantly evolving, especially with advances in technology. One of the most significant forms of innovation in the world of education is the emergence of technology-based learning media (Sa'diyah et al., 2023). The form of learning media can be in the form of various images or videos to make it easier for students to understand the material taught from teachers to students (Reinita & Fitria, 2022). This media includes various tools and platforms that utilize digital technology such as learning applications. The use of technology-based learning media makes the teaching and learning process more dynamic and interactive (Sitorus & Sipahutar, 2025). Various applications or software are used to create interesting and easy-to-use learning media. Starting from the Ispring Suite application, Kinemaster, Macromedia, Adobe Flash, Powtoon, PowerPoint, and other supporting applications or software.

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Ispring Suite is a software application designed for developing learning media by incorporating various formats such as audio, visual, and audiovisual content. This tool integrates with PowerPoint and can be combined with additional supporting software, making the produced media more engaging and interactive (Satiti et al., 2023). Thus, the learning media produced by the iSpring suite application can make it easier for teachers to deliver learning materials so that students will be more focused, conducive and easy to understand the learning materials (Bandoso, 2022). The use of Ispring suite software makes learning media accessible via Android devices. In addition to being used as a communication tool, Android devices also have the potential to be developed as learning media that are useful for students (Kartini & Putra, 2020). Android is a smartphone that is a trend of the times so that the development of learning media using Android is very promising (Vilmala & Mundilarto, 2019). By utilizing Android-based technology, learning becomes more varied and engaging, moving beyond text-only materials to include audio, visual, and even animated elements. This approach helps students better grasp learning content and supports the achievement of optimal learning outcomes.

Based on the preliminary study conducted by the author through observation and interview results with grade IV teachers in several elementary schools in Lubuk Sikarah District, Solok City, several problems were found in the learning process, namely teachers have used media devices such as laptops and projectors provided by the school in teaching. However, teachers tend to use pictures that are already in student books that are printed and pasted and displayed in the classroom more often, so that some students do not focus during the learning process. The author sees that the level of student motivation towards learning is still low, with only a small number of them actively participating in the learning process. Although school facilities have been equipped with adequate facilities and infrastructure, such as computers, chromebooks, infocus, and projector screens, teachers still have not fully utilized them as media in the teaching and learning process. This challenge arises due to the limited skills of teachers in designing and developing interactive media for use in the learning process. Moreover, learning activities are still predominantly teacher-centered, causing some students to become passive and less actively engaged. Based on the information gathered, an alternative solution is necessary to address these issues, which encouraged the researchers to carry out this study. The objectives of this study are to: (1) develop interactive learning media using the iSpring Suite application integrated with Android devices for Pancasila Education in fourth-grade elementary school; (2) analyze the validity, practicality, and effectiveness of the developed learning media; and (3) enhance students' motivation and active participation through the use of innovative technology-based media.

METHOD

The research method applied in this study is Research and Development (R&D). According to Sugiyono (2019), R&D is a research approach aimed at creating a product that will be tested for its validity and practicality. Similarly, Zakariah et al. (2020) describe development research as a method involving steps to develop new products, whether software or hardware, or to improve existing ones. For this study, the ADDIE development model was selected by the researcher. The ADDIE model according to Sugiyono, (2019) is as follows:

1. Analyze Stage; This stage is carried out to support the design process and analyze several needs and constraints that exist in the field.
2. Design Stage; In the design stage, the learning media will be created using the Android-based iSpring Suite specifically for Pancasila Education in fourth-grade elementary students.

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3. Development Stage; This development stage aims to create learning media using Android-based Ispring Suite in learning Pancasila IV Elementary School Education, in accordance with the input and suggestions provided by experts/validators. The development stage involves several steps: a) Validation, where the developed media is evaluated by experts including material specialists, language experts, and media professionals through questionnaires; b) Revision, where the researcher makes improvements to the media based on feedback, suggestions, and criticisms provided by the validators in the validation sheets.
4. Implementation Stage; At this stage, the author can use learning media that has been validated by experts in the learning process. This stage begins with preparing learning equipment and a conditioned learning environment. After all is available, the researcher can implement the product developed in the learning process. After implementing the product, a practicality test can be carried out by distributing teacher response questionnaires and student response questionnaires.
5. Evaluation Stage; At this phase, the developed learning media undergoes an evaluation process.

This study was carried out in elementary schools within Cluster IV, Lubuk Sikarah District, specifically at SDN 16 Tanah Garam, SDN 19 Tanah Garam, and SDN 20 Sinapa Piliang. The participants involved in this media development research were fourth-grade students, totaling 48 individuals. This study employed both qualitative and quantitative data. Qualitative data were gathered from questionnaires administered to teachers and students, whereas quantitative data came from averaging the scores of validity and practicality assessments. These findings were subsequently evaluated against ideal score benchmarks to assess the feasibility of the developed product (Bella Amanda et al., 2023).

The data collection methods in this study involved using instruments to measure validity and practicality for both teachers and students. Validity instruments assessed the learning media's validity across media, material, and language components. Meanwhile, practicality instruments were used to evaluate how practical the learning media is for use (Bella Amanda et al., 2023).

The data in this study were obtained from the validation results of the iSpring Suite learning media conducted by experts. Additionally, data were collected from trials measuring the practicality of the learning media. After the data was collected, the next step was to analyze the data using statistical analysis techniques, because the data obtained was numerical. The data from the analysis of learning media were described in table form using a Likert scale to evaluate each aspect presented. The following are the data analysis techniques applied

1. Learning Media Validity Analysis Techniques

Data analysis was conducted to examine the validity of the product being developed. The validator instrument in the form of a questionnaire was used to collect valid data regarding the Ispring suite-based learning media being developed. Validators were asked to fill out the prepared questionnaire. The instrument provided has four answer options, with each answer having an assessment category that can be found in the following table:

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Table 1. Validity qualification of learning media development

Category	Score	Description
Not good	1	If the descriptor is not good, not clear, not precise
Pretty good	2	If the descriptor is good enough, clear enough, precise enough.
Good	3	If the descriptor is good, clear, precise.
Very good	4	If the descriptor is very good, very clear, very precise.

Source: Modified from (Fuada, 2015)

The results of the media validation sheet will be analyzed using the formula from Arikunto in (Pratama, 2019)

$$P = \frac{\sum x}{N}\ x\ 100 \qquad NA = \frac{\sum x}{N}\ x\ 100$$

Information:
P : Presentation expert score
NA : Final score
N : Maximum score
Σ : Total score of answers from experts
n : Number of questions

The percentage results from media validation can be classified based on score interpretation criteria using the Likert scale, allowing conclusions to be made regarding the feasibility of the learning media through the table provided below:

Table 2.Validity criteria for learning media

Presentation	Criteria	Information
75.01% - 100.00%	Valid	Eligible/No Revision Required
50.01% - 75.00%	Quite Valid	Fairly Decent/Minor Revision
25.01% - 50.00%	Less Valid	Less than adequate/ Major revision
0.00% - 25.00%	Invalid	Not Eligible/Total Revision

Modification from Arikunto (in Pratama, 2019)

2. Media Practicality Analysis Techniques

Practicality analysis techniques are employed to process observation data obtained from teacher and student response questionnaires. The data from these questionnaires, which reflect responses to the learning process, are then analyzed based on the criteria outlined in the rubric presented in the following table:

Table 3. Teacher questionnaire and student questionnaire assessment scales

Category	Information
4	Agree
3	Quite Agree
2	Disagree Less
1	Don't agree

Modification of (Irawan & Hakim, 2021)

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The final value of the data calculation on the teacher and student response questionnaire can be analyzed using Arikunto's formula (in Pratama, 2019) as follows:

$$P = \frac{\Sigma x}{N} \times 100 \qquad NA = \frac{\Sigma x}{N} \times 100$$

Information:
P : Score Percentage
NA : Final score
N : Maximum score
Σ : Total score of answers
n : Number of questions

The practicality category of learning media based on the final value calculation can be seen in the following table:

Table 4.Practicality category of learning media

Presentation	Criteria	Information
75.01% - 100.00%	Practical	Eligible/No Revision Required
50.01% - 75.00%	Quite Practical	Fairly Decent/Minor Revision
25.01% - 50.00%	Less practical	Less than adequate/ Major revision
0.00% - 25.00%	Not Practical	Not Eligible/Total Revision

Modification from Arikunto(in Pratama, 2019)

RESULTS

The purpose of developing learning media is to assist students in comprehending learning materials while also encouraging their enthusiasm for learning. Additionally, the presence of learning media can serve as motivation for teachers to design more innovative and creative instructional activities. This study employed the ADDIE development model to design and develop Android-based learning media using the iSpring Suite application, integrated with the Problem Based Learning (PBL) approach for Pancasila Education in elementary schools. The development process consisted of five phases: analysis, design, development, implementation, and evaluation.

The first stage namely the problem analysis and needs analysis stages. To conduct the needs analysis, the researcher conducted observations and interviews in several schools in one cluster, namely SD Negeri 16 Tanah Garam, SD Negeri 19 Tanah Garam and SD Negeri 20 Sinapa Piliang. Based on the results of observations and interviews conducted by the researcher with the homeroom teacher of grade IV, several problems were identified in the learning process. The teacher stated, *"Although the school already provides laptops and projectors, I usually only use pictures from the student textbooks because I am not familiar with creating interactive media."* Another teacher mentioned, *"Students often become less focused during lessons because the learning methods are still mostly teacher-centered, and only a few students actively participate."* These findings indicate that teachers rarely utilized IT-based interactive media, tended to rely on static images from textbooks, and applied predominantly teacher-centered approaches. Therefore, the researcher concluded that developing interactive Android-based learning media using iSpring Suite combined with the Problem Based Learning (PBL) model is essential to improve students'

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comprehension of the material while simultaneously fostering critical thinking and problem-solving abilities.

Second Stage namely the planning stage (Design), at this stage the researcher prepares a design framework for Android-based learning media using iSpring Suite that will be developed. This includes: 1) Title Page, 2) Developer Profile, 3) Menu, 4) Media Usage Instructions, 5) CP and TP, 6) Pancasila Profile, 7) Material, 8) Quiz. Once the media framework has been arranged, the next step is to develop a validity instrument, which will serve as a tool to assess the level of media validity prior to its implementation in the learning process.

Image 1. Initial Media View

Image 2. Profile View

Image 3. Menu Display


Image 4. User Instructions Display

The third stage namely the development stage (Development), At the development stage, learning media using the Android-based Ispring Suite that has been designed will go through a validation process by a number of experts or validators who have expertise in their respective fields, consisting of material expert validators, language experts, and media experts. This process is carried out by providing validation instruments to assess the media that has been designed. After obtaining the validation results, the learning media is revised based on the feedback and suggestions given by the three validators. These revisions are carried out to enhance the learning media as planned, with the goal of producing a valid product. The expert validation results are presented in the following table :

Table 5. Expert Validation Results

No	Validators	Average Percentage Score	Category
1	Media Expert	94.64%	Valid
2	Linguist	93.75%	Valid
3	Media Expert	93.00%	Valid
Average		93.79%	Valid

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The table above illustrates that the Android-based iSpring Suite learning media integrated with the Problem Based Learning Model for Pancasila Education in Grade IV Elementary School, as assessed by material, language, and media experts after undergoing revisions, received scores ranging from 3 to 4, falling into the "good" and "very good" categories. As a result, the media met the "valid" criteria with an average percentage of 93.79%. This result is in the first level of validity category according to Arikunto (2010) with a range of 75.01% - 100.00% "Valid" category. The results indicate that the Android-based iSpring Suite learning media, developed with the Problem Based Learning Model, is appropriate for use as a teaching medium in Pancasila Education.

The fourth stage namely the implementation stage (Implementation), The implementation stage was carried out in grade IV of elementary school in Cluster IV of Lubuk Sikarah District, namely at SDN 16 Tanah Garam, SDN 19 Tanah Garam, and SDN 20 Sinapa Piliang. Media is used in Pancasila Education learning for Pancasila values material through the Problem Based Learning approach.

The practicality of the media was assessed using a practicality questionnaire distributed to teachers and students after the media was implemented in the learning process. The results of these teacher and student practicality questionnaires are presented in the following table.

Table 6. Results of Teacher and Student Practicality Questionnaire

No	School	Teacher Practicality Questionnaire	Student Practicality Questionnaire
1	SDN 16 Tanah Garam	87.50% (Practical)	95.20% (Practical)
2	SDN 20 Sinapa Piliang	95.83% (Practical)	91.89% (Practical)
3	SDN 19 Tanah Garam	95.83% (Practical)	94.84% (Practical)

The table above shows that learning using the Android-based Ispring suite with the Problem The Problem Based Learning model is practical for classroom use, with students showing high enthusiasm and active participation. Additionally, students feel they gain new experiences when directly using the Android-based iSpring Suite learning media developed with this model.

Fifth Stage namely the evaluation stage, at this evaluation stage it is carried out in the previous four stages. The evaluation process involves input from media experts, material experts, teachers, and students. Through this process, any shortcomings in the developed learning media can be identified. If weaknesses are found, the researcher will promptly make revisions based on the suggestions and feedback provided by the experts. The goal is that the media that has been developed can be considered suitable for use in learning.

DISCUSSION

Learning media using Ispring suite based on android for Pancasila education for grade IV in elementary schools meets the criteria as learning media that has good validity and practicality. The evaluation of the learning media development for Pancasila Education showed very positive results, as evidenced by the validity tests conducted by experts, including material specialists, language experts, and media experts, following revisions. The results of the material expert validity test obtained a percentage of 94.64% with the category "valid", the language expert validity test obtained a percentage of 93.75% with the category "valid", the media expert validity test obtained a percentage of 93% with the category "valid" and the results of the validity test from material experts, language experts, and media experts received a final assessment of the learning media validity test with an overall average of 93.79% in the category "valid" in the assessment category

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according to Arikunto in Pratama, (2019) which is included in the first category with a percentage range of 75.01% - 100% with the description "valid". Media with this category can be used without revision. This is supported by the results of research conducted by Pangesti (2022) entitled "Development of Interactive Multimedia Using Ispring Materials Grateful for Diversity by Strengthening the Attitude of Independence of Grade IV Students". This study was carried out with fourth-grade elementary school students using Research and Development (R&D) methodology based on the ADDIE model. The findings showed an average validity level of 90%.

After being validated by experts, the Android-based iSpring Suite learning media using the Problem Based Learning model was then tested in the field and distributed to gather practicality assessment results. The results of the practicality test of the Ispring suite learning media were obtained from the teacher and student response questionnaire at SDN 16 Tanah Garam with the results of the practicality test from the teacher's response obtaining a percentage of 87.5%, with the category "practical" and the student response questionnaire obtaining a percentage of 95.20%, with the category "practical" assessment category according to Arikunto in Pratama, (2019) which is included in the first category with a percentage of 75.01% - 100% with the description "practical". The assessments given by teachers and students are in categories 3 and 4, namely "good" and "very good". These results are in accordance with the opinion of Irawan & Hakim (2021), namely that if the majority of students and teachers choose options 3 and 4, it can be concluded that the responses of students and teachers to the learning media that have been developed are positive.

At the schools where the practicality test for the Android-based iSpring Suite learning media was conducted, positive responses were observed. At SDN 20 Sinapa Piliang, teacher responses showed a practicality percentage of 95.83%, categorized as "practical," while student responses reached 91.89%, also within the "practical" category. Similarly, at SDN 19 Tanah Garam, teachers rated the media's practicality at 95.83%, and students gave a score of 94.84%, both falling into the "practical" category. The assessments given by teachers and students are in categories 3 and 4, namely "good" and "very good". These results are in accordance with the opinion of Irawan & Hakim (2021), namely if the majority of students and teachers choose options 3 and 4, it can be concluded that the responses of students and teachers to the learning media that have been developed are positive.

Based on the results of the research that the researcher has conducted, the results show that the use of Android-based Ispring suite learning media with the Problem Based Learning model in Pancasila Education received a very good response from teachers and students. This was evident when the researcher saw students more active in learning activities, showing joy in the learning media provided. The interest and enthusiasm of students in reading and understanding the material according to the content of the learning media became clear. The ability of students to collaborate with their group mates was also seen when group assignments were completed well. The clarity of the material through the learning media is reflected in the quiz results at the end of the lesson, which demonstrated satisfactory performance. Additionally, the Android-based iSpring Suite learning media combined with the Problem Based Learning model offers students a fresh learning experience, helping them grasp the material more effectively. This is due to the well-organized structure of the main points of the material presented in the media. Thus, students can more smoothly understand the contents of the learning. Thus, they do not feel bored with the material presented, because the use of this media provides interesting variations and interactivity. Contrary to some previous studies that reported challenges in applying technology-based media due to limited teacher competence and student adaptation, the present findings demonstrate that, with proper integration of the PBL model, both teachers and students responded positively and showed

significant improvements in engagement and learning outcomes. This is in accordance with the opinion of Al-Muqtafa & Muhammada (2019) that the Android-based Ispring suite learning media with the Problem Based Learning model has the ability to convey messages evenly to students, is effective in explaining the learning process, provides a more realistic representation, and can be repeated according to learning needs, so that students are enthusiastic and excited to participate in learning.

The results of the validity and practicality assessments confirm that the Android-based iSpring Suite learning media, developed with the Problem Based Learning model, is both valid and practical for application in the learning process. This is supported by the results of research that has been conducted by Pangesti (2022) in developing an Ispring suite learning media based on Android that meets the standards for use in the learning process, which ensures that students are actively involved and interested in learning, and can easily understand the material presented, is the main goal of this development. This research suggests the need for further implementation of Android-based interactive media in other subject areas beyond Pancasila Education, as well as the integration of PBL in digital learning environments, to maximize student participation and foster critical thinking on a broader scale.

CONCLUSION

The creation of learning media utilizing the Android-based iSpring Suite combined with the Problem Based Learning model for Grade IV Pancasila Education has resulted in media that is demonstrated to be both valid and practical. This research offers valuable insights into the advancement of technology-based learning media in elementary schools, particularly for the Pancasila Education subject. For further development, it is recommended that this media be supplemented with other appropriate materials, interactive features such as learning videos, digital simulations, and online discussion forums so that the learning media becomes more varied, enjoyable, and can improve the quality of the learning process and outcomes sustainably.

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