

The effectiveness of making comics as innovative learning media: A study on prospective elementary school teachers

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ABSTRACT

Comics are one of the teaching materials developed as a tool in the learning process according to a particular topic or material. Therefore, as prospective teachers, students must be able to design and develop teaching materials in the form of comics and apply them in learning in elementary school according to the expected learning objectives. This study aims to see the effectiveness of students in making learning comics as innovative learning media. The type of research used is descriptive qualitative, with data collection through observation. The research sample was 4th-semester Elementary School Teacher Education (PGSD) students. The results of the content validity test, language, presentation, and graphics were in the valid category. Presentation and discussion skills, as well as student activities based on the results of observations, were stated to be good.

KEYWORDS

Comic; effectiveness;
innovative learning media

1. Introduction

Education has a vital role in information and communication technology in the current era of globalization (Agustian & Salsabila, 2021). A significant demand in education, along with the development of information and communication technology today, is to provide appropriate and valuable resources to increase students' motivation and interest in learning (Tafonao, 2018).

Advances and developments in technology can affect students' interest in learning. As can be seen, students are more interested in watching and playing games than repeating the learning provided by the teacher at school, and this happens because of the lack of effectiveness of the learning provided by the teacher.

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Therefore, teachers must be able to design learning systems that are interesting, memorable, and fun for students (Irsan et al., 2021).

Entering the current era of globalization, learning activities require a more innovative way for students other than applying the lecture method. This is done so that students are more active and memorable in learning. An active learning process can make students more memorable in their learning, making learning positive. In addition, active and memorable learning must be developed in the development of science and technology as it is today by making various changes in the existing learning system. For example, a teacher in learning activities is expected to reduce the application of the lecture method and replace it with the use of many learning media (Handayani & Jumadi, 2021).

Based on observations that have been carried out on PGSD study program students, it is found that there are still many students who are unable to master the lessons given by lecturers. In addition, many students working on assignments cannot create innovative learning media because, in learning activities, they tend to be too lazy to be creative and less accustomed to making learning media. Many still cannot develop media development skills, especially comics, in learning. Meanwhile, with comic media, learning can be more fun because of the pictures displayed so that a teacher can increase students' enthusiasm for learning.

The purpose of this research is to see the effectiveness of students in making learning comics as innovative learning media in the even semester of the 2022/2023 academic year.

2. Literature review

Media plays a vital role in successful learning at school, where the term media is generally used in the learning process. In addition, learning media is also everything that is used in sending messages from one individual to another, which aims to arouse students' feelings, attention, thoughts, and interests so that the learning process occurs (Farahiba, 2022). The definition of media is comprehensive, including sources, environments, people, and methods that can be used and useful for learning (Sunardi et al., 2021).

The use of learning media is expected to make students actively involved in learning activities to observe, stimulate, tell, and solve problems. Learning media can also increase learning motivation so students can understand learning materials well (Farahiba, 2022). Therefore, learning media is one of the tools that teachers can design and adapt to the desired learning process to improve the quality of learning.

One innovative and exciting learning media that can be used in learning is comics (Payanti, 2022). Comics can be interpreted as a form of cartoon that can express behavior and act out stories in sequences related to images created and designed to share entertainment images with readers (Sudjana & Rivai, 2011). According to McCloud (2008), comic channel messages containing images and symbols are arranged in a particular order. Information related to the sense of sight is displayed verbally and visually.

Humans can receive information with different percentages, such as eyes (83%), ears (11%), nose (3.5%), touch (1.5%), and taste 1%. Students prefer using comic media in learning because the images displayed in comics can bring to life a series of texts and writings and are studied in learning, making it easier for students to understand and remember what they learn. In addition, comic media is also able to increase students' imagination through the images displayed (Denny et al., 2013).

Increasing students' absorption ability in learning can be done by teachers by making comics an innovative and creative learning medium (Nugraha, 2020). Understanding how to make comics for teachers or prospective teachers can be done by providing training to improve the writing ability of a teacher or prospective teacher in designing, composing, and displaying entertaining images for students in learning. Writing ability is an ability that requires high thinking and imagination to make good writing results (Adisaputera, 2019). The power of thought and imagination in a teacher or prospective teacher needs to be honed because it is still relatively low and needs motivation to develop it.

3. Method

This research uses descriptive research with a qualitative approach. The descriptive method is a research method that aims to explain the problem coherently and reliably regarding the truth of the data obtained. At the same time, the qualitative approach describes and reveals events and facts in the field.

The population in this study were all 4th-semester students of the PGSD study program, totaling 120 people spread over four classes. Sample withdrawal in this study was carried out by random sampling. The number of samples used in this study was 58 people.

Before being used, the instruments in this study were first validity and reliability tests, namely instruments in the form of validation sheets, observation sheets for presentation and discussion activities, and student activity observation sheets. The data obtained in this study were analyzed using a Likert scale to determine the

effectiveness of making comics for student learning for both classes. Comics in this study were assessed by looking at the feasibility of content, language, presentation, and graphics, where these four aspects are seen as feasible by looking at the average percentage of the value obtained.

4. Results and discussion

4.1. Assessment of comic development

The results of the development of comics that students in both classes have developed are assessed in terms of the feasibility of content, language, presentation, and graphics. The average percentage sees these four feasibility aspects of the value obtained. The following results of the assessment of comics are presented in Table 1.

Table 1. Comic feasibility assessment results

Assessment aspect	Class C (%)	Class D (%)
Content feasibility	83,33	80,21
Language	87,50	90,63
Presentation	69,79	72,92
Graphics	76,04	91,67
Average	79,17	83,86

Source: Research results by authors

Based on Table 1, the average acquisition of each class is 79.17% and 83.86%, respectively. The average percentage is obtained from the average results of the four aspects of the assessment. Of the four aspects assessed, there are differences between the two classes. The content feasibility aspect of class C obtained 83.33%, while class D 80.21%. Feasibility of content is seen from several indicators, namely (1) the suitability of comic content with the essential competencies and learning indicators and (2) conformity with the substance of elementary social studies learning materials. For criteria one and two in class C, there are three appropriate groups, while in class D, only two groups that meet the criteria are excellent, and in each class, there are six study groups.

Furthermore, indicator (3) suitability to the needs of students, in class C, two groups that meet the criteria are excellent. In class D, however, no groups achieved excellent criteria. Indicator (4) helps students understand the concept; the material presented by the group in class C with excellent criteria is four groups, and in class D, there are only three groups. These four indicators are assessed to see if the

The following assessment aspect is presentation. The indicators assessed in this aspect are the clear presentation of learning objectives, systematic order of presentation, interactivity (stimulus and response), and the fact that the presentation of comics motivates students to learn. The percentage of assessment of the presentation aspect of each class was 69.79 and 72.92. The comic development that has been made contains all indicators in the presentation assessment aspect. However, the value obtained has not reached excellent criteria. Very little feasibility value in class C, where this class, in describing the learning objectives, is not following the basic competencies and core competencies of the material provided. So, the learning objectives and material developed in the form of comics are less appropriate, and this was also found in several groups of class D. Good teaching materials can support student learning and have clear objectives with the material to be taught. Oktafiyani & Karlimah (2021) state that the presentation of suitable teaching materials can facilitate and support students in learning the subject matter, so the teaching materials must be complete and contain learning information.

The last aspect of assessing the feasibility of teaching materials in comics is graphics. The assessment indicators in this aspect are good fonts, comic pages that are not too dense, letter variations that are not excessive, illustrations that are under the discourse, and comic displays that are not boring. Each class in this assessment obtained 76.04% and 91.67%. The difference in value is because in class C, many groups in developing comic pages are too dense with writing, image illustrations are less by the discourse given, and the appearance of the comics developed is bland. However, other aspects of the assessment have been categorized as good.

So, based on this explanation, it can be concluded that the teaching materials developed by students have a valid category with an average percentage of 79.17 and 83.86 in both classes. Wahyuni et al. (2023) obtained the results of validation of learning media with an average percentage score of 85% material validity, 96% media validity, and 84% language validity and included the valid category.

4.2. Presentation and discussion

Presentations and discussions are carried out to determine the ability of students to discuss and explain the contents of the comic development results that have been made. There are five abilities assessed in comic presentations, namely (1) completing group tasks well, (2) group cooperation (communication), (3) task results (relevant

to the material), (4) job distribution, and (5) systematization of implementation. Data from the assessment of each group is presented in Table 2.

From the five aspects of assessment in Table 2, both classes have almost the same ability. Discussion skills in completing group assignments look excellent, with percentages of 100 and 95.83, respectively. The acquisition of these values is evidenced by completing the task on time, collecting the tasks that have been given, and completing the task with compact cooperation. Compact cooperation is also evidenced by the assessment results of each class of 87.50% and 83.33%. This good score is because each group has a goal to achieve, namely completing the development of learning comics on time. Cooperation is a social activity in group learning, and each individual cannot avoid cooperation activities because of interdependence, the interaction between others, responsibility, and good communication to successfully achieve goals (Wulandari et al., 2015).

Table 2. Presentation and discussion skills

Assessment aspect	Class C (%)	Class D (%)
Completing group tasks well	100,00	95,83
Group cooperation (communication)	87,50	83,33
Task results (relevant to the material)	75,00	66,67
Job division	50,00	50,00
Systematization of implementation	62,50	58,33
Average	75,00	70,83

Source: Research results by authors

For assessing the results of tasks relevant to the materials of each class, 75% were good, and 66.67% were quite good. Each group in each class produces comic development tasks relevant to the material provided. However, one group developed comics that were not in accordance with the learning material that had been determined beforehand, so they received a bad score on this assessment aspect.

The following assessment aspect is the distribution of jobs, and all groups are still not good at assigning their group members to explain the results of discussions and developments that have been made when only three or two people explain and play a role in delivering their presentation, the rest sit and be silent. Then, in the last assessment aspect, namely the systematization of implementation, not all groups were systematically discussed. When presenting the work results in front of the class, it can be seen that there are group members who are still confused about explaining.

4.3. Student activities

During the learning process, at the presentation and discussion stages, observations of student activity were noted by filling out the student activity observation sheet. The assessment aspects seen from this observation are daring to express opinions, daring to answer questions, having initiative, having high accuracy, having a leadership spirit, and can play a role in presenting the development comics that have been made. The following results of the student activity assessment are presented in Table 3.

Presentations and discussions are carried out to determine the ability of students to discuss and explain the contents of the comic development results that have been made. There are five abilities assessed in comic presentations, namely (1) completing group tasks well, (2) group cooperation (communication), (3) task results (relevant to the material), (4) job distribution, and (5) systematization of implementation. Data from the assessment of each group is presented in Table 3.

Table 3. Student activities

Observed aspect	Class C (%)	Class D (%)
Dare to express your opinion	76,61	77,68
Dare to answer questions	80,06	81,25
Have initiative	70,16	72,32
Have high accuracy	69,35	72,32
Have a leadership spirit	74,17	77,68
Can play a role in presenting the development comics that have been made	79,84	82,14
Average	75,03	77,23

Source: Research results by authors

Based on Table 3, student activities during the learning process, the results are not much different in the two classes. In expressing opinions, students in class D were slightly bolder than students in class C, with percentages of 76.61 and 77.68, respectively. It was shown when presentations and discussions took place; many students in class D dared to express their opinions to provide suggestions and direction for group discussions in front of the class. The opinions given were in the form of questions related to the presentation, appearance of the comic, appropriate image layout, clear writing, and suitability of the material to the needs of elementary school students. This courage is demonstrated because the learning that is applied includes teaching materials developed by themselves so that each student has their judgment in expressing their opinions. As stated by LPM-UMA (2021), the ability to speak to express opinions of agreement or disagreement is an affirmation for one

to have the courage to take a place in a different relational environment, so that one can express what one's heart desires.

The existence of these opinions also shows the courage of students in accepting and answering questions. It is clear that in class D, they are also braver than in class C; the respective scores are 80.06% and 81.25%. Only a few students in each group had this courage, which was seen when they could explain questions and suggestions put forward by other groups. Having the courage to express opinions and answer questions brings up another ability for students to have initiative in answering and expressing opinions. Each class has an initiative value of 70.16% and 72.32%. This shows that the student initiative is higher in class D than in class C. This ability shows a person's ability to take a role in what is good, so this initiative benefits students, namely being seen as more active in learning.

The following assessment activity observed was the students' accuracy in developing the material in the comic, which was delivered during a presentation to the group that explained the comic's content in front of the class. Meanwhile, for the other group, the accuracy observed was being able to correct the presentation given if an error occurred that was not visible. Each class obtained scores of 69.35% and 72.68%. This relatively big difference is because, in both classes, several groups were less careful in developing the material in the comics. The material developed was not by the core competencies (KI), basic competencies (KD), and learning objectives that had been created previously. This lack of accuracy means that only a few students can provide corrections to these mistakes. However, more students only watch and listen to the presentation's contents.

The next aspect of the assessment observed was a leadership spirit in each individual. The percentage of leadership skills in both classes is 74.17% and 77.68%. The spirit of leadership was directly visible when students could provide direction for their group members to explain the results of comic development in front of the class. Besides that, leadership is also seen in students who dare to express opinions, ask questions, and have good initiative for progress for themselves and their group members. Leadership is a person who can lead to achieve specified targets (Widyantoro et al., 2023). A person's leadership will influence others to do their work optimally. In contrast, leadership requires a high sense of self-confidence, which is formed due to interactions between individuals and their environment (Yunisha et al., 2022). These descriptions are often shown by students in class D, who are generally active in class discussions.

The final observation assessment of student activities is that they can play a role in conveying the content of the comic. In class C, the score was 79.84%, and in class D, 82.14%. The results obtained are not much different, indicating that students in both classes are actively role-playing to demonstrate the content of the comics that have been developed. This role-playing plays a character's character in the comic. It is adapted to the setting of the place in each group's comic. The ability to role play is also a professional method that not only provides the ability to develop ideas, but students can also develop their ability to speak, such as appropriate gestures, appropriate choice of words, expression according to the ideas presented, etc. (Mukhlis et al., 2017).

Based on the results of observing activities in the two learning classes, the average percentage scores were 75.03 and 77.23, respectively. The scores obtained show almost the same activities in both classes. So, it can be categorized as suitable student activities in both classes.

5. Conclusion

The study findings indicate that students may design comics to assess the validity of material content, language, presentation, and visuals, which can be considered valid and evaluated on primary school pupils. The presenting and discussion abilities and student activities derived from observations were deemed satisfactory. Every student had unique skills and bravery.

Conflict of interest

The authors declare that they have no conflict of interest.

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