Social Science Print Comic Media with Contextual Approach and Its Effect on Literacy Ability of Left-handed Students

Ni Wayan Nik Sri Artini[1*], I Wayan Sujana[2] ⓘD

[1,2] Pendidikan Guru Sekolah Dasar, Univesitas Pendidikan Ganesha, Singaraja, Indonesia
*Corresponding author: nik@undiksha.ac.id

Abstrak

Proses pembelajaran bagi siswa yang kidal masih menggunakan media pembelajaran cetak yang didesain untuk orang yang tidak kidal. Hal tersebut menyebabkan siswa kurang nyaman dalam belajar. Penelitian ini bertujuan untuk mengembangkan media pembelajaran IPS dalam komik cetak yang dirancang untuk siswa kidal. Penelitian ini merupakan Penelitian dan Pengembangan dengan model Hannafin dan Peck. Subjek meliputi konten, desain, ahli media pembelajaran, dan 15 siswa kidal. Pengumpulan data dalam penelitian ini menggunakan metode tes, angket, observasi, dan wawancara tidak terstruktur. Analisis data dilakukan dengan menggunakan teknik analisis deskriptif kuantitatif, penelitian deskriptif kualitatif, dan analisis statistik inferensial (uji-t dependen). Penilaian ahli isi, desain, dan media pembelajaran diperoleh persentase 98,21%, 95,83%, dan 92,50% dengan kualifikasi sangat baik. Uji coba siswa yaitu uji coba individu, uji coba kelompok kecil, dan uji coba lapangan masing-masing diperoleh persentase 92,50%, 91,67%, dan 91,17% dengan kualifikasi sangat baik. Hasil uji efektivitas dilakukan (pre-test) dengan skor rata-rata 78,9 dan (post-test) dengan skor rata-rata 84,3. Hasil pengujian hipotesis dengan uji-t dependen menunjukkan bahwa nilai thitung (8,4371) lebih besar dari ttabel (2,475) pada N=15, dengan taraf signifikansi 5% (0,005). Artinya H0 ditolak dan H1 diterima, sehingga komik cetak berbasis pendekatan kontekstual efektif meningkatkan kemampuan literasi siswa kelas IV SD.

***Kata kunci**: Kidal, Komik, Pendekatan Kontekstual, Literasi*

Abstract

The learning process for left-handed students still uses printed learning media designed for non-handed people. It causes students to be less comfortable in learning. This study aims to develop social studies learning media in printed comics designed for left-handed students. This research is Research and Development with Hannafin and Peck model. Subjects included content, design, learning media experts, and 15 left-handed students. The data in this study were collected using the method of tests, questionnaires, observation, and unstructured interviews. Data analysis was performed using quantitative descriptive analysis techniques, qualitative descriptive research, and inferential statistical analysis (dependent t-test). The assessment of content, design, and instructional media experts obtained percentages of 98.21%, 95.83%, and 92.50% with very good qualifications. Student trials, namely individual trials, small group trials, and field trials, each obtained a percentage of 92.50%, 91.67%, and 91.17% with very good qualifications. The effectiveness test results were conducted (pre-test) with an average score of 78.9 and (post-test) with an average score of 84.3. The results of hypothesis testing with dependent t-test showed that the value of tcount (8.4371) was greater than ttable (2.475) at N=15, with a significance level of 5% (0.005). It means that H0 is rejected and H1 is accepted, so printed comics based on a contextual approach effectively improve the literacy skills of fourth-grade elementary school students.

Keywords: Left-Handed, Comic, Contextual Approach, Literacy

1. INTRODUCTION

The tendency to use the dominant hand owned by the individual is twofold: right-dominant and left-dominant. In general, most individuals use the right hand as the dominant hand. However, 10% are left-handed or left-handed (Kovel et al., 2019; Mcmanus, 2019). Left-handedness is a term given to dominant people who use their left hand as the main hand to carry out activities such as writing, eating, holding, and other activities (Mardianto et al., 2021; Putri et al., 2022). Based on observations and interviews with six left-handed students in Denpasar City Elementary School, it was found that in the learning process, left-handed students still use printed learning media designed for non-handed people. Conventional learning devices opened from right to left make left-handed students less comfortable

learning. Left-handed students' discomfort arising from the use of non-handed devices has an impact on students' lack of motivation in learning. It reduces student interest and learning outcomes because the completeness of learning facilities and a conducive learning environment affect student learning outcomes (Astuti et al., 2020; Yugiswara et al., 2019). When discomfort occurs due to the unavailability of learning facilities that match the characteristics of left-handed students, high learning readiness will not be created, and optimal student learning outcomes will not be obtained (Mardianto et al., 2021; Nuryati et al., 2019). Left-handed students are less comfortable using non-handed facilities and have a cognitive effect, which can also affect the child's psychology if forced (Hawkyard et al., 2014; Willems & Francks, 2014). It is because left-handed people are generally more comfortable using facilities with anatomy adapted to their condition as left-dominant individuals (Mardianto et al., 2021; Pramashvara, 2021).

On the other hand, left-handed students at the elementary school level who are still in the concrete operational stage need media assistance according to their characteristics to concretize learning messages (Narayani, 2019; Prananda et al., 2021). The results of observations and interviews with six left-handed students at SD Denpasar City also found that teachers in SD Kota Denpasar were not maximal in seeking contextual learning steps, especially the use of learning media that were able to present the real conditions of the material being studied and concretize messages, especially when studying social studies. Social Sciences is a subject whose material is a combination of social sciences, which is designed to prepare students to face everyday life in an ever-changing and evolving society (Nafisah & Ghofur, 2020; Umbara et al., 2020) so that in the classroom, real conditioning is needed for learning materials.

To overcome the need for comfort in opening printed learning media, as well as the ability of the media to present real or contextual conditions in the classroom, research, and development related to learning media are carried out according to the characteristics of left-handed students. Printed learning media was developed with a printed design that allows it to be opened from left to right using the dominant hand in left-handed people. It is because the typical pushing movement of left-handed students is from left to right (Abdulqodir et al., 2014; Pramashvara, 2021). In addition, learning media needs to be made as attractive as possible to avoid boredom for students, not hinder the transfer of knowledge, and facilitate students' social interaction with the field directly (Dewi et al., 2018; Savitri et al., 2021). An interesting print learning media is a message translator tool that can make children interested in reading it thoroughly and understanding the material being read. One type of learning media that can increase students' reading interest is media in the form of pictures (Putrislia & Airlanda, 2021; Sampurna, 2021). In addition to increasing interest in reading, images in learning can also present abstract concepts in visual form so that students easily understand them, one of which is packaged in the form of comics. Comics are learning media by presenting material in a combination of colorful, imaginative, and interesting verbal and visual elements, making it easier for students to understand learning material (Nasrullah et al., 2021; Sarkadi & Iqbal, 2020).

In addition to being interesting, learning media must also be able to present the real conditions of the concepts being studied so that the printed learning media developed for social studies material is presented using a contextual approach. A contextual approach is an approach that emphasizes increasing student participation and activeness, as well as helping to understand more complex learning materials that are difficult to study through the real presence of abstract concepts (Ardiansyah, 2021; Syupriyanti et al., 2019). The concept of constructivism in this approach relates learning to the real life of students, thus providing a more meaningful learning experience because knowledge is built directly by students themselves (Susilaningsih et al., 2019; Tegeh et al., 2021). Suppose the contextual approach

in learning is not used. In that case, it will reduce the use of students' five senses, including those that affect the reading and writing skills of left-handed students related to literacy skills. Literacy is the ability to process and understand information when reading or writing (Yunianika & Suratinah, 2019; Yunita Anindya et al., 2019). In elementary school students, the most basic literacy skills must be possessed are basic literacy. Reading and writing literacy is the ability to read and write which is strongly influenced by the availability of quality reading materials and students' high reading interest in elementary school students, the most basic literacy skills that need to be possessed are basic literacy. Reading and writing literacy is the ability to read and write which is strongly influenced by the availability of quality reading materials and students' high reading interest (Suandewi et al., 2019; Yunita Anindya et al., 2019).

Previous studies stated that comic learning media based on a contextual approach were appropriate for learning (Nendasariruna et al., 2018; Wicaksono et al., 2020). However, until now, research on composing left-handed comic book media based on a contextual approach or Contextual Teaching and Learning in social studies subjects has never been done. Using a contextual approach will help left-handed students present real situations in social studies learning because the learning material feels closer to students. This research is important so that left-handed students are not forced to use printed learning media intended for non-handed people. It can affect psychological conditions and impact learning motivation, reading interest, and literacy skills. Therefore, research and development of printed comics learning media based on a contextual approach to Social Science content theme 1 sub-theme 3 was carried out for left-handed fourth-grade elementary school students.

2. METHODS

This research is a type of development research that takes place at the Denpasar City Elementary School. The product was developed as Social Media Printed Comic Media Based on a Contextual Approach on Theme 1 Subtheme 3 for fourth-grade elementary school students, especially left-handed students. The development model used as a reference in this research is the Hannafin and Peck model. The Hannafin and Peck development model consist of three main stages: the needs analysis stage, the product design stage, and the product development and implementation stage (Sugiyono, 2019; Tegeh & Sudatha, 2019). First, at the needs analysis stage, an analysis of learning facilities is carried out, learning problems, and an analysis of the curriculum. Second, content outlines, flowcharts, and storyboards are made at the design stage, the software and hardware used are determined, and the evaluation instruments for printed comic media are developed. Then third, at the development and implementation stage, printed comic media was made based on the design, and product trials and effectiveness tests were carried out. The complete stages are shown in Figure 1.
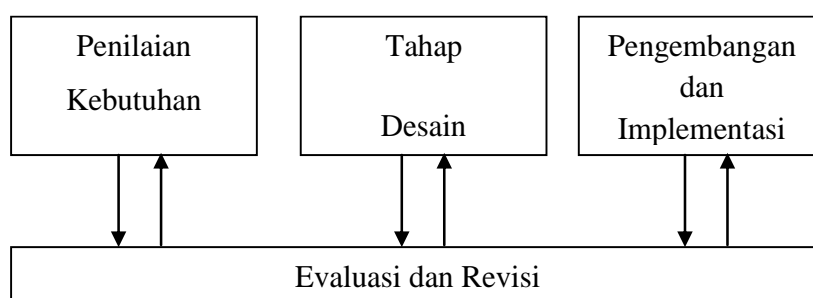
Figure 1. Hannafin and Peck stages

The subject of the product trial in the expert test is one learning content expert with a Master's Degree in Basic Education and one expert in design and learning media who has an educational background and of Master's Degree in Learning Technology. At the same time, the subjects of the student trial and effectiveness test were 15 left-handed students from 11 elementary schools in Denpasar. In the individual test, the number of left-handed students was as many as three subjects, the small group test as many as six people, and the field test as many as 15. The data in this study were collected using the test method, questionnaire/questionnaire, observation, and unstructured interviews. The test method is used to measure the ability of left-handed students before and after using this contextual printed comic media in the form of pre-test and post-test. The questionnaire method was used for the content test and student trials. The observation method was used to observe the behavior of left-handed students before and when using contextual printed comics that were composed according to the characteristics of left-handed students. The unstructured interview method was used at the beginning of the study to find out the opinion of left-handed students on using books and conventional printed learning media provided by the school. The instruments used in this study are literacy test instruments and questionnaires, expert test instruments and student trials, and literacy test instruments (Suartama, 2016; Wardani & Setyadi, 2020). The questionnaire grid and literacy test instruments used in the study are presented in Table 1 and Table 2.

Table 1. Questionnaire Instrument

Learning Content Expert	Learning Design Expert	Learning Media Expert	Individual Test, Small Group Test, and Field Test
1. Basic competence	1. Clarity of Purpose	1. Font	1. The attractive appearance of printed comic media
2. Indicator	2. Consistency between objectives, materials, and evaluation	2. Readability of text	2. Ease of understanding the material presented
3. Purpose	3. Submission of materials	3. Images support understanding of the material	3. Clarity of material description
4. Material validity	4. Learning activities	4. Image layout	4. The suitability of the material with the real life of students
5. Material accuracy	5. Giving examples	5. Image quality or resolution	5. The quality of the text used
6. The importance of the material	6. Explanation of the material	6. Background Color	6. Clarity of the text used
7. Depth of material	7. Presentation of questions	7. Image color	7. Clarity of images used
8. Material attraction	8. Clarity of question instructions	8. Instructions for using printed comic media	8. Interesting pictures with the material being taught
9. The suitability of the	9. Giving Feedback	9. Ease of use	9. Provide

Learning Content Expert	Learning Design Expert	Learning Media Expert	Individual Test, Small Group Test, and Field Test
material with the characteristics of students		of the printed comic media composed	motivation or enthusiasm when using printed comic media
10. The material is easy to understand			10. Social compatibility with the material given
11. Materials represent real life			
12. The concept of matter can be logical			
13. Appropriate and consistent use of language			
14. The language used follows the characteristics of students			

Table 2. Literacy Test Instrument

No.	Test Indicator	Items	Number of Items
1.	Understanding the contents of comics	1	1
2.	Obtaining information from the contents of the comic	2,3,4,5,6,7	6
3.	Get much new knowledge	8	1
4.	Reflecting or telling the contents of the comic	9	1
5.	Conclude writing	10	1

The research data analysis was carried out using quantitative descriptive analysis techniques, qualitative descriptive analysis, and inferential statistical analysis (dependent t-test). Quantitative descriptive analysis is a data processing technique that systematically compiles numbers or percentages regarding an object under study to obtain general conclusions. Quantitative descriptive analysis was used to process the data obtained through questionnaires (expert tests and student trials) in the form of scores. The score obtained through the questionnaire was changed in the form of a percentage to compare the number of answers given by the respondents with the maximum score from the questionnaire. To give meaning and make decisions based on the given score, a Likert scale is used with a score range of 1 to 4. The category strongly disagrees with a score of 1, disagrees with a score of 2, agrees with a score of 3, and strongly agrees with a score of 4 (A. Agung, 2018; Sukardi, 2008).

Qualitative descriptive analysis is the processing of research data by systematically compiling the data obtained in the form of sentences or words so that a general conclusion is finally obtained. This data analysis technique was carried out by grouping the data into inputs, responses, criticisms, and suggestions for improvement contained in the expert test questionnaires and student trials. The results of data analysis are then used to revise the developed product. In making decisions and giving meaning to data analysis, the determination of the PAP conversion Scale 5 is used as follows, shown in Table 3.

**Table 3.** Achievement Rate Conversion on A Scale of 5

No.	Achievement Level	Score	Qualification	Description
1.	90-100%	4	Very good	Very feasible
2.	80-89%	3	Good	Feasible
3.	65-79%	2	Enough	Less enough
4.	55-64%	1	Bad	Not feasible
5.	0-54%	0	Less	Bad

Inferential statistical analysis was used to process data on the results of the effectiveness test of printed comics media based on a contextual approach in the form of test 1 as a pre-test, namely before students learn by using the developed contextual printed comic media, and test 2 as a post-test, namely after students learn by using the media contextual print comics developed. Inferential statistical analysis included a data normality test using the Shapiro-Wilk formula and a dependent (paired) t-test to test the hypothesis. The hypothesis test results were compared with a significance level of 0.005 (5%) to determine the effectiveness of using the developed comic print media.

3. RESULTS AND DISCUSSION

Results

This research resulted in a product in the form of printed comics learning media based on a contextual approach composed according to the characteristics of left-handed students. Based on the curriculum analysis, it was found that the focus of product development was for fourth graders on Theme 1, The Beauty of Togetherness Sub-theme 3, Gratitude in Diversity. This printed comic media is made in full color with interesting and contextual images, designed using Microsoft PowerPoint 2007 application, Adobe Reader and Background Remover. The media contains Core Competencies, Basic Competencies, indicators and learning objectives to be achieved, learning materials in the form of conversations between comic characters, summaries of each sub-material, overall material conclusions, and practice questions related to the material. The following are some views of the developed products shown in Figure 2.
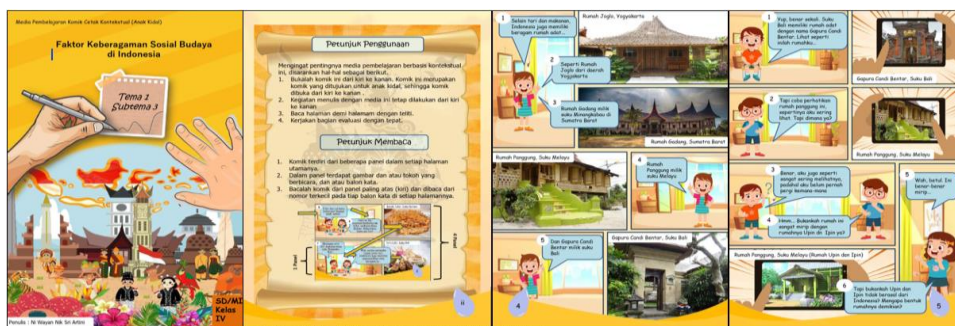
Figure 2. Display of Printed Comic Media

Expert tests and trials then carry out products developed for students. Individual trials were carried out on three left-handed students in Denpasar Elementary School: one with low literacy ability, one with moderate literacy ability, and one with high literacy ability. The small group trial was conducted on six left-handed students at SD Denpasar City, with two students with low literacy skills, two with moderate literacy abilities, and two with high literacy abilities. Meanwhile, field trials were carried out on fifteen left-handed students in Denpasar Elementary School, with five students with low literacy skills, five with moderate

literacy skills, and five with high literacy abilities. The results of expert tests and trials for students are presented in Table 4.

Table 4. Percentage of test results for contextual print comics

No.	Trial Subject	Result (%)	Qualification	Description
1.	Learning Content Expert Test	98,21	Very good	Feasible to use
2.	Learning Design Expert Test	95,83	Very good	Feasible to use
3.	Learning Media Expert Test	92,50	Very good	Feasible to use
4.	Individual Trial	92,50	Very good	Feasible to use
5.	Small Group Trial	91,67	Very good	Feasible to use
6.	Field Trial	91,50	Very Good	Feasible to use

Based on Table 4, the assessment results from the learning content experts obtained a percentage of 98.21% with very good qualifications. The expert concluded that this contextual printed comic media product was feasible. Based on the assessment of learning design and instructional media experts, 95.83% and 92.50% were highly qualified, respectively. The conclusion given by learning design and learning media experts is that this contextual printed comic media product is feasible to use. Then based on trials of students, which included individual trials, small group trials, and field trials, each obtained a percentage of 92.50, 91.67%, and 91.50% with very good qualifications. The test results for students found that the contextual printed comic media products for left-handed students were suitable for use. After the product is declared feasible, an effectiveness test is carried out to determine the effectiveness of using printed comic media based on the contextual approach of Theme 1 Subtheme 3 on the literacy skills of left-handed students. The effectiveness test was carried out by administering two tests to the test subjects, namely 15 left-handed students in Denpasar Elementary School, where test 1 was the pre-test, and test 2 was the post-test. The test instrument used has been tested for validity and reliability. The instrument's validity was tested using the Product Moment formula of the ten items of description questions obtained nine items of valid questions with a value of r count greater than r table (rxy>rtable). The instrument declared valid was calculated for reliability using the Alpha-Cronbach formula and obtained an r1.1 value of 0.88, so the test items were declared to have a high degree of reliability.

The literacy test results, namely test 1 (pre-test), obtained an average score of 78.9 in the medium category, and test 2 (post-test) obtained an average score of 84.3 in the high category. Based on the results of test 1 (pre-test) and test 2 (post-test), it was concluded that there was an increase in the average literacy test results of left-handed students before and after using printed comic media based on a contextual approach from the medium category to the high category. Before proceeding to the t-test, a normality test was carried out on test 1 (pre-test) and 2 (post-test) data. Based on the calculation on SPSS, it was found that test data 1 had a significance value of more than 0.005, which was 0.944. The data from the first literacy test (pre-test) is normally distributed. Furthermore, the second test has a significance value of more than 0.005, which is 0.469. The second literacy test (post-test) results are also normally distributed. Because the two data are normally distributed, it is continued to test the hypothesis, namely the Dependent T-Test. Based on the calculation of the SPSS, it was found that the significance value was less than 0.005, which means that there was a significant difference between test 1 (pre-test) and test 2 (post-test). In addition, based on the calculation, it is obtained that the value of tcount is more than ttable (2.145) which is 8.4731. This means that H0 is rejected and H1 is accepted, so that the composition of printed comic media based

on the Contextual Approach of Social Science content Theme 1 Subtheme 3 Grade four is effective for left-handed students in Denpasar City Elementary School, especially in improving literacy skills.

Discussion

The results showed that the composition of printed comic media based on the social studies content contextual approach in Theme 1 Sub-theme 3 for fourth-grade students at SD Denpasar City was appropriate for learning and effective in improving the literacy skills of left-handed students. Descriptively, the literacy ability of left-handed students before using the media (test 1, pre-test) had an average score of 78.9 with moderate qualifications. In contrast, the literacy skills of left-handed students after using the media (test 2, post-test) had an average score of 84.3 with high qualifications. In addition, based on the dependent t-test, it was found that the value of tcount was more than ttable (2.145) which was 8.4731. It shows a significant difference between test 1 (pre-test) and test 2 (post-test), the literacy ability of left-handed students is higher when using the social media content contextual printed comics developed than before using the media.

It is because the contextual printed comics developed are very in line with the characteristics of left-handed students, namely opening from left to right. Left-handed students are more comfortable using their dominant hand, the left hand. The preference for using the dominant hand in left-handed people will still exist even in a right-handed environment (Son & Muffly, 2017; Thomas et al., 2019). In addition, contextual printed comics that match the characteristics of students also help increase student motivation and learning outcomes. These results are supported by previous research, which states that the completeness and suitability of learning facilities will help students be more actively involved (motivated) in the learning process and improve student learning outcomes (Azma, 2019; Hendra Anggryawan, 2020). Creating a learning climate oriented toward meeting the needs of learning facilities will also encourage the emergence of students' intrinsic motivation, which is positively related to the intensity of motivation (Nguyen & Habók, 2021; Romero et al., 2020). Therefore, this printed comic media can increase the learning motivation of left-handed students because it is designed according to their characteristics as left-dominant individuals and has implications for literacy skills.

This IPS content contextual printed comic is also designed according to the subject matter and indicators to be measured, making it easier for students to achieve the expected competencies. These results are supported by research that states that the suitability of learning media content with topics, indicators, and competencies to be achieved greatly affects the achievement of better student learning outcomes (Mahendra et al., 2021; Nurrita, 2019). Contextual printed comics developed based on this contextual approach can also help students to understand abstract concepts that were previously difficult to imagine. These results are supported by previous research, which states that through the right learning media, one can translate a material's abstract concept (Aripin & Suryaningsih, 2019; Shofa et al., 2020). This social media contextual printed comic media has learning objectives formulated in the ABCD format that aligns with the material and questions to benefit teachers and students to achieve targeted learning goals with maximum learning outcomes.

These results are supported by previous research, which states that learning media must be designed according to the instructional objectives of learning and the characteristics of students because the quality of learning media has positive implications for student learning outcomes (Hae et al., 2021; Pratiwi & Meilani, 2018). In addition, the selection of the right learning media is also expected to lead to the same perception between students with one when the teacher conveys the learning message (Audie, 2019; Rusmono & Alghazali, 2019). Therefore, this printed comic media can facilitate students' learning because the

material is presented appropriately, accurately, and following the desired learning objectives and has implications for literacy skills.

This IPS content contextual printed comic also presents learning material in the form of interactions between comic characters and full-color visual images that create a real atmosphere from existing abstract material, thus supporting student understanding. Using images in a medium, especially for elementary school students, is known to improve students' cognitive processes, including during social studies learning (A. A. G. Agung et al., 2017; Putrislia & Airlanda, 2021; Umbara et al., 2020). The use of pictures in learning can also increase students' reading interest. As a result of this development, contextual printed comic media can also increase students' reading interest. It is evidenced by the results of students' literacy (reading and writing) ability tests, which increased after using this contextual printed comic media. This result is supported by previous research, which states that using comic media in learning can increase students' reading interest in the learning material being studied (Handayani & Koeswanti, 2020; Yuniarti & Radia, 2021). Students' reading interest correlates with reading and writing literacy skills in understanding the reading contents. It is evidenced by previous research, which states a significant and positive relationship between literacy, reading interest, and the ability to understand reading content (Maulani et al., 2020; Sari, 2020). Schools as educational institutions should foster various types of functional literacy so that students can become literate human beings with the ability to develop their personal and social functions. Teachers need to align these literacy skills with more appropriate directions so that the literacy skills of teachers in the learning process can be more effective (Nurgiyantoro et al., 2020; Sobandi et al., 2021). In addition, a significant correlation was also found between reading interest and achievement motivation with students' social science learning outcomes (Suniyasih et al., 2020; Verawati et al., 2020). Therefore, using social media content contextual printed comics for left-handed students can improve the literacy skills of left-handed students, especially in social studies learning.

Based on the results of the research that has been discussed, it is found that the composition of printed comic media based on the Contextual Approach of Social Studies content in Theme 1 Sub-theme 3 is feasible to use in the learning process and can improve the literacy skills of left-handed students. The results of this study are supported by the results of previous studies, which state that printed comics learning media based on a contextual approach or Contextual Teaching and Learning are effective in improving the learning outcomes of elementary school students in social studies subjects (Astutik et al., 2021; Rosyida et al., 2018). Previous research also stated that contextual comic learning media could improve students' critical thinking skills in social studies learning (Liniasari et al., 2021; Yusnina & Riyanto, 2020), so social studies comics are very suitable to be used as a tool in the teaching and learning process so that they can create quality learning.

Through this research, it is hoped that there will be attention from various parties to the diversity possessed by left-handed students. The implication of this research is the creation of comfort for left-handed students when using print media that follows their characteristics and awakening teachers to pay more attention to the diversity of their students, including left-handed students. This research's advantage is developing printed learning media suitable for left-handed students. This research is limited to composing printed comic media based on the Contextual Approach of Social Science content Theme 1 Sub-theme 3 for fourth graders, so it is hoped that other researchers can develop other learning products for left-handed students.

4. CONCLUSION

This research and development found that printed comic media based on the Social Studies Content Contextual Approach in Theme 1 Sub-theme 3 were suitable for use in the learning process and could give different results on the literacy skills of left-handed students before and after using the media. The average literacy test scores of left-handed students before using the media were 78.9 and 84.3 after using the media. Furthermore, based on the t-test calculation, it was obtained that the tcount value was more than ttable (2,145) which was 8.4731, so H0 was rejected, and H1 was accepted with the meaning that the composition of printed comic media based on the Contextual Approach of Social Studies content Theme 1 Subtheme 3 Grade four is effective for left-handed students in Denpasar City Elementary School.

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