DEVELOPMENT OF COMICS LEARNING MEDIA ON THE ORIGINS OF MOUNT KELUD USING FICTION STORY MATERIAL FOR CLASS 4 STUDENTS OF SDN TAROKAN 3

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Abstract

This research produces a new product that can bring digital learning experiences to elementary schools in the form of learning media and can solve several existing problems. This research focuses on solving learning problems that are still teacher-centered, there is no variety of learning media, and learning facilities are incomplete. The aims of this research are, (1) to produce valid products, (2) to produce practical products, (3) to produce effective products. This research uses the Research and Development (R&D) method with the development model by Borg & Gall. The subjects in this research were fourth grade students at SDN Tarokan 3. The results of this development research were: (1) comic media was declared valid by media experts with a validity percentage of 84.7%, (2) comic media was declared valid by material experts with a percentage of validity of 98.4%, (3) comic media was declared practical by the teacher with a practicality percentage of 97%, (4) comic media was declared effective with the N-gain test results showing an increase with an average value of 0.36 (medium increase).

Keywords: Learning Media; Comic; Fictional Story

Abstrak

Penelitian ini menghasilkan suatu produk baru yang dapat membawa pengalaman pembelajaran digital ke sekolah dasar dalam bentuk media pembelajaran serta dapat menyelesaikan beberapa permasalahan yang ada. Penelitian ini berfokus pada menyelesaikan permasalahan pembelajaran yang masih berpusat pada guru, tidak terdapat variasi media pembelajaran, serta sarana pembelajaran yang belum lengkap. Tujuan dari penelitian ini adalah, (1) menghasilkan produk yang valid, (2) menghasilkan produk yang praktis, (3) menghasilkan produk yang efektif. Penelitian ini menggunakan metode Research and Development (R&D) dengan model pengembangan oleh Borg & Gall. Subjek pada penelitian ini adalah siswa kelas IV SDN Tarokan 3. Hasil dari penelitian pengembangan ini adalah: (1) media komik dinyatakan valid oleh ahli media dengan persentase kevalidan sebesar 84,7%, (2) media komik dinyatakan valid oleh ahli materi dengan persentase kevalidan sebesar 98,4%, (3) media komik dinyatakan praktis oleh guru dengan persentase kepraktisan sebesar 97%, (4) media komik dinyatakan efektif dengan hasil uji N-gain menunjukkan peningkatan dengan nilai rata-rata sebesar 0,36 (peningkatan sedang).

Kata Kunci: Media Pembelajaran; Komik; Cerita Fiksi

INTRODUCTION

Learning is the core of activities at school. An educational process will not run without learning activities. Learning activities are also one of the determining factors in the quality of education in a school. As times progress, learning is also required to be able to develop according to the times. This is in accordance with what was conveyed by Fitriani (2022), she believes that changes in times have resulted in changes in the learning system in schools. According to Sugiyarti (2018), learning in the 21st century is now increasingly required to be able to realize technology-based learning with the aim that students can get used to the way of life in the modern era. Sugiyarti added that there is a gap between reality and expectations, where in the 21st century students must be able to master science, think critically, have metacognitive skills, and be able to communicate effectively. Firmansyah and Hariyanto (2019) expressed the same thing, namely that the 21st century has had a big influence on the development of science and technology, therefore technology has become one of the supports for learning in this century. From this explanation, in order to meet the demands of the 21st century, learning should be optimized with digital literacy.

Digital literacy is a digital media-based learning effort by combining educational knowledge with technology (Simbolon, 2022). Digital literacy can be done by embedding technology in learning activities. One way to embed technology into learning can be done with learning media or teaching materials. Setiani (2021) has a similar opinion, namely that digital literacy programs can be taught as separate subjects or embed digital content in broader learning. Setiani (2021) added that digital literacy allows humans to connect, collaborate, discover new information, and innovate, which is very beneficial for students of all ages.

Learning media is a tool used to help make the learning process more optimal. According to Nurrita (2018), learning media is a tool that can assist a learning process so that the material or message conveyed becomes clearer, more effective and efficient. Learning media is a bridge that can connect the world of technology with learning in schools. Apart from being a link with the world of technology, learning media has the advantage of increasing students' understanding of learning material.

The pyramid of experience proposed by Edgar Dale is a theory which states that learning media can improve students' understanding according to the type of learning media used. Rosyida (2018) reinterprets Edgar Dale's theory of the cone of experience, where a learning medium can provide different experiences and levels of mastery of the material. In this case, the level of experience and mastery of the material obtained is expressed through percentages. In research written by Rosyida (2018) it is stated that the percentage of media, especially visual media, can provide experience and a level of mastery of material of 30% -50%. In this case, the use of interesting learning media, whether containing text, images or videos, can really help students master the learning material (Hariyanto, 2020).

It is important for teachers to be able to optimize learning through learning media. The use of learning media is no longer strange if it can be used to improve the quality of learning. The importance of learning media is proven by many studies that have revealed good results from the use of learning media. Learning media can improve the quality of learning because learning media can give students various options about how students learn. Without learning media students will only learn through the explanations given by the teacher, whereas with the use of learning media students do not always have to focus on the teacher's explanations but can interact with the learning media used. One way of using technology in learning activities as a learning medium is also considered important. Apart from introducing students to the digital era, Hidayat (2020) in his research revealed that the use of technology-based media in learning can be an effective solution for improving the quality of learning in the classroom. Muammar (2018) in his research revealed positive results in the use of technology-based learning media, he revealed that technology-based learning media can increase students'

interest in learning, which is evidenced by students' enthusiasm in participating in the learning being carried out.

The theory and evidence above explain how important it is to use learning media, more specifically technology-based learning media. Learning media can change the classroom atmosphere from being monotonous or lacking variety to being more cheerful and active. From the student's point of view, learning using learning media will be more meaningful and has no negative sides compared to conventional learning. However, the ideal of learning using learning media is not without obstacles. The results of observations carried out at SDN Tarokan 3 revealed that teachers rarely use learning media. Teachers tend to use minimal media and often use conventional learning methods. This happens because from the teacher's perspective, learning media is quite complicated to create. Developing learning media will take a long time, energy and thought with the results only being used on certain material for only a short time. Apart from that, the development of technology-based learning media also experienced obstacles, where school facilities at that time were not very complete, which could limit student interaction with technology-based learning media.

This research has a role in solving the problems that have been expressed previously and in order to bring modern era learning experiences into elementary schools. One solution to solve this problem is to develop technology-based learning media, in this case in the form of a comic entitled "Asal Mula Gunung Kelud". The comics developed can be in the form of physical comics in general and can also be in the form of e-books that can be accessed on various electronic devices. The hope in developing this comic is not only that it can solve existing problems and implement era developments in learning, but it is also hoped that this media can increase student interest and learning outcomes. This solution related to media development is not the first time this has occurred, there are many studies that have obtained positive results from developing similar products. Mujahadah (2021) in his research revealed that the comic learning media that has been developed and implemented can improve the learning outcomes of grade 3 students.

This research has several novelties from similar previous research. There are 5 previous studies that can be used as a comparison to see the novelty of this research. Some of these studies are: 1) "Pengembangan Media Pembelajaran Berbasis Komik untuk Meningkatkan Karakter Kemandirian Belajar Siswa Sekolah Dasar" by Wibowo (2021), 2) "Pengembangan Media Pembelajaran Komik Matematika Siswa Kelas Iv Sekolah Dasar Berbasis Budaya" by Kurniawarsih (2020), 3) "Pengembangan Media Pembelajaran Komik untuk Meningkatkan Hasil dan Minat Belajar Matematika Peserta Didik Kelas III SD Muhammadiyah Malawili" by Mujahadah (2021), 4) "Pengembangan Media Komik dalam Pembelajaran Matematika Materi Pecahan Kelas IV Sekolah Dasa" by Febriyandani (2021), 5) "Pengembangan Media Komik Digital Berbasis Pendekatan Saintifik pada Muatan IPA" by Pinatih (2021). Of the five studies that were used as a comparison, only one study was found that developed similar learning media that was technology-based or could be accessed using electronic devices. The novelty in this research product is the use of learning media which can be accessed in two ways, namely offline and online. In this case, students can access physical comic media at school and read them directly, and students can still access them online when they are at home. This concept is not yet present in the 5 studies that have been shown, previous research only shows that comics can only be accessed online or offline but not both. Apart from how to access comics, the novelty of the comic products in this research is that the stories in the comics come from local folklore, specifically in the city of Kediri. This is different from comics in previous research which took material from general subjects such as mathematics and science.

Research on the development of learning media for comics from Mount Kelud aims to produce products that are valid, practical, effective, can be used to solve existing problems in the scope of learning,

and can bring technological developments to elementary schools. The hope of the results of this research is that this research can become a reference for educators in developing learning media that can not only improve student learning outcomes but can also increase students' insight into technology in this modern era.

RESEARCH METHODS

This research uses the Research and Development method and focuses on using a procedural model which refers to procedures from Borg & Gall. Borg & Gall (Mahfud, 2020) explains 10 implementation steps in development research, including: 1. Research and information collecting, 2. Planning, 3. Develop preliminary form of product, 4. Preliminary field testing, 5. Main product revision, 6. Main field testing, 7. Operational product revision, 8. Operational field testing, 9. Final product revision, 10. Dissemination and implementation.

According to Nur (2022), the research and data collection stage includes literature study activities related to the problem being studied, and preparation for formulating a research framework. Meanwhile, Permana (2015) explains that this stage has objectives including knowing and identifying deficiencies or problems that exist in the field. The first stage of this research was carried out by means of observations made at the research location and literature studies related to the problems and theories discussed.

According to Fatirul (2022), the planning stages are activities in the design process and procedures that will be followed in product development research. In this research, various planning activities were carried out, such as formulating objectives, designing feasibility tests, formulating research procedures and time, as well as developing data collection instruments.

According to Fatirul (2022), the initial form of product development stage is the stage where researchers begin to develop supporting components, guidelines and instruction books, and evaluate the initial form of the product. In this research, the development of comic learning media from the origins of Mount Kelud began. At this development stage, several equipment is used which can be divided into 2, namely hardware such as laptops, pen tablets and mice and the use of software such as Adobe Photoshop.

According to Fatirul (2022), the initial trial stage is an activity carried out involving an expert, either a content or material expert and a media expert or other expert related to the development of the related product. Fatirul also added that this stage can be carried out by filling out questionnaires, interviews or observations. This research and stage is carried out by carrying out product validation tests that have been developed with material validators and media validators. The initial product improvement stage is carried out by revising the product based on suggestions and input from validators.

The field trial stage was carried out by carrying out practicality tests using teacher response questionnaires and at this stage product testing was carried out on a sample of research subjects of 10 grade 4 students. According to Rudi (Permana, 2015), the number of trial subjects can describe the target population so that it is useful in trial results evaluation stage. The product refinement stage resulting from field trials is carried out by improving the product from suggestions and input from teachers.

According to Prasetia (2022), the field implementation test is a trial step on a larger scale than previous trials. The activity carried out is to test the effectiveness and adaptability of the product by involving potential product users. This research was carried out by testing the product on all research subjects totaling 30 grade 4 students. The final product refinement stage in this research was deliberately omitted because there were no experts to validate the product revision results so it could not be stated whether the product had improved quality or even decreased quality.

According to Fatirul (2022), the dissemination and implementation stage is the stage where the product has gone through various trials and improvements so that it can be said that the product has an effectiveness value and can be said to be suitable for mass production. In this research, the product has gone through a series of trials and improvements so that it can be stated that the product is feasible and ready to be disseminated.

The subjects in this research were all 4th grade students at SDN Tarokan 3, totaling 30 students. Other parties who took part in this research included material expert validators, media expert validators, and teachers. This research was conducted from February 2022 to June 2023. Data collection in this research was carried out through observation, literature study, validation, teacher responses, and tests. The instruments developed to collect data include material validation questionnaires, media validation questionnaires, teacher response questionnaires, and test questions.

The results obtained from data collection will then be analyzed qualitatively and quantitatively. The results of observation data and literature studies were analyzed using qualitative techniques, where the data was presented in descriptive form. Meanwhile, the data from the validation questionnaire, teacher response questionnaire, and test questions were analyzed using quantitative techniques to measure the data that had been presented in the form of numbers. Measurements in quantitative analysis can be broken down into 4 stages. The first stage is measuring the validity of the material in the product which is measured from validation questionnaire data by material experts. The second stage is measuring product validity which is measured from validation questionnaire data by media experts. The third stage is measuring practicality which is measured from teacher response questionnaire data. These three stages use the same measurement basis. The following is the basis for measuring the practicality and validity of media.

$$\text{Percentage} = \frac{\text{Number of scores by validators}}{\text{Maximum number of scores}} \text{ x } 100\%$$

The results of the analysis using the formula above are then interpreted using the criteria proposed by Akbar (Fatnawati, 2016). These criteria can be seen in the following table.

Table 1. Validity and practicality data measurement criteria

No	Score	Validity Criteria
1	85,01 – 100,00 %	Very valid (can be used without revision)
2	70,01 – 85,00 %	Fairly valid (usable, with revisions)
3	50,01 – 70,00 %	Invalid (unusable, with revision)
4	01,00 – 50,00 %	Invalid (should not be used, with total revision)

The fourth stage of measurement in the quantitative analysis of this research is to measure the effectiveness of the product from student test result data. The test data obtained was analyzed using a one group pretest-posttest design. The way to measure pretest and posttest results can be done using the N-gain formula as follows.

$$\text{N-gain (g)} = \frac{\text{Posttest } Score - \text{Pretest } Score}{\text{Max } Score - \text{Pretest } Score}$$

The results of the analysis using the formula above are then interpreted using the N-gain criteria proposed by Ramadhani (2020). These criteria can be seen in the following table.

Table 2. N-gain criteria

N-gain	Criteria
$0,7 \leq$ N-gain ≤ 1	High
$0,3 \leq$ N-gain $< 0,7$	Medium
N-gain $< 0,3$	Low

RESULTS AND DISCUSSION

This research uses the Borg & Gall development model which consists of 10 stages in the form of 1. Research and data collection, 2. Planning, 3. Product draft development, 4. Field trials, 5. Initial product refinement, 6. Field trials, 7. .Refinement of product results from field tests, 8. Field test implementation, 9. Refinement of final product. 10. Dissemination and implementation. The results of each stage can be seen in the following description.

The research and data collection stage which was carried out by means of observation and literature study found problems which ultimately became the background for the development of this comic learning media from Mount Kelud. Observation activities focus on 2 things, namely learning activities and the school environment. The results of observations of learning and the school environment found that there were several problems. The learning activities carried out tend to be teacher-centred. This is characterized by the lecture method carried out by the teacher and the teacher's participation being more dominant than that of the students. Other problems for teachers can also be seen from the use of learning media. Teachers only use one type of learning media and some even don't use any learning media at all. Even though there are learning media, the media used can be said to not vary. This conclusion can be drawn due to the fact that the teacher only uses images contained in students' books or images from printouts. Apart from the problems found in learning and teachers, other problems can also be seen in the school environment. Observation results show that schools still lack learning facilities for students. It can be seen from the library which is still mostly empty and the digital learning facilities are less than optimal, such as the absence of a computer lab.

The planning stage in this research includes determining the learning objectives that will be used, determining indicators, creating evaluation questions, creating data collection instruments for product validation and creating data collection instruments for teacher responses..

The product draft development stage is the stage where the comic learning media product from Mula Gunung Kelud begins to be developed. This product development was carried out using several electronic devices in the form of laptops, pen tablets, mice, and software called Adobe Photoshop. The stages of product development include making initial sketches, making basic illustrations, coloring, making background images, and writing dialogue. After the comic product development is complete, the next step is printing the comic and

inserting the comic file on the anyflip.com website so that it can be accessed online. The results of the development of the comic can be seen from the following pictures.

Picture 1. Comic front cover
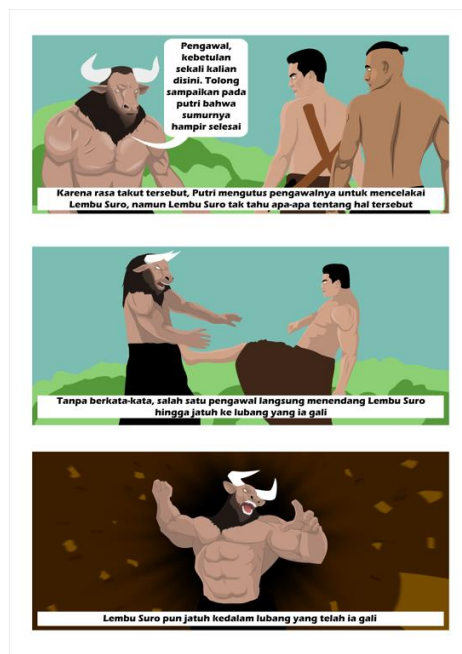

Picture 2. Comic content

The field trial stage in this research was carried out by conducting validation tests on learning media experts and material experts to see the level of product validity. Validation data was collected through a validation questionnaire which contained a series of questions related to media and material. The results of media and material validation are in the form of assessments and input from validators which are used as a reference for product improvement. The assessments given by the two validators can be seen as follows.

Table 3. Product validation test results

No.	Validation Aspect	Percentage	Criteria
1.	Material validation	98,4%	Very Valid
2.	Media validation	84,7%	Very Valid
Average		91,3%	Very Valid

The initial product refinement stage is carried out by improving the media according to input and suggestions from media expert validators and material expert validators. Several things need to be improved, such as learning tools, images in comics, and dialogue in comics.

The field trial stage is the stage of collecting data on effectiveness and practicality. Effectiveness data collection was carried out using a limited trial with 10 grade 4 students at SDN Tarokan 3. Practicality data collection was carried out using a data collection instrument in the form of a teacher response questionnaire. In the teacher response questionnaire there are 10 questions which are assessed by the teacher using a value of 1 to 4. A value of 4 means that the media is very appropriate to the question asked and a value of 1 means that the media is not appropriate to the question asked.
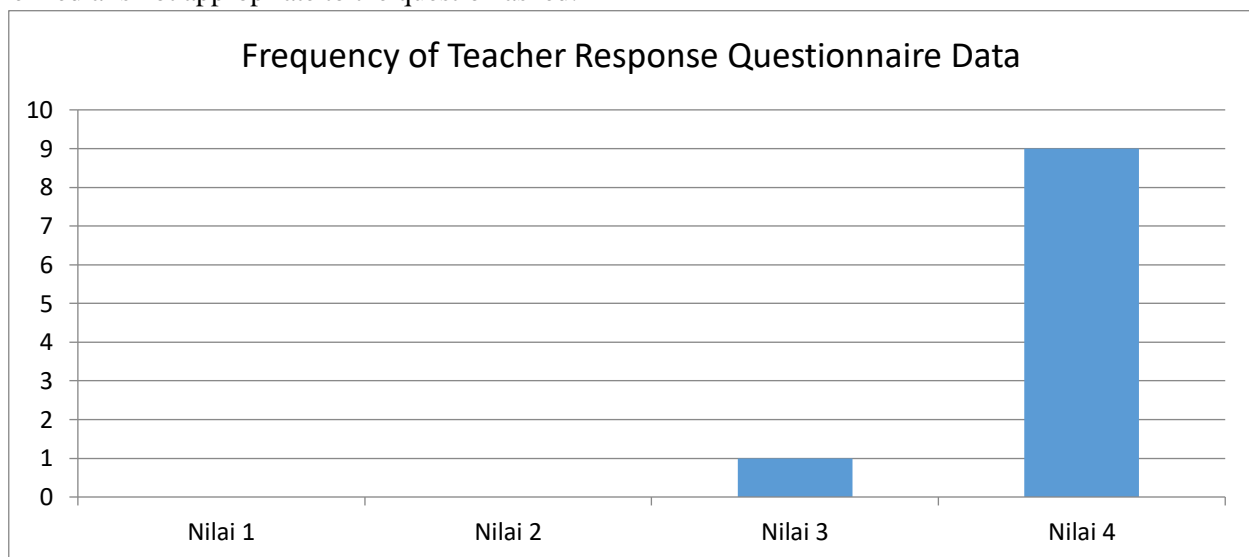

Picture 3. Frequency diagram of teacher response questionnaire data

The diagram above is a diagram that shows the assessment given by the teacher using a teacher response questionnaire. The diagram above shows that the teacher gave a grade of 4 nine times and a grade of 3 once. The calculation results show that the average score given by the teacher is 97% of the total score of 100%. It can be concluded that the comic learning media product from Mount Kelud is very practical.

Apart from collecting practicality data, at this stage effectiveness data is also collected. Data on the effectiveness of this product can be seen from the results of the increase in student scores before treatment and after treatment using N-gain analysis. The way to obtain data on student learning outcomes in this research is by using pretest questions given at the beginning of learning, and by using posttest questions given after learning using the product.
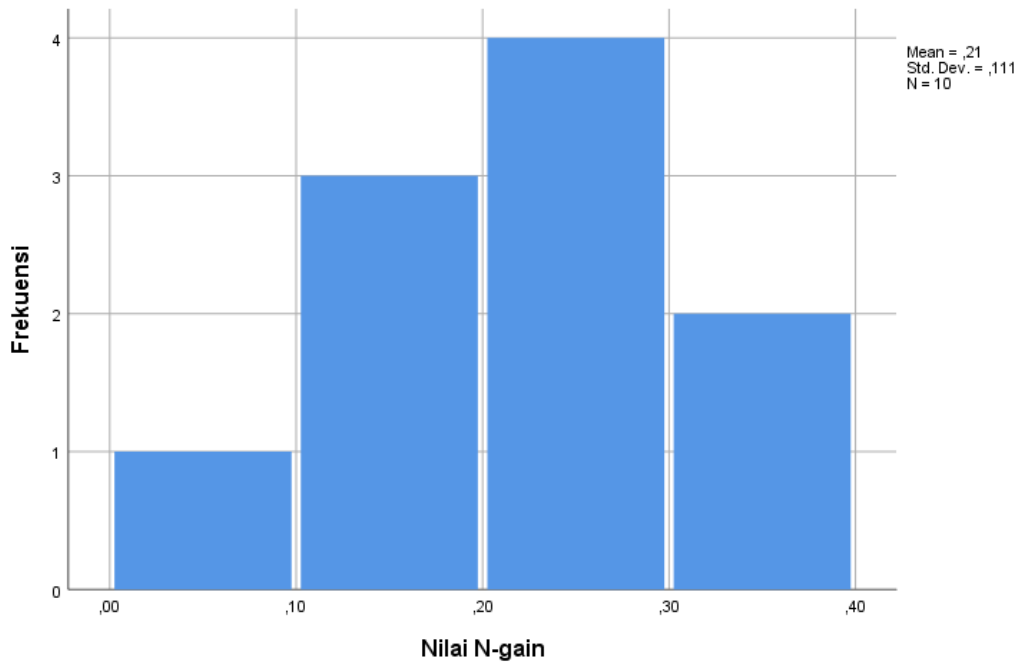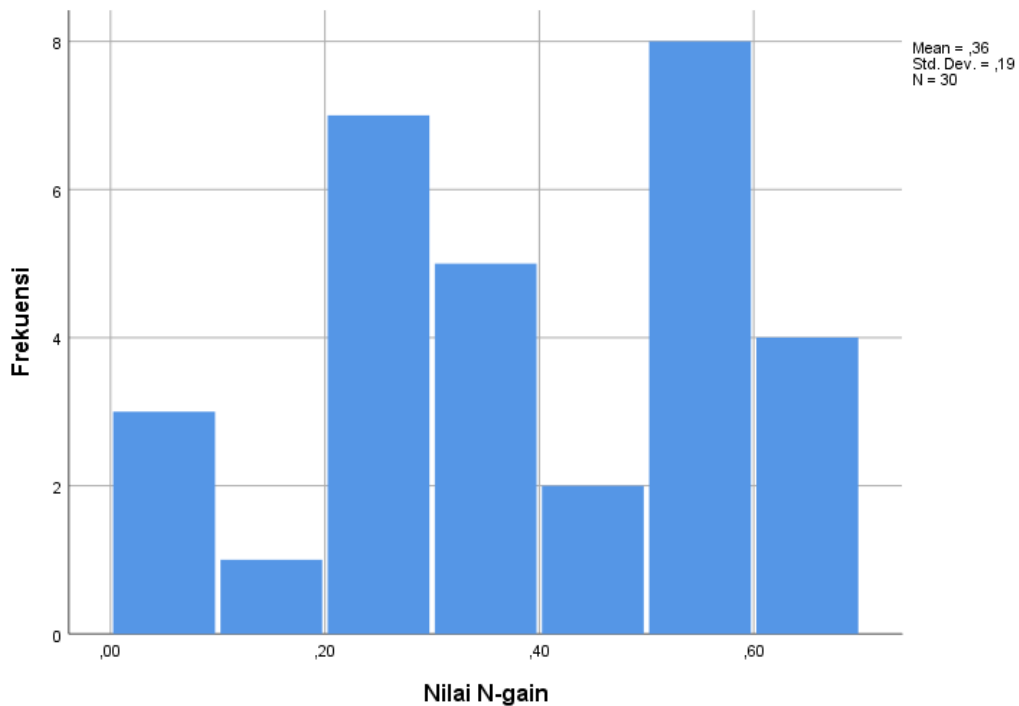
Picture 4. Limited trial N-gain results diagram

The diagram above is a diagram of N-gain measurement using the SPSS application. The vertical line on the left is the frequency or number of students who get grades. The horizontal line at the bottom is the N-gain value obtained by students. From the data above it can be seen that there are various improvement values. The improvement scores of the 10 students were then averaged and compared with the N-gain criteria. The conclusion from the measurement results using the n-gain formula is that there was an increase in student learning outcomes after treatment using comic learning media with an average percentage increase of 0.21 or it could be said to be a low increase.

The stage of perfecting the product resulting from the field test is the stage where revisions are made to the comic learning media product according to suggestions and input from the teacher. In reality, this stage was not implemented because there were no suggestions for improvement from the teacher and instead they received appreciation.

The field implementation test stage is the final trial stage. This stage was carried out with a wide-scale trial involving all 4th grade students at SDN Tarokan 3 with a total of 30 students. Similar to the previous trial, at this stage the trial was carried out to collect product effectiveness data from measuring student learning outcomes before and after treatment. Measurements were carried out to see an increase in student learning outcomes using N-gain analysis.

Picture 5. Extensive trial N-gain results diagram

The data above shows an increase in student learning outcomes before and after treatment. As with limited trials, the line on the left is the frequency or number of students, while the chart at the bottom shows the N-gain value obtained by the students. From the data above, it can be concluded that the average percentage increase is 0.36 or can be interpreted as a moderate increase.

The dissemination and implementation stage is the stage where the product has gone through various kinds of trials and improvements, so that the learning media product originating from Mount Kelud is declared feasible because it has values of validity, practicality and effectiveness and can be disseminated.

The results of the research that has been carried out are that the development of comic learning media from Mount Kelud is that the products that have been developed and implemented have had a good influence on learning at the research location, this is proven by the validity data which obtained an average percentage of 91.3%, data practicality was 97%, and N-gain data showed a moderate increase in learning outcomes. In accordance with the research objectives, the product developed has been able to solve problems in schools, namely with this product learning is not only focused on teachers and students can play an active role in accessing learning media and understanding the content of the media themselves. This comic learning media also provides students with variations in learning so that learning does not become monotonous.

In its implementation, this research product has several novelties compared to previous research. In this research, learning media products are implemented in two ways, the first way is by using physical comics that can be read directly by students, and the second way is by accessing comics via the smartphone owned by each student. When compared with the previous research that has been discussed, there has not been a single research product that can use these 2 access methods, apart from that the comic media from Mount Kelud contains stories taken from local folklore, which is very different from the comics in previous research which used material general lessons as the content. The previous research used as a comparison with this research includes: 1) "Pengembangan Media Pembelajaran Berbasis Komik untuk Meningkatkan Karakter

Kemandirian Belajar Siswa Sekolah Dasar" by Wibowo (2021), 2) "Pengembangan Media Pembelajaran Komik Matematika Siswa Kelas Iv Sekolah Dasar Berbasis Budaya" by Kurniawarsih (2020), 3) "Pengembangan Media Pembelajaran Komik untuk Meningkatkan Hasil dan Minat Belajar Matematika Peserta Didik Kelas III SD Muhammadiyah Malawili" by Mujahadah (2021), 4) "Pengembangan Media Komik dalam Pembelajaran Matematika Materi Pecahan Kelas IV Sekolah Dasa" by Febriyandani (2021), 5) "Pengembangan Media Komik Digital Berbasis Pendekatan Saintifik pada Muatan IPA" oleh Pinatih (2021).

Quoting a statement from Firmadani (2020), the benefit of this novelty for education in the future is that by using technology-based learning media, learning will become more effective and efficient, and can facilitate the interaction process between teachers and students. This is reinforced by more recent research by Wastriami (2022), he explains that the impact of learning media for education is to facilitate the learning process, help students concentrate, provide a complete experience for students in learning, increase student interaction in learning, and can increase student motivation when studying.

CONCLUSION

Based on the results of research that has been carried out regarding the development of learning media for comics about the origins of Mount Kelud in fictional story material for grade 4 students at SDN Tarokan 3, it can be concluded that: (1) Learning media for comics about the origins of Mount Kelud in fictional story material for grade 4 students at SDN Tarokan 3 said to be very valid, because it got a media validity percentage value of 84.7% and a material validity percentage value of 98.4% and got an average value of 91.3%. (2) The comic media originating from Mount Kelud in the fictional story material for grade 4 students at SDN Tarokan 3 is said to be very practical for use in learning activities, because it obtained a practicality score percentage of 97%. (3) The comic learning media on the origin of Mount Kelud in the fictional story material for grade 4 students at SDN Tarokan 3 is said to be effective, because the analysis of the expansion trial using the N-gain test obtained an average result of 0.36 (moderate increase), so the Ha hypothesis (There is an influence of comic learning media from the origin of Mount Kelud on student learning outcomes) accepted.

REFERENCES

Fatirul, A. N., & Walujo, D. A. (2022). *METODE PENELITIAN PENGEMBANGAN BIDANG PEMBELAJARAN (Edisi Khusus Mahasiswa Pendidikan dan Pendidik)*. Pascal Books.

Febriyandani, R. (2021). Pengembangan Media Komik dalam Pembelajaran Matematika Materi Pecahan Kelas IV Sekolah Dasar. *Jurnal Pedagogi dan Pembelajaran*, *4*(2), 323–330. https://ejournal.undiksha.ac.id/index.php/JP2/index

Firmadani, F. (2020). MEDIA PEMBELAJARAN BERBASIS TEKNOLOGI SEBAGAI INOVASI PEMBELAJARAN ERA REVOLUSI INDUSTRI 4.0. *Prosiding Konferensi Pendidikan Nasional*.

Firmansyah, G., & Hariyanto, D. (2019). Penggunaan QR code pada dunia pendidikan : penelitian pengembangan bahan ajar. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, *5*(2). https://karya.brin.go.id/id/eprint/18764

Fitriani, D. K., Supeno, Wahyuni, D., & Rahayuningsih. (2022). PENGEMBANGAN MEDIA INTERAKTIF BERBASIS ARTICULATE STORYLINE PADA PEMBELAJARAN IPA MATERI SISTEM TATA SURYA UNTUK MENINGKATKAN LITERASI SAINS. *Jurnal Eduscience*, *9*(2).

Hariyanto, B. (2020). Pengembangan Aplikasi Anola Berbasis Android untuk Pembelajaran Atletik Nomor Lari Jarak Pendek. *Jurnal Didaktika Pendidikan Dasar*, *4*(2), 515–536. https://doi.org/10.26811/didaktika.v4i2.150

Hidayat, H., Mulyani, H., Nurhasanah, S. D., Khairunnisa, W., & Sholihah, Z. (2020). PERANAN TEKNOLOGI DAN MEDIA PEMBELAJARAN BAGI SISWA SEKOLAH DASAR DI DALAM PEMBELAJARAN PENDIDIKAN KEWARGANEGARAAN. *Jurnal Pendidikan Kewarganegaraan Undiksha*, *8*(2).

Kurniawarsih, M., & Rusmana, I. M. (2020). PENGEMBANGAN MEDIA PEMBELAJARAN KOMIK MATEMATIKA SISWA KELAS IV SEKOLAH DASAR BERBASIS BUDAYA. *Jurnal Lebesgue : Jurnal Ilmiah Pendidikan Matematika, Matematika dan Statistika*, *1*(1). https://doi.org/10.46306/lb.v1i1

Mahfud, I., & Fahrizqi, E. B. (2020). PENGEMBANGAN MODEL LATIHAN KETERAMPILAN MOTORIK MELALUI OLAHRAGA TRADISIONAL UNTUK SISWA SEKOLAH DASAR. *Sport Science & Education Journal*, *1*(1), 31–37.

Muammar, & Suhartina. (2018). MEDIA PEMBELAJARAN BERBASIS TEKNOLOGI INFORMASI DALAM MENINGKATKAN MINAT BELAJAR AKIDAH AKHLAK. *Media Komunikasi Sosial dan Keagamaan*, *11*(2), 176–188. http://ejurnal.iainpare.ac.id/index.php/kuriositas

Mujahadah, I., Alman, & Triono Mukhlas. (2021). PENGEMBANGAN MEDIA PEMBELAJARAN KOMIK UNTUK MENINGKATKAN HASIL DAN MINAT BELAJAR MATEMATIKA PESERTA DIDIK KELAS III SD MUHAMMADIYAH MALAWILI. *Jurnal Papeda*, *3*(1), 8–15.

Nur, F., & Masita. (2022). *Pengembangan Pembelajaran Matematika*. PT. Nas Media Indonesia.

Nurrita, T. (2018). PENGEMBANGAN MEDIA PEMBELAJARAN UNTUK MENINGKATKAN HASIL BELAJAR SISWA. *MISYKAT : Jurnal Ilmu-Ilmu Al-Quran, Hadist, Syari'ah dan Tarbiyah*, *3*(1), 171–187.

Permana, A. (2015). *PENGEMBANGAN MEDIA PEMBELAJARAN INTERAKTIF SISTEM PENGAPIAN BERBASIS KOMPUTER UNTUK PEMBELAJARAN DI SMK MA'ARIF SALAM MAGELANG*. Universitas Negeri Yogyakarta.

Pinatih, S. A. C., & Putra, S. (2021). Pengembangan Media Komik Digital Berbasis Pendekatan Saintifik pada Muatan IPA. *Jurnal Penelitian dan Pengembangan Pendidikan*, *5*(1), 115–121. https://ejournal.undiksha.ac.id/index.php/JJL/index

Prasetia, I. (2022). *Metodologi Penelitian: Pendekatan Teori dan Praktik*. UMSU Press.

Ramadhani, R., & Amudi, A. (2020). EFEKTIFITAS PENGGUNAAN MODUL MATEMATIKA DASAR PADA MATERI BILANGAN TERHADAP HASIL BELAJAR. *AKSIMOA*, *9*(1), 64–71.

Rosyida, F., & Adi, K. R. (2018). PELATIHAN PEMBUATAN MEDIA PEMBELAJARAN DENGAN PROGRAM AUTOPLAY UNTUK GURU SMPN 2 BALEN KECAMATAN BALEN

KABUPATEN BOJONEGORO. *Jurnal Prakis dan Dedikasi Sosial*, *1*(1). http://journal2.um.ac.id/index.php/jpds/index/

Riwayani, S., Harahap, RD. (2022). Does Blended Learning Improve Student's Learning dependence during the Covid-19 Pandemic? Evidence from a Labuhanbatu University, North Sumatera. : Jurnal Kependidikan. 8 (1), DOI: https://doi.org/10.33394/jk.v8i1.4509

Saputra, A., Harahap, RD. (2022). An Analysis of Student Learning Challenges in Elementary School Science Subject. Jurnal Kependidikan. 8 (1), DOI: https://doi.org/10.33394/jk.v8i1.4508

Setiani, N. N., & Barokah, N. (2021). Urgensi Literasi Digital dalam Menyongsong Siswa Sekolah Dasar menuju Generasi Emas Tahun 2045. *Prosiding SEMAI*. http://proceeding.iainpekalongan.ac.id/index.php/semai-411-

Simbolon, M. E., Marini, A., & Nafiah, M. (2022). Pengaruh Literasi Digital Terhadap Minat Baca Siswa Sekolah Dasar. *Jurnal Cakarawala Pendas*, *8*(2).

Sugiyarti, L., Arif, A., & Mursalin. (2018). PEMBELAJARAN ABAD 21 DI SD. *Prosiding Seminar dan Diskusi Nasional Pendidikan Dasar*.

Wastriami, & Mudinillah, A. (2022). Manfaat Media Pembelajaran Berbasis Aplikasi Kinemaster Terhadap Hasil Belajar IPA Siswa SDN 25 Tambangan. *TARQIYATUNA: Jurnal Pendidikan Agama Islam dan Madrasah Ibtidaiyah*, *1*(1).

Wibowo, S. A., & Koeswanti, H. D. (2021). Pengembangan Media Pembelajaran Berbasis Komik untuk Meningkatkan Karakter Kemandirian Belajar Siswa Sekolah Dasar. *Jurnal Basicedu*, *5*(6), 5100–5111. https://doi.org/10.31004/basicedu.v5i6.1600