Storythat Comic Based on the Ngideri Dhisah Tradition to Enhance Students' Visual Perceptual Skills

Jefri Rieski Triyanto*[1], Mohamad Na'im[1]

*jefririeski@unej.ac.id
[1]Universitas Jember

Abstract

This study aims to develop a history learning medium using a Storythat comic based on the Ngideri Dhisah tradition. Secondly, it aims to measure the effectiveness of the Storythat comic medium based on the Ngideri Dhisah tradition in enhancing students' visual perceptual skills. This research is a development study or Research & Development (R&D) adopting the ADDIE model by Branch. The study was conducted at SMAN 1 Tenggarang with the research subjects being grade X students. Data collection techniques included questionnaires, interviews, and observations. Meanwhile, the data analysis technique to measure students' visual perceptual skills used IBM SPSS V29. The results of this study indicate that: (1) the Storythat comic medium based on the Ngideri Dhisah tradition is suitable for use in the learning process with minor revisions; (2) the Storythat comic medium based on the Ngideri Dhisah tradition can significantly enhance students' visual perceptual skills with a "Large Effect" category (Relative Effectiveness Test score of 0.83). This research provides initial information for future studies that will examine the effectiveness of the Storythat comic medium in improving students' visual perceptual skills, particularly in the history learning process.

To cite this article

Triyanto, J. R., Na'im, M. (2024). Storythat Comic Based on the Ngideri Dhisah Tradition to Enhance Students' Visual Perceptual Skills. *Diakronika* 24(2), 92-105. http://doi.org/10.24036/diakronika/vol24-iss2/439.

Introduction

Education is the primary foundation for shaping students' character and knowledge. In the digital era 5.0, innovative learning media are crucial to attract interest and enhance learning effectiveness. One such medium is Storythat Comic, a comic-based learning medium that presents educational content in the form of illustrated stories (Candrayani & Sujana, 2023). The use of varied learning media is essential in the education process. Utilizing media in teaching and learning activities can improve the learning process, making the learning objectives more achievable (Feka et al., 2023). Learning media are tools that can help teachers deliver lesson material, thus increasing students' interest and engagement with the subject matter (Wulandari et al., 2023). According to Seels & Richey (2012), learning media can include books, videos, audio, images, and comics like Storythat Comic, which combines compelling visual and narrative elements. As a narrative visual medium, Storythat Comic integrates these elements to create a more effective and enjoyable learning experience (Farahiba & Kayati, 2022; Mulyati et al., 2021).

A common problem in history education within classrooms is the lack of student interest in reading and learning about historical events. This lack of interest is often due to educators not effectively utilizing information technology (Offiana et al., 2020), which can also impact students' visual perceptual skills. Visual perceptual skills refer to the cognitive process that gives meaning to visual stimuli received through the sense of sight, where visual perception occurs as visual stimuli are interpreted, making the information sensible and meaningful. Thus, visual perception is a skill usually acquired based on past experiences (Widyana, 2009). Previous research conducted by Tomita (2018) shows that learning motivation is influenced by the visual appeal of teaching materials, indicating that in the learning process, the design of media and materials plays an important role. The relationship between reading interest and learning, as well as learning media with visual perceptual skills, will be further explained in the paragraph below. Educators often use conventional models like lectures when teaching history. The use of lectures often leads to student boredom during class, resulting in low reading interest and learning outcomes. Therefore, a blended learning model combining lectures and technology is needed. Technology-based education has actually been around since the 2010s (Macgilchrist et al., 2019). However, in reality, even up until 2024, many teachers still rely on conventional teaching methods. In the current digital era, conventional teaching methods are considered less effective in capturing students' interest and attention (Fatimah et al., 2024)

One way to enhance students' visual perceptual skills in history education is by creating engaging learning media, such as the Storythat Comic developed by the researcher. Furthermore, according to Wardani (2012), the use of comics in learning can improve students' learning outcomes through engaging visual illustrations and entertaining stories, as well as easy-to-understand language. In addition, comics can also support students' thinking skills (Putri & Ofianto, 2023). Studies by Cui et al. (2019) and Liu et al. (2021) show that visual perception ability is a fundamental factor supporting reading comprehension and arithmetic. This research confirms that visual perceptual skills are crucial for various aspects of learning, both in reading and mathematics. The use of digital comics can help enhance students' information retention. Engaging images and stories help students remember information longer than conventional teaching methods. A study by Al Faruque (2023) found that students who learned using digital comics showed significant improvement in information retention compared to those who learned using plain text. Students also understand meanings and events in illustrated stories more quickly (Cohn, 2020). In the era of the Industrial Revolution 4.0, learning processes should be technology-based, where digital literacy is fundamental for accessing information widely (Fatimah et al., 2023).

The novelty of this research compared to previous studies is the use of storythat comic as a learning medium, introducing a new way of delivering historical material through interactive comic visualization. This study also examines how much influence storythat comic has on students' visual perception. It offers an alternative to the conventional text-based methods and encourages greater student interest in historical material through more engaging visual narratives. Additionally, storythat comic based on local stories in a historical context provides a deeper understanding of cultural and moral values. The use of stories closely related to students' daily lives helps them understand history from a more personal and relevant perspective, different from general history textbooks.

Research Methods

This study is a development research or research and development (R&D) study that adopts the ADDIE model by Branch. Development research is a combination of two approaches, namely research and development, aimed at creating innovations in learning. There are four steps in development research: the study on primary information, design, implementation, and evaluation. (Patphol & Wongyai, 2021). The ADDIE (Analyze, Design, Development, Implementation, Evaluation) development model by Branch (2009) consists of five stages: (1) Analyze, (2) Design, (3) Develop, (4) Implementation, and (5) Evaluate (Branch, 2009). This research produces a digital comic product whose effectiveness will be measured against perceptual visual skills.

The Ngideri Dhisah tradition is one of the local cultures that possesses interesting historical, social, and moral values. This tradition not only represents the cultural identity of the Bondowoso community but also provides a very good opportunity for students to see history learning in a contextual manner. The relevance of the Ngideri Dhisah tradition to the development of students' visual perceptual skills is that the Ngideri Dhisah tradition has visual perceptual components, such as its ritual performances, cultural symbols, and social interaction patterns, which provide rich visual material for students in the process of developing visual perceptual skills. Well designed visual based learning can enhance students' understanding and memory (Bobek & Tversky, 2016; Fiorella & Kuhlmann, 2020; Guo et al., 2020). Therefore, the researchers chose this tradition because it aligns with the objectives of history learning, the urgency of preserving local history, the local relevance as a historical source, and as a way to enhance students' visual perceptual skills through interactive comic media.

The study was conducted in Bondowoso Regency, specifically at SMAN 1 Tenggarang. The selection of SMAN 1 Tenggarang as the research location is based on the following reasons: 1) The site of the Ngideri Dhisah Tradition is close to the school, so it is expected that history learning can be contextual; 2) In the context of globalization, local traditions like Ngideri Dhisah are increasingly marginalized. The use of this tradition in learning not only helps students understand cultural values but also serves as an effort to preserve local culture through education. The research subjects were targeted at Grade X students of SMAN 1 Tenggarang. The selection of this class was based on questionnaires provided during the analyze learner stage and the suitability of the developed material with the intended learning objectives. The selection of the 10th-grade class as the subject of the study is also based on the relevance of the Ngideri Dhisah tradition material to the learning in phase E at the high school level.

The instruments used in developing the *storythat comic* based on the Ngideri Dhisah tradition include a needs analysis instrument, a media expert validation instrument, a material expert validation instrument, a language expert validation instrument, an interview instrument, a user test instrument, and a visual perceptual skills instrument. The following four sub-skills are part of visual perception skills according to The National Educational Psychological Service (NEPS): 1) Visual figure ground; 2) visual discrimination; 3) visual memory; 4) visual closure (NEPS, 2015). The data collection techniques in this research used questionnaires and interviews. The statistical data analysis used by the researchers was assisted by IBM SPSS 29 software.

The study was conducted during the 2023/2024 even semester academic year with Grade X students as the research subjects. Class X students as research subjects involved in the research process are as follows: 1) 36 Class X students as respondents for the needs analysis involving 12 students from Class XA, 12 students from Class XB, and 12 students from Class XC; 2) User trials involving 5 students from Class XD; 3) Limited trials involving 15 students from Class XB; 4) Extensive trials using 35 students from Class XA. In general, the implementation of this research is as follows: 1) Analyze Stage. The researcher collects information and analyzes the needs related to the media to be developed and the level of students' perceptual visual skills; 2) Design Stage. In this stage, the researcher collaborates with teachers to create an initial draft of the storythat comic media. The initial draft of the media development is based on the needs analysis conducted in the previous stage; 3) Develop Stage. In this stage, activities include producing content aimed at creating an effective lesson plan and developing the storythat comic media. This is followed by validations by material experts, media experts, and language experts to ensure the development of a good and appropriate product; 4) Implementation Stage. In this stage, the developed learning media undergoes trial phases after obtaining assessments from validators. Implementation is carried out by conducting user trials with students and teachers; 5) Evaluate Stage. This stage involves analyzing users' responses to the learning media used and the impact of the media. These responses and impacts can be analyzed using qualitative and quantitative data analysis techniques.

The evaluation stage is conducted with a limited trial with 15 students, followed by a broader user trial involving 35 students. The limited test aims to identify the initial weaknesses of the developed learning media and to obtain feedback from potential users. This stage involves a small number of subjects (15 students) who are selected representatively based on input from the teacher. Before the limited trial process is conducted, students are given a pre-test first to determine the level of perceptual visual skills of the learners at the beginning of the learning process. Students were then given an explanation of the Ngideri Dhisah Tradition material using the developed media. Observations were conducted on the students during the learning process using the developed media. At the end of the learning process, students were given a post-test to observe the differences in their perceptual visual skills compared to the beginning of the learning. The implementation of the extensive trial is the same as that of the limited trial, but the difference lies in the number of subjects involved, which is greater than in the limited trial, involving as many as 35 students. From these limited and extensive trials, a statistical analysis will then be conducted to conclude whether the developed media is effective or not in enhancing students' visual perceptual skills.

Result
Results of Needs Analysis

This section will present the results and analysis of the needs in the field based on questionnaires that have been distributed by the researcher to 36 respondents. The respondents were randomly selected from several class X groups using purposive sampling techniques and also based on recommendations from teachers. The results from this questionnaire will be used as a basis for developing media that is relevant and appropriate to the needs in the field.

Table 1. Needs Analysis Results

Indicator	Sub- Indicator	N	Min	Max	Mean	σ
Teaching and Learning	Delivery of Learning Objectives	36	2	4	3.25	0.554
	Use of Teaching Materials	36	2	4	2.94	0.475
	Use of Various Teaching Methods	36	2	4	2.89	0.708
	Use of Interactive Learning Media	36	1	4	2.03	0.845
	Learning Evaluation	36	2	4	3.14	0.639
	Achievement of Scores KKM	36	3	4	3.19	0.401
Teacher and Other Education Personal	Use of Technology-Based Media	36	2	4	3.17	0.447
	Class Management	36	3	4	3.31	0.467
	Teacher's Personal Skills	36	2	4	3.19	0.624
	Teacher's Professional Skills	36	2	4	3.08	0.5
	Teacher's Pedagogical Skills	36	2	4	3.19	0.624
	Teacher's Social Skills	36	2	4	3.17	0.609

The next stage is design. During the design phase, the proposed ideas will be further detailed into a formulated learning media. Once the learning media design is complete, the developers can identify the materials and tools needed to create and develop the learning media, such as a laptop, internet connection, and books as additional references. Based on the needs analysis, the analyze branch, and interviews with educators, the researchers have obtained an overview of the storythat comic media to be developed in the classroom, starting with Core Competencies, learning objectives, and teaching

materials. All of this will be implemented following the syntax of the contextual teaching and learning method. The content of this storythat comic is based on the Ngideri Dhisah tradition in Bondowoso Regency.

The Ngideri Dhisah tradition, an annual ritual still practiced by the residents of Ramban Kulon Village, aims to cleanse the village and maintain the security of the village area. In addition to being used to clean the village and maintain the area, this ritual is also performed as a way to honor the land inhabited by the residents and the services of the ancestors (Raden Imam Ashary), who helped spread Islam in Bondowoso, especially in Ramban Kulon Village, Cermee District. Therefore, as a way to show gratitude, the Ngideri Dhisa tradition continues to be practiced to this day. The Ngideri Dhisa tradition is performed every Friday night for seven consecutive weeks during the second week of the month of Syawal. This is done on the night after the Ishak prayer, accompanied by reciting prayers and musical instruments. On the first day, the group only visited the resting place of Raden Imam Asy'ary, which had very difficult terrain, and they had to wade through the river barefoot. On the second and final day, he attended an invitation from the local residents. This tradition is expected to eliminate all bad things from the village. The ritual is only performed by representatives, and a group of twelve people. After the ritual is completed, they are told by the people around them that they must take a different path because they are not allowed to pass through the path they have previously taken. The Ngideri Dhisah tradition reflects the local wisdom of the Bondowoso community, particularly in maintaining harmony with the environment, ancestors, and social values. Ngideri Dhisah has a profound spiritual dimension, especially in relation to honoring ancestors. This tradition often involves collective participation from the community. This teaches the values of solidarity, cooperation, and mutual assistance.

Figure 1. The design of the storythat comic media based on the Ngideri Dhisah tradition
Source (s): research document

Development Stage

At this stage, the task is to produce content to create an effective learning framework, develop the Storythat comic media, and conduct validation by experts in media, subject matter, and language. The researcher's first step is to validate the developed media with experts in media, language, and subject matter. Below are the results of the expert validation using descriptive statistical analysis with SPSS Version 29.

Table 2. Media Expert Validation Statistics Results

Media Expert Validation Data	$\overline{X}$	N	∑n	Min	Max	Std. Deviation
	3.40	20	68	2	4	0.598

$$\overline{X} = \frac{\sum n}{N}$$
$$\overline{X} = \frac{68}{20}$$
$$\overline{X} = 3.40$$

Table 3. Statistical Results of Language Expert Validation

Language Expert Validation Data	$\overline{X}$	N	∑n	Min	Max	Std. Deviation
	3.07	15	46	2	4	0.704

$$\overline{X} = \frac{\sum n}{N}$$
$$\overline{X} = \frac{46}{15}$$
$$\overline{X} = 3.07$$

Table 4. Material Expert Validation Statistics Results

Material Expert Validation Data	$\overline{X}$	N	∑n	Min	Max	Std. Deviation
	3.50	20	70	2	4	0.688

$$\overline{X} = \frac{\sum n}{N}$$
$$\overline{X} = \frac{70}{20}$$
$$\overline{X} = 3.50$$

Implementation Stage

The next step according to the ADDIE model is the implementation stage. In this stage, the researcher tests the validated media with students and educators. The educator trial was conducted with a history teacher in class X, Mrs. Iklim, S.Pd., while the student trial was carried out with 5 students from class XD. Below are the results from the educator trial. The educator trial was conducted using a questionnaire consisting of 15 statement items that cover 3 assessment indicators: design, appearance, and content. Here are the evaluation results from the educator regarding the developed Storythat Comic media.

Table 5. Statistics Results of Educator User Trials

Educator User Trial Data	$\overline{X}$	N	∑n	Min	Max	Std. Deviation
	3.3	15	50	2	4	0.724

$$\bar{X} = \frac{\sum n}{N}$$
$$\bar{X} = \frac{50}{15}$$
$$\bar{X} = 3.3$$

Below are the statistical data analysis results and the average diagram from the student user trials.
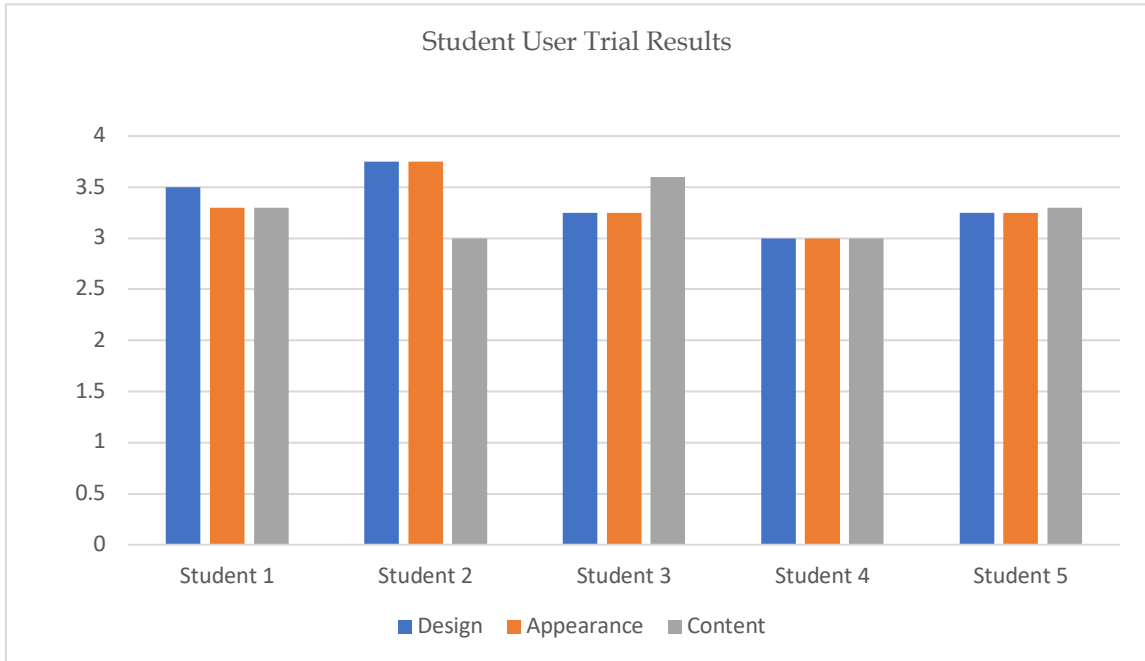

Figure 2. Student Trial Chart
Source (s): research document

Table 6. Statistical Analysis Results of Student User Testing

	$\bar{X}$	N	∑n	Min	Max	σ
Student 1	3.3	10	33	3	4	0.483
Student 2	3.4	10	34	3	4	0.516
Student 3	3.5	10	35	3	4	0.527
Student 4	3	10	30	3	3	0.000
Student 5	3.2	10	32	3	4	0.133

Table 7. Average Analysis Results of Educator User Testing

Results of Data Analysis						
Formula	Student 1	Student 2	Student 3	Student 4	Student 5	Mean
$\bar{x} = \dfrac{\sum n}{N}$	$\bar{x} = \dfrac{33}{10}$	$\bar{x} = \dfrac{34}{10}$	$\bar{x} = \dfrac{35}{10}$	$\bar{x} = \dfrac{30}{10}$	$\bar{x} = \dfrac{32}{10}$	$\bar{x} = \dfrac{164}{50}$
Mean	3.3	3.4	3.5	3	3.2	3.28

Table 8. Product Feasibility Categories

Rating	Deskription	Interpretation
$1.0 \leq SV > 1.5$	Poor	Not usable
$1.6 \leq SV > 2.5$	Fair	Usable with major revisions
$2.6 \leq SV > 3.5$	Good	Usable with minor revisions
$3.6 \leq SV > 4$	Very Good	Usable without revisions

(Sumber: Gronlund, 2001)

Evaluation Stage

The final stage that must be carried out based on the ADDIE model is evaluation. The developed media is evaluated by conducting both limited and extensive trials. This is done to assess the effectiveness of the storythat comic media based on the Ngideri Dhisah tradition in improving students' perceptual visual skills. The limited trial is conducted in class XB with a total of 15 students, while the extensive trial uses class XA with a total of 35 students. Before conducting the limited and extensive trials, the researcher first conducts a normality test as a prerequisite.

The small group trial is performed by administering pretest and posttest questions to determine the level of students' perceptual visual skills. The instrument used to measure students' perceptual visual skills in history learning is a questionnaire consisting of 20 questions. The presentation of the pretest and posttest data results for students in the small group trial will be accumulated and the average value from both tests will be taken. Below is the presentation of the pretest and posttest results from the small group trial.

Table 9. Pretest and Posttest Scores for the Small Group Trial

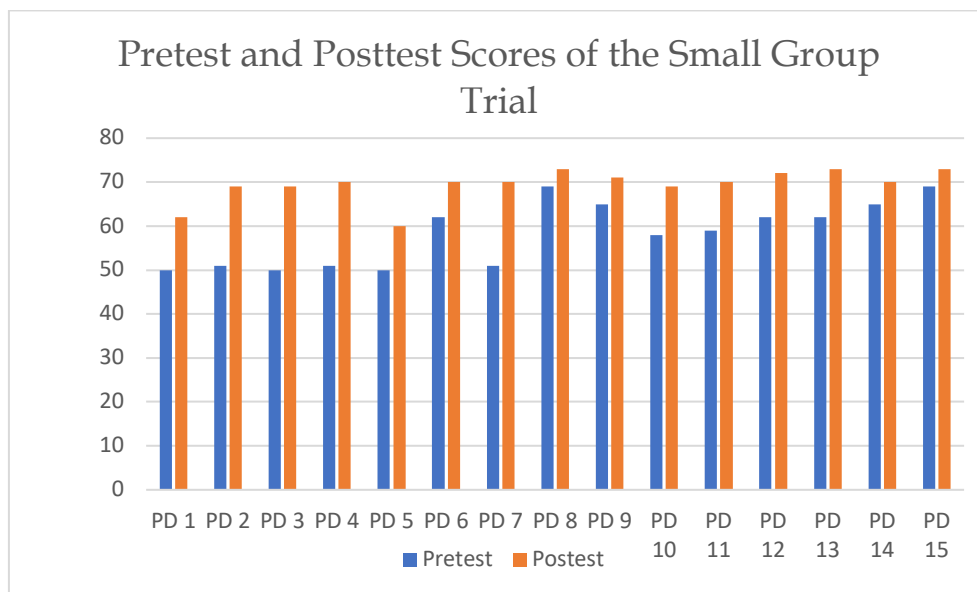| No	Initial	Score	
		Pretest	Posttest
1	AD	50	62
2	RPJ	51	69
3	GP	50	69
4	AS	51	70
5	BD	50	60
6	AMP	62	70
7	CMN	51	70
8	BPN	69	73
9	ADRT	65	71
10	NS	58	69
11	YG	59	70
12	SWT	62	72
13	TZ	62	73
14	MGP	65	70
15	ZR	69	73

Figure 3. Pretest and Posttest Score of the Small Group Trial Chart
Source (s): research document

To assess the effectiveness of the developed learning media on students' perceptual visual skills, a quantitative analysis was conducted using IBM SPSS V29. The following are the results of the Paired Samples T-Test.

Table 10. Results of Paired Samples Statistics for the Small Group Trial

Scores	Mean	Std. Deviation
Pre-test	58.27	7.206
Post-test	69.40	3.719

Table 11. Results of Paired Samples Correlations for the Small Group Trial

N	Correlation	Sig. Scores
15	0.678	0.005

After conducting the small group trial, the next step is to perform a large group trial with 35 students from Class XA. Before conducting the large group trial, a prerequisite test was performed, namely the normality test of pretest and posttest using the Kolmogorov-Smirnov test. The results indicate that the data from the pretest and posttest are normally distributed, allowing for the large group trial. The large group trial involves administering pretest and posttest questions to assess perceptual visual skills. The instrument used to measure perceptual visual skills is a questionnaire with 20 statements. Below is the presentation of pretest and posttest scores for the large group trial.
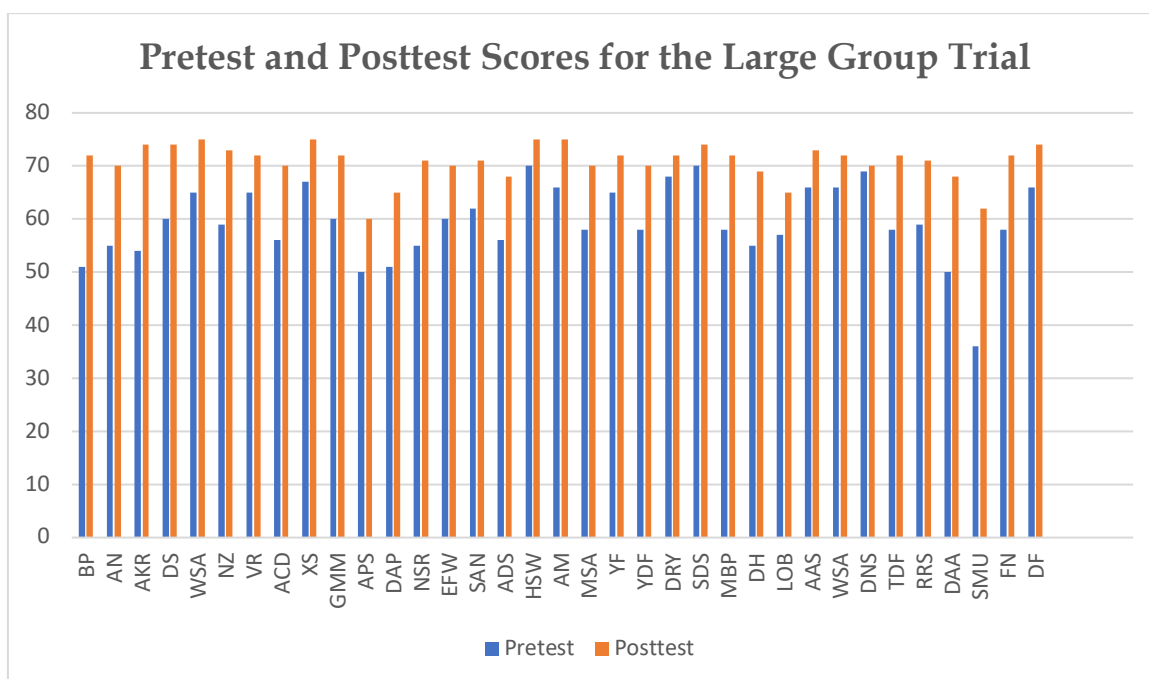

Figure 4. Pretest and Posttest Score of the Large Group Trial Chart
Source (s): research document

Table 12. Paired Samples Statistics for the Large Group Trial

Scores	Mean	Std. Deviation
Pre-test	59.40	7.105
Post-test	70.86	3.507

Table 13. Results of Paired Samples Correlations for the Large Group Trial

N	Correlation	Sig. Scores
35	0.722	0.01

Based on the results of the Paired Samples Correlations test, the significance value is 0.01, which is below the threshold of 0.05. This indicates a significant correlation between the Pre-test and Post-test scores in the large group trial at a 95% confidence level (0.01 < 0.05). Therefore, it can be concluded that there is a relationship between the Pre-test and Post-test scores in history learning using the storythat comic media based on the Ngideri Dhisah tradition, with a correlation of 0.722.

Table 14. Result of Paired Sample T-Test for Large Group Trial

t scores	Df	Sig. Scores
-13.097	34	0.01

(Sources: Processed from SPSS)

The results of the Paired Sample T-Test in the large group trial are then used to measure the effectiveness of the storythat comic media based on the Ngideri Dhisah tradition on students' perceptual visual skills, calculated using the Eta Squared formula below:

$$\text{Eta Squared} = \frac{t^2}{t^2 + (N-1)}$$
$$= \frac{-13,097^2}{-13,097^2 + (35-1)}$$
$$= \frac{171,5}{171,5 + 34}$$
$$= \frac{171,5}{205,5}$$
$$= 0,83$$

Table 15. Criteria for Relative Effectiveness Testing

Scores	Qualification
0.01	Small Efect
0.06	Moderate Effect
0.14	Large Effect

(Sources: Cohen, 1988)

Discussion

Based on Table 1, the needs analysis results from 36 respondents show that, for the teaching and learning indicator, the sub-indicator use of interactive learning media received the lowest score. This is evident from the mean value of 2.03 and a standard deviation of 0.845, indicating that the media used so far lacks variety. Based on interviews and field observations, the media most frequently used by teachers is PowerPoint. This analysis helps the researcher ensure that the study is relevant to the existing problem. By identifying the needs from the beginning, the researcher can set specific and realistic goals so that the research results can provide appropriate solutions.

Incorporating the needs analysis results regarding perceptual visual skills, this serves as the foundation for designing the Storythat Comic media based on the Ngideri Dhisah tradition in Bondowoso Regency. The advantage of Storythat Comic is its ability to assist in developing students' visual literacy skills, which are crucial in today's digital world. These skills enable students to interpret and understand information presented visually. According to research by Serafini (2014), visual literacy is an increasingly important skill, and digital comics are an effective tool for developing this skill in students. Colorful and engaging images and illustrations can increase students' attraction to the material presented. Visually appealing content can help simplify the understanding of complex concepts. According to Mayer (2009) a combination of text and images can enhance comprehension and retention of information. The story in comics can make learning more enjoyable and less boring. Students are more easily engaged and motivated to learn. Clark & Mayer (2023) assert that narrative elements can enhance learning interest and motivation.

The use of learning media like Storythat Comic can be integrated with local culture to create a more contextual and meaningful learning experience for students. Storythat Comic can be developed based on the Ngideri Dhisah tradition. Ngideri Dhisah is an annual ritual still practiced by the people of Ramban Kulon Village, aimed at cleansing the village and ensuring its security. This ritual is also a way of showing respect for the land inhabited by the villagers and honoring their ancestors (Raden Imam Ashary), who helped spread Islam in Bondowoso, especially in Ramban Kulon Village, Cermee District. As an expression of gratitude, the Ngideri Dhisah tradition continues to this day.

Through Storythat Comic, values from the Ngideri Dhisah tradition, such as teamwork, courtesy, and respect, can be taught in an interesting and relevant way for students. This aligns with the view of Maghfiroh & Wachidah (2023), who state that one advantage of using comics in education is stimulating students' reading interest. Additionally, setting the story within a local environment, such as villages or well-known landmarks, can help students understand and appreciate their surroundings. Heinich (2002) mention that using local contexts in educational media can enhance student relevance and engagement. The development of Storythat Comic based on the Ngideri Dhisah tradition can improve perceptual visual skills and instill moral values and character in students.

In the development stage, the goal is to produce and validate the selected learning resources (Branch, 2009; Spatioti et al., 2022). At this stage, content must be created to develop an effective learning framework and Storythat Comic media, which will undergo expert validation by media, material, and language specialists. The purpose of expert validation is to determine whether the developed media is feasible for use (Tasmiyah et al., 2023). Appropriate and feasible media usage will affect students' hard skills, especially their cognitive abilities (Yanto et al., 2023). The first step taken by the researcher is to validate the developed media with media expert Ms. Rully Putri Nirmala Puji, S.Pd., M.Ed. The media validation results were analyzed descriptively using SPSS Version 29.

Based on the media expert's assessment of the Storythat Comic media, a score of 3.40 was obtained (Table 2). According to the feasibility table (Gronlund, 2001), this indicates that the Storythat Comic media is categorized as "usable with minor revisions." In addition to media validation, the researcher also conducted language validation with language expert Mr. Ahmad Sukron, S.Pd., M.Pd. Good language usage in educational media helps students assimilate information more effectively and efficiently, delivering the intended learning message (Ryan, 2015; Wicaksono, 2016).

Table 3 shows that the average language validation result is 3.07. When compared to the feasibility table, it can be concluded that the language used in Storythat Comic media is usable with minor revisions. After validating the media and language, the researcher also validated the content created. The material used is the Ngideri Dhisah tradition, a local wisdom in Bondowoso Regency, specifically in Cermee District, Ramban Kulon Village. Ngideri Dhisah is an annual event held by the villagers of Ramban Kulon during the second week of the Syawal month. Ngideri means "circling," while Dhisah means "village." This tradition is an expression of gratitude to God Almighty for the land they inhabit and respect for their ancestors. The researcher selected this material based on the proximity of the research subjects to the Ngideri Dhisah tradition, enhancing perceptual visual skills through contextual learning.

The content validation results, as shown in Table 4, averaged 3.50, indicating that the Ngideri Dhisah tradition material is categorized as "good" and usable with minor revisions.

The next step in the ADDIE model is implementation. After validating and revising the media, the researcher conducted user testing with educators and students to ensure the feasibility of the developed educational media. The user test results for educators, as shown in Table 5, yielded an average score of 3.3, categorized as "good and usable with minor revisions." Testing with students, conducted on five 10th-grade students, is essential to ensure the media meets their learning needs.

According to the student user test results (Tables 6 and 7), the average score was 3.28, categorized as "good and usable with minor revisions" when compared to the feasibility table (Table 8). The media is thus suitable for limited and extensive trials to assess its effectiveness in improving students' perceptual visual skills.

The final step is evaluation, involving limited and extensive trials to assess the media's effectiveness. A normality test was conducted first to ensure the appropriate statistical method was used. Based on Table 9, the pretest and posttest average scores were 58.27 (Std. Dev.=7.206) and 69.40 (Std. Dev.=3.719), respectively. This indicates a significant improvement in students' perceptual visual skills after using the Storythat Comic media based on the Ngideri Dhisah tradition.

Conclusion

Based on the discussion above, it can be concluded that the storythat comic media based on the Ngideri Dhisah tradition, which was developed, is effective in improving students' perceptual visual skills. The developed media can be categorized as having a large effect on enhancing the effectiveness of the learning process and students' perceptual visual skills. Additionally, when comparing the pre-test and post-test scores from the small group and large group trials, there is a significant difference in the average scores between the pre-test and post-test. This indicates an improvement in students' perceptual visual skills. The innovation of history learning using storythat comic media based on the Ngideri Dhisah tradition can be utilized in contextual history learning processes. Contextual history learning, combined with engaging learning media, will certainly enhance the effectiveness of students' perceptual visual skills and the overall learning process.

It is hoped that this research can provide initial information about students' abilities to give perception and meaning to historical events based on visualizations from various learning media, one of which is the storythat comic media based on the Ngideri Dhisah tradition. Thus, there will be further research on innovations in history learning that make it easier for students to understand historical events in their surroundings. Innovating history learning by utilizing developed media based on traditions or cultures around the students will certainly make history learning more engaging and less monotonous. Based on the validation results from media, language, and content experts, the storythat comic history learning media based on the Ngideri Dhisah tradition is deemed suitable for use in teaching and learning activities. Therefore, the researcher hopes that this study can contribute to the advancement of innovative and creative history learning processes using engaging learning media. Moreover, this research can provide initial information for future studies that wish to examine students' perceptual visual skills, especially in the history learning process.

References

Al Faruque, S. N. (2023). The Unique Power of Comics: A Comprehensive Exploration of the Visual Verbal Medium and Its Impact on Storytelling, Communication, and Culture. International Journal Of English and Studies (IJOES) . *International Journal Of English and Studies (IJOES)* , *5*(10), 1–11. https://doi.org/10.47311/IJOES.2023.5.10.11

Bobek, E., & Tversky, B. (2016). Creating visual explanations improves learning. *Cognitive Research: Principles and Implications*, *1*(1), 27. https://doi.org/10.1186/s41235-016-0031-6

Branch, R. M. (2009). *Instructional Design: The ADDIE Approach*. Springer.

Candrayani, N. M. W., & Sujana, I. W. (2023). Digital Comics: Character Value-Based Learning Media in the Ramayana Puppet Story Content Social Studies Elementary School. *Indonesian Values and Character Education Journal*, *6*(1), 63–72. https://doi.org/10.23887/ivcej.v6i1.54657

Clark, R. C., & Mayer, R. E. (2023). *E-learning and The Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning*. Wiley.

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences (2nd ed.)*. Routledge.

Cohn, N. (2020). Your Brain on Comics: A cognitive Model of Visual Narrative Comprehension. *Topics in Cognitive Science*, *12*(1), 352–386. https://doi.org/10.1111/tops.12421

Cui, J., Zhang, Y., Wan, S., Chen, C., Zeng, J., & Zhou, X. (2019). Visual form Perception is Fundamental for Both Reading Comprehension and Arithmetic Computation. *Cognition*, *189*, 141–154. https://doi.org/10.1016/j.cognition.2019.03.014

Farahiba, A. S., & Kayati, . A. N. (2022). Development Of Interactive Comic Media Validation Instruments Based On Madura's Local Wisdom. *Curricula: Journal of Teaching and Learning*, 143–155. https://doi.org/10.22216/curricula.v6i3.734

Fatimah, S., Hidayat, H., Sulistiyono, S. T., Alhadi, Z., & Firza, F. (2023). Digital Literacy toward Historical Knowledge: Implementation of the Bukittinggi City History Website as an Educational Technology. *JOIV: International Journal on Informatics Visualization*, 7(4), 2445–2451. https://doi.org/10.62527/joiv.7.4.2224

Fatimah, S., Prasetyo, S., & Munastiwi, E. (2024). Inovasi dalam Pengajaran IPA di Sekolah Dasar Melalui Penggunaan Teknologi Digital. *MUBTADI: Jurnal Pendidikan Ibtidaiyah*, 6(1), 15–27. https://doi.org/10.19105/mubtadi.v6i1.14271

Feka, M. G., Donuata, P. B., & Koten, F. P. N. (2023). Pengembangan Komik Fisika Materi Kemagnetan Sebagai Media Pembelajaran Siswa SMPN 1 Maumere. *Kappa Journal*, 7(3), 438–442. https://doi.org/10.29408/kpj.v7i3.21226

Fiorella, L., & Kuhlmann, S. (2020). Creating drawings enhances learning by teaching. *Journal of Educational Psychology*, 112(4), 811–822. https://doi.org/10.1037/edu0000392

Gronlund. (2001). *Constructing Achievement Test* (5th ed.). New York: Prentice Hall inc.

Guo, D., McTigue, E. M., Matthews, S. D., & Zimmer, W. (2020). The Impact of Visual Displays on Learning Across the Disciplines: A Systematic Review. *Educational Psychology Review*, 32(3), 627–656. https://doi.org/10.1007/s10648-020-09523-3

Heinich, R. (2002). *Instructional Media and Technologies for Learning*. Britania Raya: Merrill.

Liu, S., Wei, W., Chen, Y., Hugo, P., & Zhao, J. (2021). Visual–Spatial Ability Predicts Academic Achievement Through Arithmetic and Reading Abilities. *Frontiers in Psychology*, 11, 1–11. https://doi.org/10.3389/fpsyg.2020.591308

Macgilchrist, F., Allert, H., & Bruch, A. (2019). Students and society in the 2020s. Three Future 'Histories' of Education and Technology. *Learning, Media and Technology*, 76–89. https://doi.org/10.1080/17439884.2019.1656235

Maghfiroh, A., & Wachidah, K. (2023). The Effect of Using Digital-Based Comic Learning Media on Reading Literacy for Grade 4 Elementary School Students. *Indonesian Journal of Innovation Studies*, 21, 1–15. https://doi.org/10.21070/ijins.v21i.751

Mayer, R. E. (2009). *Multimedia Learning*. Cambridge: Cambridge University Press.

Mulyati, T., Kusumadewi, R. F., & Ulia, N. (2021). Pembelajaran Interaktif Melalui Media Komik sebagai Solusi Pembelajaran di Masa Pandemi. *Pedagogi: Jurnal Penelitian Pendidikan*, 8(1), 28–39. https://doi.org/10.25134/pedagogi.v8i1.4054

NEPS. (2015). *Visual Perception*. https://assets.gov.ie/41301/e3632f9137544262b40d7e0c5e9a3604.pdf

Offiana, I., Agung Gede, D. A., & Nafi'ah, U. (2020). Pengembangan Media Pembelajaran Komik Digital pada Materi Pokok Keruntuhan VOC untuk Peserta Didik Kelas XI MIPA 4 SMAN 1 Turen Kabupaten Malang. *Jurnal Pendidikan Sejarah Indonesia*, 6(1), 19–29. https://doi.org/10.17977/um0330v6i1p19-29

Patphol, M., & Wongyai, W. (2021). Development of Leaning Management Model for Creative and Innovation Skills Enhancement of Primary Students: A Case Study in Thailand. *Elementary Education Online*, 20(1), 217–227. https://doi.org/10.17051/ilkonline.2021.01.024

Putri, N. K., & Ofianto, O. (2023). Analisis Pengembangan Media Komik Digital untuk Pembelajaran Sejarah Siswa SMA. *Jurnal Kronologi*, 5(1), 307–3017. https://doi.org/10.24036/jk.v5i1.642

Ryan, J. (2015). Reconstructing Miscommunications for The Language Classroom. *ELT Journal*, 69(4), 405–414. https://doi.org/10.1093/elt/ccv016

Seels, B. B., & Richey, R. C. (2012). *Instructional Technology: The Definition and Domains of the Field*. Bloomington, IN: Association for Educational Communications and Technology.

Spatioti, A. G., Kazanidis, I., & Pange, J. (2022). A Comparative Study of the ADDIE Instructional Design Model in Distance Education. Information. *Information*, *13*(9), 402. https://doi.org/10.3390/info13090402

Tasmiyah, T., Rusmawati, R. D., & Suhari, S. (2023). Pengembangan Bahan Ajar Berbasis Web Google Sites Materi Stoikiometri dengan Model ADDIE. *Jurnal Ilmiah Ilmu Pendidikan*, *6*(12), 9799–9805. https://doi.org/10.54371/jiip.v6i12.2889

Tomita, K. (2018). Does the Visual Appeal of Instructional Media Affect Learners' Motivation Toward Learning? *TechTrends*, *62*(1), 103–112. https://doi.org/10.1007/s11528-017-0213-1

Wardani, T. K. (2012). Penggunaan Media Komik dalam Pembelajaran Sosiologi pada Pokok Bahasan Masyarakat Multikultural. *Komunitas*, *4*(2), 230–243. https://doi.org/10.15294/komunitas.v4i2.2418

Wicaksono, L. (2016). Bahasa dalam komunikasi pembelajaran. *Jurnal Pembelajaran Prospektif*, *1*(2). https://doi.org/10.26418/jpp.v1i2.19211

Widyana, R. (2009). *Hubungan Antara Persepsi Visual dan Kemampuan Membaca Siswa Kelas 1-2 Sekolah Dasar*. Http://Fpsi. Mercubuana-Yogya. Ac. Id/Wpcontent/Uploads/2012/06/Rahma-Membaca-Agustus-2009.

Wulandari, A., Salsabila, A., Nurazizah, T., & Ulfiah, Z. (2023). Pentingnya Media Pembelajaran dalam Proses Belajar Mengajar. *Journal on Education*, *5*(2), 3928–3936. https://doi.org/10.31004/joe.v5i2.1074

Yanto, R., Waskito, W., Effendi, H., & Purwanto, W. (2023). Development of Web-Based Learning Media Using Google Sites in Vocational High School Informatics Subjects. *Journal of Vocational Education Studies*, *6*(1), 11–24. https://doi.org/10.12928/joves.v6i1.8027

.