



## Developing Pop-Up Book Digital as Learning Media of Procedure Text: Student's Learning Style

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ARTICLE INFO	ABSTRACT
<p><b>Article history:</b></p> <p>Received</p> <p>Accepted</p>	<p>The research aim to obtain the learning style of seven grade students at SMP Pahlwan Medan. The result gained from this study are used to develop Pop-Up Book Digital as learning media which appropriate based on student's need. This research method used the Research and Development (R&amp;D) method with the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation). But researchers limit this study only to the analysis stage where to analyzed student's learning style as the first stage. The data collection technique is in the form of a questionnaire and have been given to 27 students. The result of this study shows that the majority of students, namely 32.8%, have a visual learning style, then 32.6% have an auditory learning style, and 21.5% have a kinesthetic learning style.</p>
<p><b>Keywords:</b></p> <p><i>Pop up book digital</i></p> <p><i>Learning style</i></p> <p><i>Procedure Text</i></p>	

## INTRODUCTION

In learning English, there are two main skills that must be mastered by students, namely receptive and productive skills. English is one of the foreign languages studied at school. Each student has a different learning style, which is the preferred way for students to receive and process information in learning. There are various theories about learning styles, one of which is the theory of Bobby De Potter (1992) in (Alhafiz, 2022) argues that each person has a different tendency to absorb information / learn. There are three learning styles, namely what is often abbreviated as VAK: Visual, Audiotory, Kinesthetic.

Technology plays a major role in the educational revolution that is taking place, especially the 21st century educational revolution and especially in the fourth revolution called education 4.0. At this stage, the teacher's function is not central in the learning process, but changes to student-centred where the teacher prepares learning resources and media (Unik & Niar, 2021). The benefit of learning media is to improve the quality of learning and make it easier for students to understand the subject matter. Learning media can be visual, audio or a combination of both, such as images, videos, presentations and others (Anugrah, 2023). The use of learning media must be as optimal as possible while still considering the needs of students in order to achieve learning goals (Siti Samsidar, 2022). One form of learning media resulting from technology is Pop Up Book which is packaged in digital form. Digital Pop-Up Book is one of the learning media that is a combination of three-dimensional (3D) visualization equipped with audio or sound effects in it. According to Ningtiyas, Setyosari, & Praherdiono (2019) Pop-Up Book is a book that uses paper engineering with 3-dimensional images that are used to describe the material in more detail.

Previous research has been conducted on 25 third grade students at SD Negeri Lamreung Aceh Besar collected through a questionnaire containing 10 questions related to the feasibility of Digital Pop Up Book Learning Media and getting a "very feasible" response with the score obtained from the III-A class teacher is 92% and from the III-B class teacher is 96%. According to preliminary data through observation and asked the teacher at SMP Pahlawan, the highest score of students was 95 and the lowest score was 50 with KKM (minimum achievement criteria) of 75. From the total number of students 27, 18 of them were still unable to reach the expectation of KKM in this material This happens because there are still many underlying factors, such as the inability of students to understand the learning carried out by the teacher due to the limited media used. Based on the data above, researchers need to follow up on the problems experienced by students through the development of digital Pop-Up Book learning media on student text procedure material based on their needs and learning styles.

This research aims to investigate the learning needs of students based on 3 aspects

of learning style and the development of Pop-Up Book Digital learning media on text procedure material in differentiated learning based on students' learning style.

### 1. English Language

In learning English, there are four skills (abilities) which are divided into two parts, namely productive and receptive. Both types of skills must be developed in order to become proficient in English. Productive skills are speaking skills and writing skills, while receptive skills are reading skills and listening skills.

### 2. Differentiated Learning

Differentiated learning allows each teacher to meet and interact with students at a level comparable to their level of knowledge to then prepare their learning preferences (Purnawanto, 2023). Learning style is an individual's way to absorb and process information easily according to their abilities. The diverse learning styles of each student must be accommodated with differentiated learning. Bobby De Potter (1992) in (Alhafiz, 2022) argues that each person has a different tendency to absorb information / learn. There are three learning styles, namely what is often abbreviated as VAK: Visual, Auditory, Kinesthetic. Visual learning style. Someone who has a visual learning style, which plays an important role is the eye / vision (visual). Visual learning style emphasizes visual acuity. This means that concrete evidence must be shown first for students to understand. Auditory learning style. Basically, auditory learning style is a learning style by hearing. The auditorial learning style prioritizes the sense of hearing. Kinesthetic learning style. Kinesthetic learning style is a learning style by moving, working, and touching. The point is to learn by prioritizing the sense of taste and physical movements. (Supit, et.al., 2023).

### 3. Learning Media Development

Pop Up Book Digital, according to (Samsidar, 2022), pop-up book is a book that has 2 or 3-dimensional elements besides that pop-up book has a beautiful and enforceable image display. Pop-up books in digital form have the ability to increase the impression that the material is intended to be conveyed, making it easier to remember and learn. Digital pop-up books can provide a more interesting visualization of the material.

### 4. Procedure Text Material

Procedure text is a type of text that serves to inform readers about the steps of doing something. The purpose of this text is to explain how something is made, done, or used with clear and sequential steps. The linguistic characteristics of procedure text are, using simple present tense, imperative sentence, connectives, adverbs. The generic structure of procedure text consists of aim/goal, ingredients/materials, and steps/methods.

## **METHOD**

The research method that researchers use is a type of development research method or called Research and Development (R&D), this research method is used to produce a certain product and also measure the feasibility level of the product. The resulting research

products can be in the form of software or hardware. Research and Development has 4 levels (Sugiyono, 2016: 32-33) and in this study, researchers will use Research and Development at level 3, namely revising existing products and testing the effectiveness of these products.

The product development model used is the ADDIE model which has several stages, namely: analysis, design, development, and implementation. In addition, to test the effectiveness of the product, a pre-test and post-test will be conducted on student learning outcomes before and after using the developed product.

#### Instrument Data

Data collection techniques are the application or application of instruments in the context of collecting or obtaining research data (Arikunto, 2013). The data collection techniques used in this study are:

##### 1. Validation Questionnaire

Validation activities are carried out by experts to assess the product design developed. Before the learning media is implemented in the classroom, it is first validated by two experts, namely: media experts and material experts. The scale used in the questionnaire data is a Likert scale which is used to measure the attitudes, opinions, and perceptions of a person or group of people about social symptoms or events (Sugiyono, 93). The data collection technique used is to provide the results of the learning media design that has been developed along with the validator sheet to assess its feasibility so that the results of the validator can become a reference in revising the media.

##### 2. Test

Test is a form of questions given to students to get answers from students in the form of oral tests, written tests or in action tests. This test will be used in measuring the effectiveness of the learning media developed through assessing and measuring student learning outcomes, especially cognitive learning outcomes with regard to mastery of teaching materials or student knowledge in accordance with educational and teaching objectives. This test will be carried out twice, namely the pre-test and post-test to measure student understanding before and after using the learning media developed on text procedure material with standard learning outcomes in accordance with the minimum completeness criteria (KKM) in English subjects.

#### Data Analysis

##### 1. Expert Validation Analysis

Analysis of the validation sheet is done by distributing a validation sheet table containing statements with scores equipped with the value of the score. This table will be given to experts who will assess digital Pop Up Book learning media on text procedure material. In this study, the data analysis process on the expert validation sheet used a Likert scale. The assessment scores used are: (5) very feasible, (4) feasible, (3) less feasible, (2) not feasible, and (1) very not feasible (Mardapi, 2008). The percentage of validation results can be calculated using the following equation:

Description:

P = percentage (%)

$\sum x$  = number of scores from validators

$\sum X$  = total number of ideal scores

The benchmarks used to interpret the percentage of expert team validation results are adapted by Arikunto (2004).

## RESULT

In accordance with the implementation of the differentiated curriculum system by prioritizing student learning styles as the main benchmark for a teacher in determining teaching materials in certain subjects, the team distributed questionnaires to students to find out their learning styles. The following are the results of the learning style analysis of Pahlawan Private Junior High School students in grades 7-6, consisting of 27 students.

Tabel 5.2 Hasil Analisis Gaya Belajar

No	Pertanyaan	Item	N	F	Persentase
1	Pada saat menggunakan peralatan baru saya biasanya	A. Membaca instruksi lebih dahulu	27	15	55,5%
		B. Mendengarkan penjelasan dari orang yang sudah pernah menggunakan alat tersebut sebelumnya		5	18,5%
		C. Langsung mencobanya, saya yakin saya akan tahu cara menggunakannya		6	22,2%
2	Pada saat saya berbelanja pakaian, saya lebih cenderung	A. Membayangkan seperti apa pakaian itu kalau saya pakai	27	10	37%
		B. Menanyakan ke penjual apakah pakaian itu cocok atau tidak untuk saya		3	11,1%
		C. Mencoba memakai pakaian tersebut dan melihatnya cocok atau tidak		14	51,8%
3	Ketika memilih tempat untuk liburan saya biasanya	A. Membaca banyak brosur/ mencari informasi secara daring	27	10	37%
		B. Mendengar rekomendasi dari teman		6	22,2%
		C. Membayangkan seperti apa kalau saya berada di tempat yang ingin saya pilih		11	40,7%

4	Ketika saya belajar sebuah keterampilan baru, saya paling merasa sesuai dengan	A. Memperhatikan apa yang dilakukan guru saya	10	37%	
		B. Menanyakan langsung kepada guru saya apa yang sebenarnya harus saya lakukan	27	11	40,7%
		C. Mencobanya sendiri dan mempraktikannya sambil berjalan	7	25,9%	
5	Kalau saya sedang memilih makanan dari daftar menu, saya cenderung	A. Mengimajinasikan seperti apa makanan yang sedang saya pilih	9	33,3%	
		B. Menanyakan tentang makanan yang saya pilih dengan teman saya	27	7	25,9%
		C. Mengimajinasikan bagaimana rasa makanan itu	10	37%	
6	Ketika mendengarkan sebuah grup band bernyanyi di radio atau telepon saya, saya sangat ingin	A. Menonton secara langsung seluruh personil band tersebut dan seluruh orang yang hadir	27	12	44,4%
		B. Mendengarkan lirik dan ketukan musiknya	11	40,7%	
		C. Bergerak/berjoget mengikuti musiknya	4	14,8%	
7.	Ketika saya berkonsentrasi saya paling sering	A. Fokus pada kata atau gambar yang ada di depan saya	20	74%	
		B. Memikirkan masalah dan kemungkinan solusinya	27	3	11,1%
		C. Berjalan ke sana ke mari, memainkan pena dan pensil dan menyentuh benda-benda yang ada di sekitar	4	14,8%	
8	Ingatan saya yang paling kuat adalah	A. Melihat sesuatu.	10	37%	
		B. Ketika diucapkan oleh seseorang	27	10	37%
		C. Langsung melakukan sesuatu	7	25,9%	
9	Saya merasa tertarik dengan	A. Tampilannya	27	2	7,4%
		B. Caranya berbicara	7	25,9%	

	orang lain karena	kepada saya			
		C. Caranya yang ia lakukan sehingga saya tertarik	18	66,6%	
		A. Menunjukkan apa yang saya maksudkan	8	29,6%	
	Ketika saya sedang menjelaskan kepada seseorang saya cenderung:	B. Menjelaskan dengan beberapa cara supaya ia mengerti	15	55,5%	
10		C. Mengarahkan agar ia mencoba dan menyampaikan penjelasan ketika ia mencoba mengerjakannya	27		
		A. Menonton film, fotografi, melihat karya seni	6	22,2%	
11	Saya sangat suka	B. Mendengarkan musik, radio, atau berbincang dengan teman	27	16	59,2%
		C. Ikut serta dalam kegiatan olah raga atau menari	3	11,1%	
	Saya menghabiskan waktu luang saya untuk:	A. Menonton televisi	5	18,5%	
12		B. Ngobrol dengan teman	27	13	48,1%
		C. Melakukan aktivitas fisik atau membuat sesuatu	9	33,3%	
	Yang pertama sekali saya lihat dari seseorang adalah:	A. Penampilan dan cara berpakaianya	8	29,5%	
13		B. Suara dan cara bicaranya	27	19	70,3%
		C. Cara ia berdiri dan bergerak	0	0%	
	Hal yang paling mudah saya ingat	A. Wajah	10	37%	
14		B. Nama	27	13	48,1%
		C. Semua hal yang sudah saya lakukan	3	11,1%	
	Saya bisa mengingat dengan baik dengan cara	A. Menulis catatan atau menyimpan salinan informasi rinci yang terkait	13	48,1%	
15		B. Mengucapkannya atau mengingat kata dan poin-poin penting dalam	27	8	29,5%

benak saya		
C. Melakukan dan mempraktikkan sesuatu atau setidaknya membayangkan bagaimana sesuatu itu dikerjakan	6	22,2%

The answer items in point (A) refer to the visual learning style, then point (B) refers to the auditory learning style and point (C) refers to the kinesthetic learning style. This questionnaire is an adaptation of Wierdati (2019) in the GLS manual series book *The Importance of Understanding Learning Styles*. Based on the results of the analysis, it can be seen that the majority of students, namely 32.8%, have a visual learning style, then 32.6% have an auditory learning style, and 21.5% have a kinesthetic learning style.

Based on further observations, this happens because there are still many underlying factors, such as students' inability to understand the learning carried out by the teacher due to the limited media used. In addition, it turns out that in understanding a material there are several things that students like the most, such as paying attention to what the teacher explains, asking directly what to do, even students prefer to practice or try the material themselves while walking around so they can understand it. The diversity of students will increase awareness for teachers to care more about what students need. This is because it will have an effect on the effectiveness of learning. After understanding students' learning styles, it is then the teacher's role to accommodate and apply differentiated learning during the learning process in the classroom. Differentiated learning does not mean teaching students using different methods, nor does it mean that smart students have to learn with smart students and vice versa based on Corley (Lailiyah, 2016). To be effective in teaching, planning must be done in advance. After understanding the characteristics of the students, media design can be done to meet the needs and abilities of the students. Students who have a visual learning style, emphasize visual acuity, this means that concrete evidence must be shown first so that students understand. Students who have an auditory learning style, emphasize hearing so that they easily understand something through explanations that are absorbed by the sense of hearing. Students who have a kinesthetic learning style focus on moving, working, and touching, this means learning by prioritizing the sense of taste and physical movements. Bobby De Potter (1992) in (Alhafiz, 2022). This digital Pop up book media will certainly be equipped with interesting visuals due to the learning style of 32.8% visual students, audio due to the learning style of 32.6% auditory students, as well as clear procedure text material and contains commands that ask students to move due to the learning style of 21.5% kinesthetic students.



## CONCLUSION

Based on the research findings, the development of digital pop-up books as a differentiated learning tool for teaching procedural text is a promising approach to enhance student learning. By combining visual, auditory and kinesthetic elements, it effectively caters to students' diverse learning styles. The results show that this innovative approach can significantly improve students' comprehension of procedural texts and overall academic performance. The research found that students' learning styles vary widely, which highlights the need for differentiated teaching. Digital pop-up books were found to be an effective tool in addressing the specific learning needs of students with different learning preferences. The use of visual, auditory and kinesthetic elements in the media increased student engagement and understanding. Future research could explore the long-term impact of using this digital tool on student achievement and explore its applicability to other subjects and grade levels. In addition, investigating the effectiveness of digital pop-up books in different cultural and linguistic contexts would provide valuable insights into their universality. Overall, the findings of this study support the integration of technology-based learning materials into educational practices to create more inclusive and engaging learning experiences for all students.

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