Development of Differentiated Teaching Materials in Explanatory Text Materials Using the Canva Application for Bangun Insan Mandiri Middle School Students 2023/2024

Putri Septia Gesima

{putrigesima@gmail.com¹}

Indonesian Language and Literature Education Study Program of Postgraduate School of Universitas Negeri Medan, Indonesia 2024

Abstract. This research aims to determine: (1) the process of developing differentiated teaching materials for explanatory text using the Canva application for students of Bangun Insan Mandiri Middle School in Medan, (2) the feasibility of these differentiated teaching materials, and (3) their effectiveness. The research employs the Borg and Gall development model. Data collection involved distributing questionnaires and descriptive tests. The results show that (1) the development process includes 10 stages, from problem identification to mass production, (2) the teaching materials are deemed suitable based on evaluations from material experts (93.18%), design experts (99.07%), Indonesian language teachers (98.52%), individual trials (98.46%), small group trials (98.48%), and limited field trials (95.96%), and (3) the materials are effective for use in the learning process.

Keywords: Teaching Materials, Differentiation, Explanatory Text, Canva.

1 Introduction

Teaching materials are an integral part of the learning process and their success in the classroom heavily depends on their quality. Good teaching materials must be innovative and relevant to students' lives so that the content can be easily conveyed and understood. According to the National Center for Competency-Based Training, teaching materials include any form of materials used by teachers to facilitate classroom learning. Teaching materials can be written or non-written. Meanwhile, Prastowo (2011:28-30) defines teaching materials as systematically arranged learning materials used by teachers and students during the learning process. The content of teaching materials includes learning instructions, competencies to be achieved, supporting information, exercises, worksheets, and evaluation.

The proper and effective use of teaching materials is also key to the success of professional teachers in delivering learning to students. Elsa et al. (2023:105) in their journal state that the

role of teaching materials is to accelerate the learning process and facilitate teachers as facilitators by increasing student participation and interaction. Therefore, teachers as the drivers of learning success must have innovative and creative abilities to maximize student learning outcomes. This statement is in line with Purwitasari (2014:298) in "Developing a Teaching Material Model for Observation Report Texts for Class X Vocational High School Students," which states that proper teaching material development can motivate students and create a fun and engaging learning environment. Teachers should also have the ability to choose and develop teaching materials that align with the curriculum and students' needs, as stipulated in the Regulation of the Minister of National Education No. 16 of 2007 on teacher competencies.

However, in reality, many teachers are unable to develop innovative teaching materials. Most teachers rely on a single learning resource, namely the textbook, as stated by Elsa (2023:106). The lack of teacher ability in developing teaching materials negatively impacts the learning process and results in suboptimal learning outcomes.

A similar situation occurs at SMP Bangun Insan Mandiri Medan, where the teaching materials used are still focused on the Indonesian language textbooks from the Erlangga publisher. Although the government has introduced a new curriculum, "Merdeka Belajar," which emphasizes differentiated learning, the teaching materials used still refer to the previous curriculum and are inadequate in incorporating differentiated learning strategies. This leads to a lack of student interest and varying levels of understanding among students.

Differentiated learning is a teaching approach that tailors the curriculum, teaching methods, assessments, classroom environment, and individual student needs (Wisman et al. 2022:60). Each student has a different learning style, way of learning, and ability to achieve success in learning. Therefore, teaching materials should take into account three different learning styles: visual, auditory, and kinesthetic.

The use of Canva as a tool for developing differentiated teaching materials is highly appropriate. Canva offers various interesting features such as templates, images, attractive fonts, videos, audio, and can be directly shared with students through Canva for Education. These features align with students' learning styles and can enhance learning success.

From the curriculum perspective, students' ability to understand explanatory texts is important. However, the researcher's observations found that students still have difficulty understanding explanatory texts. This is also supported by research from Astri et al. (2020), which states that students' low ability to write explanations is due to their inability to understand explanatory texts, which are considered difficult.

This research aims to develop, validate, and test the success of differentiated teaching materials for explanatory texts using Canva. These teaching materials are expected to be an alternative solution for teachers to increase student participation in the learning process in SMP Bangun Insan Mandiri Medan.

2 Theoretical Basis

2.1 Teaching Materials

Teaching materials are any form of material used in the learning process (Majid, in Kosasih, 2021:1). Teaching materials can also be defined as content that students must learn (Depdiknas, 2003). These materials encompass knowledge, skills, and attitudes that students need to master in relation to specific basic competencies.

Teaching materials are used by both students and teachers or learners to facilitate the learning process, such as textbooks, student worksheets (LKS), and audiovisual media. In addition, teaching materials can also include digital materials, newspaper articles, photos, instructions from teachers, direct discussions with speakers, cards, written assignments, and student discussion materials (Kosasih, 2021:2). Therefore, teaching materials can take various forms that enrich students' experiences and knowledge.

According to Benny (2021:5), teaching materials are resources containing knowledge and information for their users. Teaching materials serve as a medium to transfer skills and knowledge from the source to the learner. The use of these materials can increase students' interest, motivation, and desire to learn.

A variety of teaching materials facilitate students in achieving the required competencies (Kosasih, 2021:18). Generally, teaching materials are classified into printed and non-printed materials. Printed materials include modules, brochures, textbooks, and posters, while non-printed materials encompass multimedia, videos, and audio.

Based on the types of teaching materials mentioned in these opinions, the teaching material to be developed in this research is multimedia-based teaching materials in the form of web-based modules. These are considered suitable for helping students understand explanatory texts in the eighth grade at SMP Bangun Insan Mandiri, where the learning process uses the "Merdeka" curriculum, which emphasizes differentiated learning.

2.2 Differentiated Teaching Materials

Differentiated teaching materials are an approach designed to meet the diverse learning needs of each student in the classroom. It involves using teaching strategies that allow teachers to adjust the materials, processes, and assessments according to students' learning styles, interests, and levels of understanding.

Teaching materials that support students' success in understanding the lesson must also incorporate four main aspects of differentiation. These four elements should be included in the teaching materials.

According to Ropin Sigalingging (2020:17), differentiated teaching materials must fulfill the four aspects present in the learning process, which are (1) **Content**; refers to what the teacher teaches to the students. The steps for organizing lesson content include: 1.Determining the material to be taught according to the students' readiness level. 2.Determining the material to be taught according to students' interests. 3.Determining how the content is delivered according to each student's learning profile. (2) **Process**; process refers to the learning experiences and activities students engage in during class regarding the material being studied. (3) **Product**; product is the final outcome of the learning process, where students demonstrate their abilities, skills, understanding, and knowledge after completing a unit of study. (4) **Learning Environment**; this aspect includes the classroom arrangement in terms of social,

physical, and personal factors, tailored to students' interests, learning profiles, and readiness, to motivate them to learn.

2.3 The Use of Canva in Supporting Differentiated Teaching Materials

Jubilee (2023:2) explains in his book titled "Professional Graphic Design with Canva" that Canva was first created in 2012 by Melanie Perkins, Cliff Obrecht, and Cameron Adams in Sydney, Australia. Initially, Canva was designed to simplify the complex graphic design process, which was difficult for non-experts to understand. As the Canva platform evolved, new features were added, such as design templates, easy-to-use design tools, and the ability to share designs online and download them in various formats. Canva has also released a mobile app that allows users to create and edit designs from their smartphones or tablets.

Canva offers a wide variety of themes that can be selected according to the user's needs. The Canva application also supports video, images, and audio, which can be presented in an engaging way. Features such as presentations with Canva, Canva video, and others can be utilized for specific needs.

Integrating Canva into the creation of differentiated teaching materials can be a very effective step. Canva is a graphic design platform that allows users to create a variety of materials, ranging from presentations, infographics, posters, to visually appealing worksheets (Jubilee; 2022). Here are some ways you can use Canva in creating differentiated teaching materials: (1) Creation of Interactive Learning Materials: Create engaging and interactive learning materials using various Canva features such as animations, images, and icons. We can create attractive presentation slides by incorporating visual elements that align with the learning content. (2) Infographic Creation: Create infographics that visually explain important concepts. Infographics can help students understand information more quickly and easily, providing a clear overview of the material being taught. (3) Customization Based on Difficulty Levels: Canva allows us to create different versions of teaching materials with varying levels of difficulty. We can adjust the design, content, and instructional details according to the students' levels of understanding and readiness. (4) Use of Templates: Canva provides various templates that we can use as a foundation for creating teaching materials. We can choose templates that suit the type of material we want to create and customize them according to our needs and preferences. (5) Collaboration: Canva enables collaboration between teachers and students in creating teaching materials. We can invite students to participate in the material creation process, for example, by providing feedback or adding additional content. (6) Use of Images and Illustrations: The use of images and illustrations can help clarify difficult-to-understand concepts. Canva offers a wide range of images and illustrations that we can use for free or with a premium subscription. By utilizing these Canva features, we can create differentiated teaching materials that are engaging, interactive, and tailored to students' learning needs.

3 Research Methods

This research is categorized as development research or Research and Development (R&D), focusing on the development of differentiated teaching materials in explanatory text using Canva for students in Phase D (Grade VIII) at SMP Bangun Insan Mandiri Medan. This R&D

study produces a product output and tests its effectiveness (Sugiyono, 2015:30). Sujadi (2002:164) states that this development research includes stages in creating a new product or improving an existing product. This research and development is directed by the instructional material development theory of Borg and Gall.

4 Discussion

The development of differentiated teaching materials in explanatory text using the Canva application was carried out in a programmed and systematic manner with several observations, leading to the identification of issues related to the teaching materials used. An analysis of the 2016 Erlangga Indonesian Language textbook on explanatory texts showed that there were no supplementary teaching materials that addressed the needs of students and aligned with the Merdeka Curriculum (differentiated). As a result, students' understanding and knowledge of explanatory text material have not been optimal. This aligns with research published by Sonnya et al. (2023) on "The Development of Teaching Materials to Support Merdeka Curriculum Learning," which states that in the Merdeka Curriculum, it is crucial for teachers to develop teaching materials beyond textbooks to enhance student motivation and learning outcomes. The differentiated teaching materials in explanatory text using the Canva application were developed through 10 stages following the Research and Development process adapted from the Borg and Gall model. The first step involved analyzing potential and issues, where the main problem identified was that the average writing scores for explanatory texts among students had not yet reached the minimum passing grade of 70. However, there was a potential advantage: students at SMP Bangun Insan Mandiri are allowed to bring mobile phones to school. Additionally, facilities such as computer labs and Wi-Fi access in every classroom support the development of differentiated teaching materials to address these issues. The second stage is data collection, which includes analyzing problems, curriculum, theories, and needs. At this stage, analyzing students' needs is crucial in developing differentiated teaching materials. The analysis of student needs is categorized based on four aspects of differentiated learning. The first aspect is content, where a diagnostic cognitive assessment is conducted to group students based on their abilities, allowing the content of the teaching materials to be tailored to their capabilities. Next, we determine the processes, products, and learning environments for students through non-cognitive diagnostic assessments. Through the results of cognitive diagnostic mapping, it was found that students have varying interests and learning styles. Based on this, the organization of learning activities and the products they produce will be adjusted according to students' learning styles. This is what is meant by differentiated teaching materials in line with the Merdeka Curriculum. The development of differentiated teaching materials has also been conducted by Yuanita et al. (2023) in their research titled "Development of Differentiated Teaching Materials for Opinion Article Material for High School Students," which produced teaching materials that effectively meet students' needs and interests. Yuanita stated that the differentiated teaching materials she developed include learning activities tailored to learning profiles with preparations for visual, kinesthetic, and auditory media as innovations in learning that facilitate students in writing articles. In accordance with the development process carried out through the 10 stages of the Borg and Gall model, the differentiated teaching materials were successfully developed based on students' needs and learning profiles. The differentiated teaching materials in explanatory text were also developed with the help of the Canva application, which supports the inclusion of videos, images, and audio to enhance differentiated learning. Several benefits of differentiated

teaching materials in explanatory text using the Canva application are: (1) The material is easily understood by students due to its systematic presentation that aligns with their needs and learning styles (differentiated), facilitating the learning process, (2) the teaching materials provide opportunities for students to learn at their own pace, (3) the time required to use the teaching materials is relatively short, preventing boredom among students, (4) the design is appealing because it includes images, colors, and videos, (5) it serves as an alternative in various situations, (6) differentiated teaching materials in explanatory text using the Canva application provide students with new knowledge about innovative software.

(a) Feasibility of Differentiated Teaching Materials in Explanatory Text Using the Canva Application

The feasibility of the differentiated teaching materials developed using the Canva application was evaluated through content validation, design assessment, teacher feedback, and student trials. Content validation, conducted by A.S., focused on three aspects: material feasibility (95.83%), language feasibility (90%), and presentation feasibility (93.18%), all categorized as "very good." Feedback from content experts led to revisions, including improving sentence structure and adding a glossary. Design validation was carried out by S.M.H., focusing on the graphic design's feasibility. Suggestions included creating original instructional videos and using brighter background colors for exercises. The graphic design scored 99.07%, and evaluations of the size and cover design achieved 100%, both categorized as "very good." The design content also scored 98.52%, further affirming the materials' high quality. The response from the teacher, conducted by Mrs. C.P. (initials) at SMP Bangun Insan Mandiri Medan, achieved a percentage of 98.52%, categorized as "very good." The assessment was based on feedback from the Indonesian language teacher regarding the explanatory text material, which reached 100% and was categorized as "very good." The indicator for engagement scored 98.07%, also categorized as "very good," and the language indicator reached 100%, categorized as "very good." Therefore, the differentiated teaching materials in explanatory text using the Canva application are deemed suitable for use in teaching. The trial results for the differentiated teaching materials using the Canva application showed high effectiveness across all indicators: (1) Individual trials with 3 students achieved 98.46%, with ease of understanding at 97.91%, engagement at 97.22%, self-directed learning at 100%, and presentation of materials at 100%, all categorized as "very good." (2) Small group trials with 9 participants scored 98.48%, with ease of understanding at 100%, engagement at 95.37%, selfdirected learning at 98.61%, and presentation at 100%. (3) Field trials involving 31 students yielded a total score of 95.96%, with ease of understanding at 95.96%, engagement at 96.77%, self-directed learning at 91.93%, and presentation at 100%. Overall, these results indicate that the teaching materials are suitable for use at SMP Bangun Insan Mandiri Medan. This finding is consistent with Erry Ratna et al. (2023), which reported similar success with Canva-based materials in a different school context.

(b) Effectiveness of Using Differentiated Teaching Materials in Explanatory Text with the Canva Application

Before using the differentiated teaching materials with the Canva application, students had an average score of 66.81, which increased to 85.97 after the implementation. This demonstrates a significant improvement of 19.16 in students' learning outcomes when using the differentiated materials developed with Canva, providing positive effects on students' learning, particularly in explanatory texts. Based on the gain test conducted on 31 eighth-grade students

(Phase D end) at SMP Bangun Insan Mandiri Medan, it was found that 27 students (87%) showed a moderate effectiveness criterion, while 4 students (12%) demonstrated high effectiveness. The average gain index was 0.60, categorized as moderate. Similar findings were reported in the research by Risky et al. (2023), where students' learning outcomes increased by 65% based on the difference between pretests and posttests, also falling into the moderate effectiveness criteria. Therefore, the differentiated teaching materials in explanatory texts using the Canva application are effective for students at SMP Bangun Insan Mandiri Medan. The effectiveness of these materials was confirmed through the gain test, which indicated a moderate level of effectiveness.

5 Conclusion

The results of the study on the development of differentiated teaching materials for explanatory texts using the Canva application for students at SMP Bangun Insan Mandiri yield several conclusions: The outcome of this research is a product in the form of differentiated teaching materials for explanatory texts based on Canva. The development process of these teaching materials adopts the Borg and Gall stages, starting from identifying potential and problems, data collection, product design, validation, product revision, product testing, revision, limited field testing, revision, and final product. The teaching materials have been tested and deemed suitable for eighth-grade students (Phase D) at SMP Bangun Insan Mandiri based on content and design validation. The content validation results reached 93.18%, categorized as "very good" regarding content feasibility, presentation feasibility, and language feasibility. Meanwhile, the design validation achieved 99.07%, categorized as "very good" in terms of graphics. Additionally, the assessment from the Indonesian language teacher reached 98.52%, also categorized as "very good." Student assessments from individual tests scored 98.46%, small group tests reached 98.48%, and limited field tests yielded 95.96%, all categorized as "very good." The differentiated Canva-based teaching materials for students at SMP Bangun Insan Mandiri Medan are considered effective for use. This is evident from the increase in pretest scores from 66.81 to 85.97 in the posttest. There was an improvement of 19.16 in learning outcomes after using the differentiated teaching materials in explanatory texts with the Canva application. The effectiveness of these materials is further supported by the gain test, showing a gain index of 0.60, which indicates moderate effectiveness.

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