

# Development of Integrated Thematic Teaching Materials with Mind Mapping Model in Class III of Elementary School

Delfakhria<sup>1</sup>, Solfema<sup>2</sup>

<sup>1</sup> Padang State University, West Sumatera, Indonesia; delfakhria@gmail.com

<sup>2</sup> Padang State University, West Sumatera, Indonesia; solfema@fip.unp.ac.id

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## ABSTRACT

The research aims to produce an integrated thematic lesson material in class III with a valid, practical, and effective mind mapping model. The research carried out is in the type of 4D model development research. The definition stage consists of needs analysis and student analysis. The design stage consists of designing lesson plans and teaching materials. The lesson plans and valid teaching materials are tested on third-grade students of SD Negeri 54 Anak Air Kec. Koto Tengah, Padang, Semester 1 with 1 observer. Collecting data in the study using a 5-scale questionnaire to determine the level of validity, practicality, and student learning motivation as well as pre-test and post-test in the form of objective questions to see the achievement of student learning outcomes. The validation of teaching materials from the media aspect is 82%, the material aspects of RPP validation are 92%, the validation of teaching materials is 95%, and the language aspect is 98%. The results of the teacher's questionnaire are efficient, 92% are efficient, the average student questionnaire results are 88 very practical, and the results of the effectiveness experiment on increasing students' learning motivation are 83% in the very practical category. Thus, the development of learning materials with a mind map model assisted by Google Slides in grade III Elementary School is categorized as valid, practical, and effective.

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### Corresponding Author:

Delfakhria

Padang State University, West Sumatera, Indonesia; delfakhria@gmail.com

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## 1. INTRODUCTION

The development of science and technology can increase changes in learning activities. The development of technology today can influence education where education has implemented teaching materials as supporters in the explanation of teaching materials that require educators to be creative and appropriate in their selection. Its development is inseparable from the factors of children's learning

readiness, child psychology, and children's understanding of the instruments applied. Teaching material can influence students to foster student enthusiasm for participating in the learning process (Hernawan et al., 2012). Teaching materials must be arranged systematically and contains elements of instruments and learning references so that they can influence the student learning process. Interesting learning resources can stimulate students in the use of learning resources. Creatively designed teaching materials can increase students' sensitivity to participating in learning activities to achieve the lesson's objectives.

In this digital era, not all teaching materials are in hardcopy form, so it is necessary to renew by updating lesson materials. The use of learning materials is support to carry out the learning objectives. Researchers develop teaching materials assisted by google slides. The Google Slides application is an online-based APK for making presentations. This application can be accessed via a laptop or smartphone (Anshori & Syam, 2018). The reason the researcher chose Google Slide-assisted teaching materials is that it has advantages compared to other teaching materials. one of them is the existence of quizzes and learning videos in the book, and then this book is in unprinted form.

The 2013 curriculum expects to change the implementation of teacher-centered lessons to become student-centered. Lesson activities are able to have an influence on achievement in the implementation of lessons if the content and process of the lesson are in accordance with what has been planned (Parmin & Peniati, 2012). Meanwhile, Prananda et al. (2021) stated that in the 2013 curriculum, students are required to express, process, construct and apply knowledge. In learning activities, students are expected to be able to do assignments in groups. Sinambela (2013) explained that in the 2013 curriculum, the learning pattern changed from independent learning to group learning (Team-Based), and the material provided was related to the surrounding environment. This, of course, inhibits students' creativity to think and direct their learning activities so that the concepts they find will later strengthen their knowledge and memory.

The learning that has been carried out has not relied on the students' skills. Educators carry out their obligations, namely teaching, but there is a lag, namely not only giving lessons but educators not providing education to their students. In implementing the lesson, it should be able to contribute to aspects of students' attitudes, skills, and knowledge (Diani dkk, 2021). These problems lead to the shallowing of learning materials. Furthermore, teachers are not accustomed to designing their teaching materials based on regional characteristics and various learning models. The educational philosophy of Ki Hadjar Dewantara (in Sugiarta et al., 2019) revealed that the learning process includes new educational policies, so education is a change, and along with the times, the elementary school curriculum also changes. Here, teachers are required to innovate in using technology so that teachers are not said to be ignorant. The use of information technology is familiar to some teachers, but besides that, there are still many teachers who even have sophisticated smartphones and still cannot maximize them. However, teachers must be IT literate to meet teaching and learning needs.

Therefore, a learning model is needed that can involve students in developing creativity. The model that can be used is Mind Mapping. The implementation of lessons based on the Mind Mapping model emphasizes student reminders, and students must also be able to make their discoveries of learning material (Aktivitas et al., 2013). In developing teaching materials on the thematic subject matter with the Mind Mapping model. Buzan (2006) revealed that Mind Mapping could integrate and improve the ability of the brain to work in a person, namely when storing one's memory efficiently. According to Wati (2022), the Mind Mapping learning model is a model that focuses on optimizing the work of the brain. The left and right hemispheres are used simultaneously to make knowledge formation work comprehensive and meaningful. Based on the research conducted by Lukman & Ishartiwi (2014), the development of teaching materials by using a mapping model is (1) a product where the results can be applied during the process of implementing lessons based on evaluations put forward by the material and instrument experts viewed from several categories, they are the feasibility of content and feasibility in presentation and language, or images of its graphics and (2) a teaching material resulting from an effective development can be used as a reference in the implementation of learning. Porter (in Satini,

2016) stated that mind mapping is a strategy that can be used in honing the left brain and right brain based on visual images and graphic infrastructure that can give an impression on the implementation of the learning process. This mechanism is same as the way the brain processes various incoming information because mind mapping involves both sides of the brain, thus making it easier for students to remember information.

Teaching materials based on the Mind Mapping model can enable students to relate ideas. Taufik (in Eliyanti et al., 2020) suggests that there are advantages in the application of the mind mapping model, namely: (1) this method is fast, (2) it can be applied in organizing several ideas that come to mind (3) diagram drawing activities can generate creative ideas. The author hopes that learning resources can accompany existing teaching materials. Previous research researched by Lukman, Ishartiwi (Lukman & Ishartiwi, 2014) under the title Development of Teaching Materials with a Mind Mapping Model for Junior High School Social Science Learning, with the result of the research being to produce teaching materials with a Mind mapping model for Social Science learning for junior high school students packaged in the form of a book with the material "Development in the Islamic Period in Indonesia." The resulting product is suitable for use for learning based on validation from material experts, media experts, limited trials, as well as field trials, and teaching materials developed for class VII students in SMP are effectively used for social studies learning. In line with the results of Masriani's research (Mayar, 2021) with his research title Development of Teaching Materials in Thematic Learning Using the Mind Mapping Method in Elementary Schools, he concluded that these teaching materials were declared valid and effective. Developing teaching materials by combining a scientific approach with innovative learning models or methods following KD demands can improve student learning abilities.

One form of learning tool is teaching materials. Based on the exposure to the relevant research results, the above research becomes a reference in the development of integrated thematic teaching materials in terms of research development and the nature of the elementary school. This research will use the thematic learning curriculum 2013. From the explanation above, the observations desire to carry out their research entitled "Development of Integrated Thematic Lesson Materials with Google Slide-Assisted Mind Mapping Model in Class III Elementary School."

The researcher assisted Google Slides in this research because the Google Slides is practical in its use; even this app comes in a simple display that is easier for users or their accessors. It only needs a Gmail account to be able to use or access it. Slides are available with various kinds and templates, and interesting themes can make new ideas and create attractive appearances in the preparation of mind mapping model materials.

## 2. METHODS

This research aims to develop one of the learning tools, namely integrated thematic teaching materials with a mind mapping model assisted by google slides that are valid, practical, and effective to increase students' motivation and learning outcomes. This study consisted of media experts, material experts, language experts, teachers, and third-grade students of SD Negeri 54 Anak Air, Koto Tangah, Padang City. The type of research that will be carried out is research and development (R&D). Development research aims to produce products that can develop the quality of education and learning effectively. Understanding R&D, according to Sugiyono (Haryati, 2012), research and development methods are research methods used to produce specific products and test their effectiveness. These products can be in the learning aids, books, and modules.

The type of data taken in this study is primary data, namely data taken from the results of validation by the validator (RPP and teaching materials) and data taken in the implementation of trials in the form of practicality and effectiveness of learning teaching materials for theme 1 sub-theme 2 by using a mind mapping model assisted by Google Slides. The data that has been obtained is then analyzed for each component.

Data analysis is an activity to find and collect the information obtained from interviews, field notes, and documentation by sorting out the important information, describing it into units, combining it, collecting it into a design, choosing which ones are significant, and making conclusions so that they can be analyzed and easily understood (Sugiyono, 2011). The research data were analyzed descriptively. The data collected are media validity scores by experts, practicality scores by teachers and students, and effectiveness scores through student motivation and student learning outcomes.

Data collection techniques were carried out using a questionnaire/questionnaire to collect research data. A questionnaire is a tool used to collect data, where respondents fill out a questionnaire sheet that has been provided by the researcher (Sugiyono, 2016). This study used questionnaires to determine teaching materials' validity, practicality, and effectiveness in increasing student motivation and learning outcomes. The questionnaire consisted of a validated questionnaire for media experts, material experts, language experts, a practicality questionnaire for teachers and students, and a learning motivation questionnaire.

Meanwhile, the instruments used are validation questionnaires, practicality questionnaires, learning motivation questionnaires, and tests to determine student learning outcomes. Validity is how a concept is accurately measured in quantitative studies (Heale & Twycross, 2015). Validation sheet in the form of a closed questionnaire. Closed questionnaires are presented so that the respondents only need to put a tick or tick in the appropriate column or place (Arikunto, 2010). The validation sheet is arranged according to a Likert Scale. The Linkert scale measures attitudes, opinions, and perceptions of a person or group of people about social phenomena (Sugiyono, 2011). For the practicality sheet in the form of a closed questionnaire. The practicality sheet is in the form of a teacher and student response questionnaire. Practicality sheets are used to determine the level of teaching materials' practicality. It is arranged on a Likert scale using a scale of 1-5 score. The Likert scale is arranged in a positive category until a positive statement gets the highest weight. At the same time, the learning motivation sheet is in the form of closed interviews. The closed interview is a data collection technique using a list of questions that have been compiled (Sutrisno et al., 2013). With this structured interview, each respondent was asked the same questions. Student learning motivation sheets are used to determine the success of teaching materials in increasing student motivation. Learning motivation sheets are arranged according to a Likert Scale.

### 3. FINDINGS AND DISCUSSION

The stages of developing lesson materials include the validation put forward by scientists regarding the lesson materials were designed. Then revisions were carried out regarding the achievement of validation from scientists and product observations of students in grade III SD/MI in knowing the practicality of the lesson materials that have been designed. In testing the practicality and effectiveness of learning activities in class.

At this stage, the research was conducted by involving experts related to material, language, media, and students by conducting limited research with 15 students. Using 4D stages, namely define, design, develop and disseminate. The following is the presentation of the research data.

#### 3.1. Results of the Defining Phase (define)

There are 2 (two) stages in the definition, namely needs analysis and student analysis. The results of the analysis can be described as follows:

##### Curriculum Analysis

The curriculum analysis stage is carried out by analyzing KD to formulate indicators and then formulated learning objectives to be achieved by students by using the indicators. Furthermore, the formulation of indicators is used for the development of teaching materials with a mind mapping model assisted by Google Slides on theme 1 (Growth and Development of Living Creatures) sub-theme 2

(Human Growth and Development) in third-grade elementary school semester I, which is following the content standards in thematic learning at the elementary level curriculum 2013. The analysis results show that in theme 1 (Growth and Development of Living Creatures), sub-theme 2 (Human Growth and Development) in grade III SD relates 4 subject matters, namely Civics, Indonesian Language, Mathematics, and SBdP.

After the researchers conducted the KD analysis, the researchers formulated indicators to support the achievement of basic competencies. The results of the analysis of learning indicators for theme 1 (Growth and Development of Living Creatures) and sub-theme 2 (Human Growth and Development) are carried out by developing indicators that have been made by third-grade teachers at SD Negeri 54 Anak Air Kec. Koto Tengah, Padang. Teaching materials used by educators need to be developed because they do not contain indicators for achieving KD, and the goals to be achieved are not yet specific.

### **Student Analysis**

The characteristics of the third-grade students of SD Negeri 54 Anak Air are different, especially their physical and motor characteristics. Based on the results of interviews with 15 third-grade students, it can be seen that the third-grade students like interesting pictures and different colors. Identical female students like pink, while identical male students like green and blue.

Seeing the exposure to the characteristics of the students above, the learning provided should be adjusted to the interests of the third-grade students. This is in accordance with the opinion (Fitria, 2019) that grade III students in the learning process still depend on interesting objects and experiences experienced directly. Therefore, efforts to create a learning process are highly expected in developing suitable teaching materials for third-grade students. Based on the data from the student characteristics analysis and interviews with third-grade teachers at SD Negeri 54 Anak Air Kec. Koto Tengah, Padang, information was obtained that student motivation in the learning process is still lacking. This can be seen from each student's test results, from 15 students. Only five or six people complete the test; the rest are often remedial. This is also seen in the learning process when the teacher asks whether they understand the material presented. Students always answer that they understand. However, when tested again, many students still cannot answer the questions given.

On the other hand, when the teacher explains the learning material, students are busy—flipping through the handbook and looking at pictures unrelated to the material being studied. Students also tend to be lazy to re-learn materials that are considered difficult or materials that they have not mastered well. When doing the exercises, more than half of the students, at the time find a difficult question, they always leave the answer blank without really trying to find the answer.

In general, third-grade students of SD Negeri 54 Anak Air Kec. Koto Tengah, Padang have the characteristics of being happy to move, seeing interesting pictures, and not liking long reading texts, this can be seen when they study serious subject matter such as PPKn lesson content, Indonesian and Mathematics are presented monotonously, children tend to be bored when the teacher explains learning, only a few students are focused, the rest are busy with their work, some are chatting with friends, looking at the window, contemplating, and flipping through books, but when entering lessons that are identical to sports or SBdP students are more enthusiastic and happy to learn.

Based on this, interesting and innovative teaching materials are needed so that students play an active role in each learning to foster student creativity and motivation in the learning process.

### **3.2. Results of the Design Phase (design)**

The researcher designed the thematic learning teaching materials using the Mind mapping model at this design stage. Teaching materials are designed to make it easier for educators to present thematic learning in class III SD/MI and make it easier for students to absorb material so that teachers can focus

more on efforts to arouse student interest (Kosasih, 2021). The teaching materials in these teaching materials that were developed refer to the analysis of KI, KD, and indicators that have been formulated.

The teaching materials developed are in the form of teaching materials in the form of slides, so that in making teaching materials, it is seen from the reference for making slides, namely logging in to the g-mail account, clicking new, selecting the Google Slides application (Purnamasari et al., 2019). Each slide in the teaching materials with the Mind mapping model displays writing that is in accordance with the writing of teaching materials in grade III SD/MI, which can be seen in appendix 3 (pages 143-159). For clarity, the following is a form of teaching material design that is available at the link <https://bit.ly/BahanAjarTema1SubTema2>.

The development phase of teaching materials includes validation by experts on teaching materials that have been designed, and then revisions are made to the validation results from experts and product research to third-grade students of SD/MI to see the practicality of the teaching materials developed. Practicality and effectiveness testing are by testing learning tools that have been developed in the learning process in the classroom.

The validation carried out by media experts is related to the category of the suitability of the instrument, its design, and its simplicity when operating it. The media expert who validated this teaching material was Mr. Dr. Darmansyah, S.T, M.Pd. He is an expert in Educational Technology at Padang State University. The calculation of the validation results by media experts is illustrated in the table below:

**Table 1:** Display of Validation Results Scores by Media Experts

No	Validator	Number of Assessment Results
1	Media expert validator	45
Total Average Percentage of Validity		82 %
Category		Very Valid

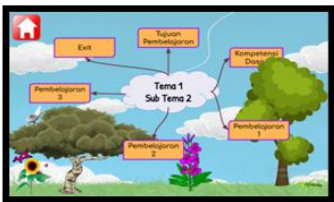
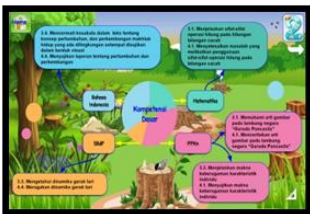
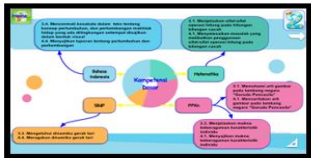
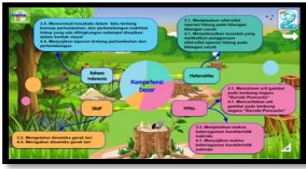
(Data Primer, 2021)

Based on the validation results by media experts, an average value of 81% was obtained. The validation results, which are in the range of 81% - 100%, are declared very valid, and this means that the subject matter contains attractive and proportional designs and is easy to operate by students, so that students can operate the teaching materials independently. There are several inputs, and reinforcements put forward by material scientists, namely:

1. Numbering each slide.
2. On each slide, try a different Background.

The following are the results of the revisions that have been made to the inputs and reinforcements put forward by media scientists:

**Table 2.** Revision Results From Media Experts' Suggestions and Comments

No	Before Revision	After Revision
1	 <p>No numbering on each slide</p>	 <p>Each slide is numbered</p>
2	 <p>Ordinary slide background and same in every slide</p>	 <p>Presented interesting and different backgrounds for each slide</p>

Validation carried out by material experts is related to the material presented in teaching materials with a mind mapping model assisted by Google Slides. Three material experts validate these teaching materials. They are (1) Mr. Dr. Desyandri, S.Pd, M.Pd. as an expert in primary school teacher education as well as a lecturer in the basic education postgraduate program at Padang State University. (2) Mrs. Dr. Darnis Arief, M.Pd is an expert in primary school teacher education as well as a lecturer in the basic education postgraduate program at Padang State University. Mrs. Sri Wahyuni M.Pd, is an elementary school teacher who has experience in teaching for more than 10 years and is an alumna of basic education at Padang State University.

In the validation of learning materials, 2 components are validated, those are the lesson plans and the lesson materials contained in the teaching materials. The results of RPP validation from experts on assessment data material are illustrated in table 3. below:

**Table 3.** Revision Results From Material Experts' Suggestions and Comments

No	Validator	Rating result
1	Validator 1	107
2	Validator 2	103
3	Validator 3	109
Total number		319
Total Average Percentage of Validity		92%
Category		Very Valid

(Data Primer, 2021)

Based on the results of RPP validation carried out by material experts, an average value of 92% was obtained. Therefore, the RPP that was made was declared very valid. Several amplifiers are given validation, namely:

1. Pay attention to KD mapping – supporting indicators, keys, and enrichment
2. The indicators in the Mathematics content regarding the operation of counting whole numbers have not been seen.
3. Include the mind mapping assisted by Google Slides in the learning objectives and steps.

4. Add question grid.

The following are the results of the revisions that have been made to the suggestions and comments given by the material experts:

Table 4. Revised Results From Material Expert Comments on RPP

Before Revision			After Revision		

The indicator of Indonesian as one of the keywords “Kosakata dalam teks (vocabulary in text)” does not yet exist in the indicator.

The indicator of Indonesian as one of the keywords “Kosakata dalam teks (vocabulary in text)” in the indicator already exists.

The indicators on the Mathematics content about counting operations on whole numbers have not been seen.

Indicators of the Math content about counting operations on whole numbers are already seen.

The mind mapping model teaching materials assisted by Google Slides for learning have not been included in the learning objectives.

It has included the mind mapping model teaching materials assisted by Google slides for learning on the objectives.

There are no questions grid yet.

The question grid has been included.

The validation results of the material contained in the mind mapping model of teaching materials assisted by google slides can be seen in appendix 8 (pages 202-220). The data from the validation results are described in detail in chart 4.8:

Chart 5. Recap of Validation Results by Material Experts

No	Validator	Rating result
1	Validator 1	56
2	Validator 2	57
3	Validator 3	58
Total number		171
Total Average Percentage of Validity		95%
Category		Very Valid

(Data Primer, 2021)

Based on the acquisition of validation by material experts, it was obtained that an average of 95% was categorized as very valid and could be tested after a slight revision. The results of the revisions that have been carried out by researchers based on comments and material expert suggestions are illustrated in the following table:

Table 6. Results of Revision of Material Experts' Suggestions and Comments

Before Revision	After Revision

Learning objectives are combined in 1 slide and do not match the learning objectives in the RPP.



Based on the results of practicality by the teacher, it was found that 92% were categorized as very practical. The chart shows that the subject matter with the google slide-assisted mind mapping model that was developed is very practical to use and easy to operate independently, and well to be applied during the learning process in class III Elementary School.

To find out the level of practicality of teaching materials with the mind mapping model assisted by Google Slides that was developed, a practicality test was carried out on students who used the technique of filling out practicality sheets by students on the developed teaching materials. Obtaining the results of the practicum carried out by students in detail is illustrated in table 9.

Chart 9. Practicality Test Results by Students

<b>Number of participants</b>	<b>Total Acquired Overall Score</b>	<b>Practical Results</b>	<b>Category</b>
15	658	88	Very Practical

(Data Primer, 2021)

The number of practical achievements, namely 88, is categorized as "Very Practical" based on the practical results. From the categories obtained in practical experiments on students, the teaching materials obtained are classified as very practical to apply.

In understanding the level of effectiveness of the subject matter, the effectiveness experiment was carried out on students based on filling out student motivation questionnaires and student learning outcomes. The details are as follows.

The test of the effectiveness of increasing learning motivation was carried out using a comparison technique to the students' pre-test and post-test achievement. In the effectiveness experiment, data regarding students' enthusiasm in participating in lessons was obtained from how to distribute pre-test and post-test questionnaires in the form of a learning motivation questionnaire sheet. The data on the results of the pre-test and post-test results of student learning motivation is depicted in table 10:

**Table 10.** Recapitulation Results from Pre-test and post-test results of students' learning motivation.

<b>No</b>	<b>Variable</b>	<b>The average result of the pre-test</b>	<b>The average result of the post-test</b>
1	Learning motivation	64	83

(Data Primer, 2021)

The average result shows an increase in students' learning motivation. It can be seen that the pre-test obtained an average result of 64, which was categorized as moderate. During the post-test, there was an increase with an average score of 83, which was categorized as very high. From this, it can be concluded that using subject matter with a mind mapping model assisted by Google Slides effectively increases student motivation in grade III Elementary School.

The development of teaching materials with a mind mapping model assisted by Google Slides adopting a 4-D development model has been successfully implemented. The learning tools he developed were lesson plans and the subject matter for class III SD Negeri 54 Anak Air, totaling 15 students, and implemented in another school, namely SD Negeri 11 Lubuk Buaya with 14 students. The resulting product can be used as a supporter in the implementation of lessons that can cover all student learning styles and be able to make students active in learning. Judging from the legitimacy experiment carried out, validation of all teaching materials that have been designed have conformity. Parts that are

assessed by the validator are design, content achievement, and language. Teaching materials with a mind mapping model assisted by Google Slides are very valid based on the design aspect. This relates to the appearance of teaching materials that are already good, the type and size of the letters are easy to read, and layouts, pictures, animations, and supporting videos are in accordance with the learning materials. (Bahtiar, 2015) suggests that teaching materials are packaged in such a way as to arrange the cover, the content layout, the shape and size of the letters, illustrations, colors, and image composition. Format and physical form have a role in motivating students to be interested in reading, interpreting, and making the learning process more effective.

Based on the feasibility aspect of the content or teaching materials, the mind mapping model assisted by Google Slides is very valid. These teaching materials have met KI, KD, instructions, and lesson objectives based on student characteristics and student ability levels and can increase student understanding. Taufina Taufik (Ratih & Taufina, 2019) suggests that the ideal learning material is teaching material that conforms to the applicable competencies and the needs and character of students in achieving quality lessons. Judging from the linguistic aspect, teaching materials with a mind mapping model assisted by Google Slides are very valid. The validity of teaching materials is marked by word rules that match the language rules, detailed data and directions, and the ease with which students interpret the language used. This is in accordance with the assertion (Ulfah & Jumaiyah, 2018), which states that using a good language can improve the application of learning resources, especially for students in expressing ideas and clear directions.

Judging by practical experiments carried out by educators and students, it can be seen that the teaching materials designed include very practical criteria. The practicality of teaching materials is illustrated by the side of comfort and the effectiveness of learning time. This reveals that teaching materials are relatively simple and do not require extraordinary abilities in making and using them. By judging from the category of efficient use of lesson time, teaching materials include learning resources that have been assessed for their effectiveness in being applied by educators and students. This is because the use of teaching materials in the learning system gives students more freedom to take part in the learning process (understudy focus learning). The teaching materials developed help students carry out learning based on their capacities.

Based on the effectiveness test on students' learning motivation. According to Asmelia & Fitria (2020), learning motivation is an impulse that arises from the individual to gain knowledge and changes that occur in his behavior due to the experience in interacting in the environment. The use of teaching materials with a mind mapping model assisted by Google Slides has succeeded in increasing student learning because the application of this learning resource can foster a meaningful learning atmosphere. This is due to creating a conducive and fun learning room climate and students being directly involved in learning activities. With strong motivation, students can be consistent in completing their obligations, including overcoming the learning problems they experience, and show a high learning motivation mentality because they feel happy to follow the learning process. It is proven that the teaching materials with the mind mapping model assisted by Google Slides affect students' learning motivation.

In addition to increasing students' learning motivation, the use of teaching materials with a mind mapping model assisted by Google Slides that was developed also has an impact on increasing student learning achievement. What is illustrated is based on the findings carried out using pre-test and post-test. In the pre-test results, student learning outcomes obtained a good predicate; then, there was an increase after the post-test student learning outcomes obtained a very good predicate. The teaching materials developed present problems related to the subject matter that will be mastered concretely and comprehensively.

#### 4. CONCLUSION

The development of integrated thematic teaching materials that apply the mind mapping model in third-grade elementary school is categorized as valid and practical in its use. Learning will be effective, creative, and innovative if the teacher can integrate a scientific approach based on the delivery method

and learning techniques based on students' basic competencies and characteristics in elementary schools.

Based on the research done, the researchers suggest that educators use teaching materials with a mind mapping model assisted by Google Slides as teaching materials that can support improving student learning outcomes, especially students' communication skills. As for schools, to encourage and motivate teachers to utilize teaching materials with the Mind mapping model assisted by Google Slides and to utilize technology in the learning process. For other researchers, further research is needed to be able to improve the quality of teaching materials even better.

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