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Analysis of Creative Thinking Skills of Elementary School Students in the Application of *the Project-based Learning* (PjBL) Model Assisted *by Mind Mapping*

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Abstract

    This study aims to describe the thinking skills of elementary school students in the application of the project-based learning model assisted by mind mapping using qualitative methods and descriptive approaches. The data sources are teachers and principals from interviews; the activity of implementing PjBL assisted by mind mapping observed in observation, as well as a questionnaire for 9 grade V students of SD Muhammadiyah 14 Surabaya. Fluency in coming up with many ideas and providing many ways can be seen from the students' ideas/ideas that vary in each child. Flexibility in generating ideas can be seen in students' activities when looking for other alternatives to make it easier for them to understand the material. The authenticity in producing new and unique expressions is reflected when looking at new ideas produced by students, for example, the grouping of rare or protected flora and fauna, so that it is not monotonous in the material alone. The details in adding or detailing an idea to make it more interesting are illustrated when students add or detail an object by adding colors, images, and symbols to enrich their understanding. This mind mapping project is able to be an alternative to creating learning strategies for teachers and students.

Keywords: Think creatively, PjBL, Mind Mapping, Social Science Studies, Elementary School.

INTRODUCTION

Social Science learning in elementary schools has an important and strategic role in developing students' creative thinking skills. But in reality, traditional learning methods that are still often used seem to be less able to stimulate students' creativity. Learning that tends to be one-way and teacher-oriented makes students passive and rarely actively involved in teaching and learning activities. Researchers also observed that in some classrooms where learning tends to be one-way (teacher-oriented), students are only silent in class and less involved in the teaching and learning process. Teachers only focus on delivering material without feedback to students if there are difficulties during the teaching and learning process. In the process, teachers often use the lecture method which makes learning in the classroom tend to be passive because the teacher is considered the only source of knowledge that exists.

In fact, there are many sources or media that can be used so that they are not fixated on the teacher's explanation alone. According to Usmaedi (2017), every time learning uses *teacher centered*, teachers and students only occasionally have dialogues, namely when questions and answers are not followed up such as a more detailed explanation of the material explained. This condition reflects the lack of ability of students to enrich the learning process by increasing interaction in their environment, making it difficult to create understanding and knowledge of the world around them, as well as the absence of moments to build knowledge and confidence*,* as well as interactions between individuals or groups of various types (Trinova, 2013). In addition, one-way learning causes the information received by students to involve less in-depth visual or audio interaction (Mazaimi & Photograph, 2023).

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In the current era of globalization and technological advancement, creative thinking skills are one of the essential competencies that every individual, including elementary school students, must have. The effectiveness of the educational process provides not only academic tasks, but also the development of high-level skills *(High Order Thinking Skill)* or abbreviated *HOTS*, such as the ability to think creatively, which is listed in the Bloom Taxonomy, Operational Verbs (KKO) C-6, one of which is creating. This ability is critical to facing the complex and dynamic challenges of the future. *High Order Thinking Skills* is the ability of students to connect, manipulate or change the knowledge and experience they have had critically and creatively to make problem solving in new situations (Wahyuningsih, Y., Rachmawati, I., Setiawan, A., & Ngazizah, 2019).

Skilled according to KBBI means capable in completing tasks. Meanwhile, thinking according to the Great Dictionary of the Indonesian Language is to apply reason with the aim of considering and deciding something. In addition, creativity according to KBBI is having creativity. It can be concluded that creative thinking skills are capable of considering and deciding something so that it has creativity. Furthermore, according to Hasanah et al. (2023) Creative thinking skills are skills with the aim of producing solutions and solving problems to create new things. Another view is from Fitriyah & Ramadani (2021) who suggested that creative thinking skills are also the ability to solve problems from various perspectives. In addition, creative thinking skills are a thinking process that opens up opportunities for students to use their thinking power to generate new ideas, theories or experiments (Kurnia, 2021). Another opinion says that creative thinking skills are habituation of abilities by providing opportunities for each student to think and then convey ideas that arise according to their wants and needs (Kartina et al., 2021).

The benefit of creative thinking skills is that students can produce new and different ideas (Sari & Lkpd, 2016). Creative thinking skills are part of higher-order thinking skills

(Purba, P.B., D. Chamidah, D.A.A.N.C. Saputro, M.M.J.P.H Lestari, Salamun, Suesilowati, I. Rahmawati, 2022). The application of creative thinking skills aims to be an encouragement for students in learning so that it has a significant impact on learning outcomes (Sold, A., & Merliza, 2019). In addition, this skill can create opportunities for the development of students' personalities through activities to increase focus and learning intelligence and self-confidence (Mulyadi, D. U., & Wahyuni, 2016)

Indicators of creative thinking ability according to Hendriana, H., Rohaeti, E. E., & Sumarmo (2017) that is **Smooth** in giving many ideas in many ways, **Flexibility** in generating ideas, assessing things from different perspectives, looking for other ways, and changing the way of thinking, **Authenticity** in producing new and different expressions, **Details** in adding or detailing the details of something so that it becomes more attractive.

Holding on to the characteristics of education in the 21st century. One of the expected life skills is *soft skill* i.e. interpersonal skills such as the 4Cs skills which consist of: *Critical Thinking and Problem Solving, Collaboration, Communication, Creativity and Innovation* (Zubaidah, 2018). *Project Based Learning* (PjBL) emerged as one of the solutions to solve this problem

PjBL is a learning method that focuses on exploration, collaboration, and problem-solving in the context of a real project. With this approach, students are invited to have a role in the learning process, namely planning, implementation, and assessment of the final results of the project. Through PjBL, students can develop critical and creative thinking skills, as well as the ability to collaborate and communicate (Suryani, 2023). This project learning model requires structured tasks that come from challenging things by involving students to design, find problem solving, make a decision in investigative activities independently in a certain period to produce a work.

According to Qurniawati et al. (2024) The way of delivering learning materials is

one of the benchmarks for the success of the teaching and learning process. One of the effective media to support the implementation of PjBL is *mind mapping. Mind mapping* (concept map) is a way of visualization to help students in organizing information in a structured and creative way. With *mind mapping,* Students can more easily understand the relationship between concepts and develop new ideas. Use *mind mapping* in learning PjBL is expected to increase student involvement and strengthen their creative thinking skills. According to Dwi Amalia et al. (2023) there are 6 steps of the syntax of the Project Learning model as follows: 1) Triggering with basic questions; 2) Making project plans; 3) Designing schedules; 4) Observing students and project improvement; 5) Assessment of meaningful results and experiences.

Type *mind mapping* discovered by Aristotle redeveloped by Tony Buzan, mind mapping gives students a way to gather information using symbols, images, and colors (Hendawati et al., 2018). This concept map can improve the creative thinking skills of students (Windura, 2013). In addition, Novioleta et al. (2020) note that learning using *mind mapping* making the learning process more fun, not boring, and students more creative in using *mind mapping*.

There are several studies on creative thinking skills in the application of Project Based Learning (PjBL) with the help of mind mapping. First, there are Sabatini, So (2024) which has the result that there is a significant positive influence of Project Based Learning and mind mapping on students' creative thinking. There is also research Tanjung & et al (2024) has the result that the application of project learning with the help of this concept map can improve the students' skills to solve problems, think critically, collaborate, communicate, and produce real work that is relevant to their lives.

The purpose of the researcher in this study is to describe the thinking skills of elementary school students in the application of the project learning model with the help of concept maps based on indicators of creative thinking ability, namely fluency in organizing

information systematically and creatively, flexibility in understanding the relationship between concepts and developing new ideas, originality in producing new and different expressions, details by adding or detailing details. With this analysis, it is hoped that it can provide practical insights and recommendations for teachers and education practitioners in developing innovative and effective learning strategies. Thus, it is hoped that students will not only understand the material well, but also be able to apply it in daily life more easily.

RESEARCH METHODS

This study uses qualitative research with a descriptive approach, namely describing in the form of a description of phenomena in the form of facts in the field related to the thinking skills of elementary school students in the application of the project learning model with the help of concept maps.

According to Berg (2001), suggesting that research can begin with an idea, supported by theoretical information, design a research plan, collect and analyze data, report findings. According to Anggito, Albi & Setiawan (2018) that qualitative research is the collection of data on a natural basis with the intention of describing the phenomenon that occurs, where the researcher as the key instrument, the sampling of the data source is carried out by sampling the purpose and snowball (*purposive and snowball sampling*). In addition, according to Norman E.Wallen & R.Fraenkel (2013), qualitative research emphasizes more on thorough elaboration, describing what happens or certain circumstances in detail, or describing the traits/habits of people.

From some of the opinions above, it can be concluded that qualitative research with a descriptive approach is research that aims to describe the state of an object or subject that focuses on interactive activities in the current state as it is. The researcher will use a qualitative descriptive method in his research this time.

According to Moon & Berg (2017) Qualitative data sources are presentations in the form of oral or written words observed by

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the researcher and surrounding objects that are captured in detail and implied in the document or object. The source of the researcher's data is respondents from teachers and principals from interviews; the activity of implementing PjBL assisted by mind mapping was observed in observation, the source of the location was class V-A SD Muhammadiyah 14 Surabaya. The subjects of this study are 9 students who show creativity in their concept maps and teachers of classes V-A and the Principal.

The qualitative data collection method is a way to obtain information that is guaranteed to have a level of validity and reliability and is needed so that the data is organized in an informative and systematic manner as the basis for research (Ratnaningtyas et al., 2023). The types of data in the study based on the source are primary and secondary data. Primary data is primary data or information that is directly related to the research; Secondary data is data or information that is indirectly related to the problem in the research (Ratnaningtyas et al., 2023). The primary data sources in this study are students, teachers and principals. The secondary data source is the journals related to this study.

According to Ratnaningtyas et al. (2023) Triangulation is the verification of information from various sources, methods and times. Source triangulation functions to check the validity of data by verifying data from various sources owned; The triangulation of sources in this study is students, teachers and principals. The data is analyzed by researchers to draw conclusions and then put together with others. In triangulation techniques, the credibility of the data is tested by checking the data to the same source with different techniques. Triangulation in this study is by applying several instruments, namely open questionnaires, interviews, and observations. The time triangulation used in this study was carried out during the IPAS lesson in the first hour so that the resource persons were still fresh, without many obstacles so as to provide more valid and reliable data.

The data collection technique used is triangulation techniques that include several instruments. The triangulation techniques used in this study are documentation, interviews and observations.

According to Creswell (2014) in Ardiansyah et al. (2023) Documentation includes the collection of data from archival documents or other written materials related to research in the form of records, reports, letters, books or other official documents to provide knowledge about relevant history, policies, circumstances and developments.

Interview according to Suharsini (2013) in Djollong (2014) is a conversation between interviewers (*interviewer*) and interviewed (*interviewee*) to obtain information and assess the condition of the respondents. The interviews conducted by the researcher are structured interviews *(guided interview),* namely an interview with a series of complete and detailed questions. Qualitative interviews aim to gain an in-depth understanding of individual experiences, views, and viewpoints related to the phenomenon being researched (Ardiansyah et al., 2023).

Observation or observation is an activity that has the purpose of feeling, understanding a phenomenon in the view of science and previous ideas and to obtain some information based on needs (Ratnaningtyas et al., 2023). Observation details help researchers to organize and collect data relevant to the phenomenon being studied (Creswell, 2014).

The data analysis in this study uses the analysis model of Huberman, A.M. & M.B. Miles (1984) in McKenna et al. (2001), with the following description:
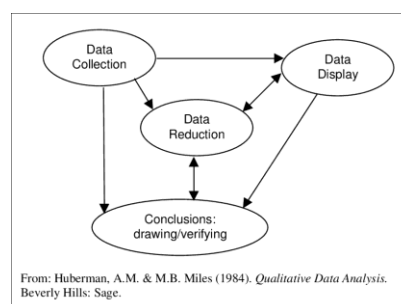

From: Huberman, A.M. & M.B. Miles (1984). *Qualitative Data Analysis.* Beverly Hills: Sage.

Figure 1
Huberman & Miles Data Analysis Model
(1984)

From the figure above, it can be seen that the data analysis in qualitative research according to (Suggestion, 2017) deep (Dwi Amalia et al., 2023) It consists of 3 stages of analysis. The first is data reduction *(data reduction),* namely taking data by summarizing, selecting important things, and looking for the basis and structure. The second is the presentation of data *(data display)*, namely the presentation of data in the form of narrative text (story). The third is verification/drawing conclusions *(conclusion drawing/verification),*

RESULTS AND DISCUSSION

Based on the results of the study using observation sheets, interviews, and questionnaires, the researcher can describe as follows:

Observation Results

Observation was carried out at three meetings. There are several aspects observed in this observation. On the first day of the study, researchers found that the students found it difficult to memorize the types of flora and fauna in Indonesia. Teachers have explained with the lecture method, but students do not understand either. Then by playing the learning video, students only remember a small part of the material taught. After doing these two methods, teachers plan to create learning strategies with a mind mapping project. Novioleta et al. (2020) note that learning using *mind mapping* making the learning process more fun, not boring, and students more creative in using *mind mapping*. Next, the teacher applies the 6 steps of PjBL syntax. The teacher prepares a schedule, prepares the LKPD, and drawing paper for the mind mapping project. The teacher also asked the students to prepare the materials they needed independently.

Figure 2.

First Day of Material Explanation

On the second day, the teacher asks questions about the materials to be used for the aid project *mind mapping* namely typical Indonesian flora and fauna, Indonesia's geographical influence on biodiversity, biodiversity around students' homes and the benefits of biodiversity for humans, what is *mind mapping* and its uses. The teacher also played a video of the distribution of flora and fauna based on the Webber and Wellace Lines. Then the teacher asks some questions to the students. Students can answer quite smoothly and they begin to understand what project they will be working on as well as the steps to work on it. Researchers saw many ideas emerging from the students. Moreover Agustina et al. (2022) said that the application of mind mapping is beneficial for students to be more independent in learning and support their academic success.

The teacher invites students to make mind mapping. The teacher guides and monitors the progress of the student's mind mapping project. The researcher saw that the students had begun to be able to classify the characteristics of flora and fauna based on the type of area. The researcher also found that creative ideas emerged from a mind mapping project created by students from symbols, images and colors.

(1) The smooth aspect is achieved in this process. This is in line with the opinion Aristotle redeveloped by Tony Buzan, mind mapping gives students a way to gather information using symbols, images, and colors (Hendawati et al., 2018). Students can also seek relationships, organize and change their knowledge and experience to find solutions to new situations (Wahyuningsih,

Y., Rachmawati, I., Setiawan, A., & Ngazizah, 2019). **(2)** The flexibility aspect of creative thinking skills is achieved in this process because students also collect information to find alternative mind mapping that suits their interests and abilities.

On the third day, the teacher asked students to present the results of their mind mapping-assisted projects one by one to the front of the class. The students presented the results of their projects smoothly by looking at the concept maps they made. The mind mapping makes it easier for them to explain the classification of flora and fauna based on the division of their territory more easily. The mind mapping also accommodates their reasoning power to understand the elaboration of material in a more structured and systematic manner. According to Windura (2008) in Image (2013) explained that mind mapping is also useful for taking notes (note taking), summarizing (summarizing) and reviewing students' learning materials, which is very effective for organizing incoming information, as well as helping to strengthen their memory. It can be seen from the symbols, drawings and lines that they create reflect the aspect of detail **(4)** to support their imagination in understanding the material that has been taught by the teacher in class

Figure 3.
Presentation of Student Mind Mapping Results

At the time of the presentation, NF students can organize information about biodiversity categorization in a systematic and creative way. Student N can also relate to the relationship between the concepts he makes and the new ideas he has. This is in line with the aspect of authenticity **(3)** which shows

that the ideas produced by NF students are original from their own thoughts.

Furthermore, students and teachers reflected on what results were obtained from learning this mind mapping assisted science science project. Teachers provide an assessment of the results of the project assisted by student mind mapping with the criteria of suitability of flora and fauna characteristics, suitability of flora and fauna based on their type and creativity created by students. Teachers and students reflect on learning. Teachers provide positive input and evaluation so that students' ideas become more interesting.

Interview Results

The first interview was from the Principal of SD Muhammadiyah 14 Surabaya, who took part as a supervisor in this series of mind mapping projects. He explained that the application of the project learning model with the help of concept maps carried out by homeroom teachers is very important for grade V students of SD Muhammadiyah 14 Surabaya because it can foster their creative ideas. Furthermore, he also explained that project-based learning (PjBL) with the help of this concept map provides space for students to generate ideas from different points of view, such as grouping types of flora and fauna independently from the materials obtained by the children themselves. Then, he argued that the innovation of the project learning model with the help of concept maps is very important for children to produce new and different expressions, namely the grouping of endangered rare flora and fauna, which actually do not exist in the task and they add themselves but still in the context of the division of the region, namely Asiatis (West), Transition (Central), and Australis (East). Therefore, the combination of concept maps in learning activities can be an important tool for teachers to generate creative thinking and improve student learning outcomes (Kumalasari et al., 2024). The Principal also added that the application of the project learning model with the help of concept maps can create a learning atmosphere that attracts more students'

attention so that they are more enthusiastic in learning and can understand the material to grow their creative ideas.

The second interview result was from the homeroom teacher V-A. First, he explained that when presented with a mind mapping project, the ideas/ideas of the students are varied, diverse and also different for each child. Concept maps encourage students to think in a more structured way, develop, strengthen their memory and maximize their creative mindset (Hakim et al., 2024). Students can look for other alternatives to make it easier for them to understand the material, add or detail the characteristics or grouping of flora and fauna based on the division of their territory which will be outlined in the mind mapping-assisted project. There are new ideas generated by children in this mind mapping project, for example, the grouping of rare or endangered or protected flora and fauna, so it is not monotonous in the material alone. The concept map making stage can stimulate the work of the right brain by connecting concepts to organize information (Ummah, 2021). He also explained that his students add or detail an object by adding colors, images, and symbols to enrich their understanding not only for them, but also for other students. With many images and colors in mind mapping, students are expected to be able to easily understand the subject matter (Wati Sulistyo et al., 2023).

The third interview result was from 9 students in class V-A SD Muhammadiyah 14 Surabaya. The following is a snippet of an interview with one of the students named AVN:

Interviewer	:	By looking at the concept map you made, try to explain to Mom about the distribution of flora and
AVN	:	fauna in Indonesia!
		The distribution of Flora and Fauna in Indonesia is divided into three parts. The first is the Western part, also called the Asiatic part. The Middle part is also called the Transitional section. The

third part of the Eastern Part or called Australis. Each section has its own characteristics and types.

Interviewer	:	The flora part is also the same, there is the Western part (Asiatis), the Middle
AVN	:	part is called Transition, and
Interviewer	:	the Eastern part is called Australis.
		Can you mention the
AVN	:	differences in Western, Central, and Eastern flora and fauna?
		Can
		Can you explain the difference based on the concept map you made?
		Flora in the West has the characteristics of having large and tall trees, with dense leaves, there are ephiphytic plants on other plants. The characteristics of the flora in the Middle (Transitional) part are the size of the tree which is small and has short leaves. In the dry season, the leaves fall. The characteristics of flora in the Eastern part (Australis) are its parallel leaves, many palm plants such as coconut trees, many sago, but there is no type of jackfruit. Then the
Interviewer	:	characteristics of fauna in the West (Asiatis) are that they have a large body and consist
AVN	:	of mammals and less attractive fur. The fauna characteristics in the Middle (Transitional) part are generally typical reptiles and not densely furry. The characteristics of fauna in the East are generally mammals, small in size, there are beautiful feathered birds and marsupials.
		Can you mention what are

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Interviewer	:	the flora and fauna based on the differences in the region?
Interviewer	:	In the western part of the chest, the flowers are
AVN	:	Raflesia Arnoldi, Meranti and Mahogany. Flora in the
Interviewer	:	central part are Sulawesi Black Trees and Orchids.
AVN	:	The Eastern Flora (Australis) is Acacia and Sago Trees. Fauna in the western part are Orang Utan, Sumatran
Interviewer	:	Elephant, Sumatran Tiger and One-Horned Rhinoceros.
AVN	:	The fauna of the Central part is Komodo dragons, Maleo Birds and Tarsius. Fauna in the Eastern part (Australis) there are Birds of Paradise, Kangaroos, King's Cockatoos and Green Pythons.
		Is there any additional information you have made to your mind mapping?
		Exist.
		Why do you add something else beyond the material your teacher is teaching?
		Because I want people who see my mind mapping to know other things outside the material and my mind mapping can look more interesting
		What is the additional information you created?
		Preservation of Flora and Fauna in Indonesia, how to preserve flora and fauna in Indonesia, the impact if flora and fauna in Indonesia are not maintained.

**Figure 4.
Interview Snippets**

In-depth interviews were conducted with 9 students, namely NFL, SBH, ALF, DFF, FRL, AVN, MYD, KRN, and PLT. In this interview, the researcher was assisted by a class teacher to assess the results of student interviews against their creative thinking indicators. **(1)** **The** aspect of fluency in organizing information systematically and creatively was shown by 8 students out of 9 students with the Very Good (SB) category and 1 student with the Good category (B). The 8 students were able to present the information in their concept maps systematically and creatively. They can explain in detail the distribution of flora and fauna in Indonesia along with the characteristics and types of flora and fauna smoothly. The indicator of smoothness is also seen when 7 students with a good category and 2 students with a very good category, can provide many ideas in many ways when they explain the concept map of the distribution of flora and fauna in Indonesia.

(2) **The** aspect of flexibility in understanding the relationship between concepts and developing new ideas is reflected when 8 students can mention the differences in flora and fauna of the Western, Central and Eastern regions of Indonesia very well (SB). One other student can mention the differences in flora and fauna of the Western, Central and Eastern regions of Indonesia well (B).

(3) The aspect of authenticity in producing new and different expressions was only seen in 1 student who provided additional information about how to preserve flora and fauna in Indonesia, and the impact if flora and fauna in Indonesia are not preserved. The other 8 students did not add other information beyond the material that had been taught.

(4) The aspect of detail in adding or detailing details using image symbols and colors to make them more attractive to all students in their mind mapping. The symbols they use are trees, Indonesian flags, curved motifs, squares, triangles, stars, arrows, rectangles. The colors they use are various, including blue, green, red, yellow, black, orange, pink. While the images they use are images of animals, plants, clouds, the sun and trees.

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Documentation Results

According to Charismana et al. (2022), documentation is a technique of collecting information by searching for accurate evidence in the form of policy documents, biographies, diaries, newspapers, magazines or papers or recordings, drawings, photographs and paintings. In this study, the researcher used documentation in the form of photos when the research took place.

Figure 5
Mind Mapping Work of Supervised Students (KS)

During the initial process of mind mapping, students looked pensive for a while thinking about what they would make for mind mapping.

After a while, they began to design the ideas that were in their minds. In the fluency aspect **(1),** they begin to be able to generate ideas in different ways between one student and another.

When they are struggling, they are seen looking for alternatives or even changing their perspective in assembling ideas in their minds. This shows that they can apply the flexibility aspect **(2)** in demonstrating their creative thinking skills.
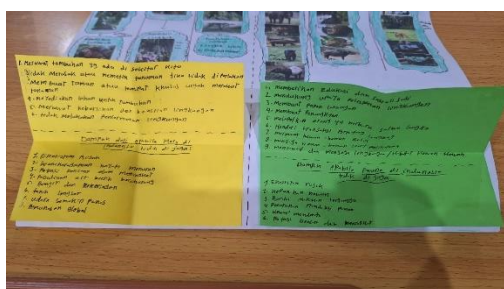

Figure 6
Additional Information on Student Mind Mapping

The aspect of authenticity **(3)** by producing new and different expressions was seen only in 1 student. The student added information about how to preserve flora and fauna in Indonesia, and the impact if flora and fauna in Indonesia are not preserved.

Figure 7
Results of Students' Mind Mapping Using Symbols, Images and Colors

Detail aspect **(4)** By adding or detailing details using symbols, images and colors so that it is more attractive to see when students add various kinds of symbols (triangles, stars, arrows, rectangles), pictures (animals and plants), and colors (pink, purple, blue, red, green, gray, orange, black).

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The creative thinking skills of elementary school students are reflected in this mind mapping-assisted project, where students use their imagination in the thinking process to come up with new ideas according to their abilities and needs. Creative thinking ability according to Hendriana, H., Rohaeti, E. E., & Sumarmo (2017) namely fluency in providing many ideas in many ways, flexibility in producing ideas, assessing things from different views, looking for other ways, and changing the way of thinking, originality in producing new and different expressions, details in adding or detailing the details of something so that it becomes more attractive. In the previous description, these four aspects

of creative thinking were achieved in this study.

According to Fitriyah & Ramadani (2021), creative thinking skills are the ability to solve problems from various perspectives. This is in line with **Smoothness Aspect (1)** in creative thinking. As many as 8 out of 9 students were rated very well in this indicator by homeroom teachers, because they were able to organize information systematically and creatively. In addition, the 8 students can give a lot of ideas using many ways very well.

In addition, creative thinking skills are a thinking process that opens up opportunities for students to use their thinking power to generate new ideas, theories or experiments (Kurnia, 2021). This is seen in **Aspects of Authenticity (3)** in creative thinking. However, only 1 in 9 students were able to generate new ideas outside the context taught in their mind mapping very well. The rest did not add any other information because they thought it was unnecessary, there was no place, or they were satisfied with the concept map they created.

A concept map is a way of visualization to help students organize information in a structured and creative way. With concept maps, it is easier for students to understand the relationships between concepts and develop new ideas. This can be seen in **the aspect of flexibility (2)** in the ability to think creatively. As many as 8 out of 9 students were able to understand the relationship between concepts and develop new ideas and they were able to assess things from different views very well.

The use of concept maps in PjBL learning aims to trigger student involvement and strengthen their creative thinking skills. This mind mapping-assisted project can make it easier and very helpful for students to manage information systematically and creatively, making students interested in the theme being taught and the results, they can summarize the material in a concise, concise and clear manner and no need to fumble anymore with the material taught by the teacher because the concept of the material has been mapped in thought and imagination and then poured into writing and pictures on mind mapping.

The mind mapping project makes it very easy for students to understand the concept of the lesson with new ideas and creations they have, as well as to imagine as they please. Students explained that before the mind mapping project was carried out, they felt that the ideas they had were all they had, but after working on the project with the help of mind mapping, many of their ideas came out so that the resulting mind mapping became better and more interesting. Another student explained that this mind mapping project made it easier for him to understand the concept, then break it down into simpler information. The application of project learning with concept map media can improve students' skills to solve problems, think critically, collaborate, communicate, and produce real work relevant to their lives (Tanjung & et al., 2024).

There is a significant influence on project learning with the help of concept maps (Sabatini, So, 2024). Researchers also found this in the scope of elementary school students. In this mind mapping project, the students actively contribute and think creatively, feel happier in learning because creative ideas emerge, the assignments given become more fun because they know how to assemble the material obtained creatively and effectively, not just reading. The students also used symbols, images and colors to gather information. The colors used are various such as black, green, pink, blue, yellow, red, purple, brown, and orange. The symbols used are arrows, lines, squares, directional indicators, and stars. The images used are leaves, roofs of houses, roads, animals, plants, animals, trees, flowers, and cutouts given by the teacher. They also used colorful folded paper stickers to show their creativity in mind mapping. In this mind mapping project, students explained that their classes have become more fun than before, not boring, exciting, exciting, and enthusiastic. It is easier for students to understand lesson concepts with new ideas, produce the best work, and compete to work on this project as best as possible. This reflects that **Detail Aspect (4)** manifested in this study.

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Because effective education not only emphasizes academic assignments, but also the development of high-level skills *(High Order Thinking Skill)* or abbreviated *as HOTS*, such as the ability to think creatively, which is listed in the Bloom Taxonomy, Operational Verbs (KKO) C-6, one of which is creating. KKO C-6 which is the highest level in the Bloom Taxonomy. Not surprisingly, the students at the beginning of the process of implementing this mind mapping project had difficulty creating and classifying images, symbols, colors and words in their imagination. But as time went by, students recalled the material that had been taught and guided by the teacher, slowly the students were able to do this project well. The resulting mind mapping was enough to amaze the researcher and the class teachers because they were able to complete this mind mapping project perfectly. The limited time ahead of the End of Semester Summative (SAS) caused this project to only run shorter than it should.

CONCLUSION

Social Science learning in elementary schools has an important and strategic role in developing students' creative thinking skills. But in reality, traditional learning methods that are still often used seem to be less able to stimulate students' creativity. Learning that tends to be one-way and relies on teachers makes students passive in the teaching and learning process. Referring to the results of the research and discussion that has been described, researchers can conclude that Project Based Learning (PjBL) assisted by mind mapping can foster students' creative thinking skills.

The aspect of fluency in coming up with many ideas and providing many ways can be seen from the students' ideas/ideas that are varied, diverse and also different in each child. **The aspect of flexibility** in generating ideas, looking at things from another angle, looking for alternatives, and changing mindsets is seen in students' activities when looking for alternatives to make it easier for them to understand the material, adding or detailing the characteristics or grouping of

flora and fauna based on the division of their territory which will be outlined in the mind mapping-assisted project. **The aspect of originality** in producing new and unique expressions is reflected when looking at the new ideas generated by the children in this mind mapping project, for example, the grouping of flora and fauna that are rare or about to become extinct or protected, so that it is not monotonous in the material alone. **The aspect of detail** in the skill of adding and detailing the details of an object or idea so that it becomes more interesting is illustrated when students add or detail an object by adding colors, images, and symbols to enrich understanding not only for them, but also for other students.

This mind mapping project is able to be an alternative to creating learning strategies for teachers and students so that the teaching and learning process becomes more interesting and challenging. The application of creative thinking skills is expected to be a motivation for students in learning so that it has a positive impact on learning outcomes. The limited time ahead of the End of Semester Summative (SAS) caused this project to only run shorter than it should.

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