



Implementation of Wallace's Creative Process in Learning Batik through the Splash Technique for Elementary Education Students

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Abstract

Batik is significant in Indonesian culture and is recognized by UNESCO as an intangible cultural heritage. However, students of the elementary education department (PGMI) have a limited grasp of the batik-making process. This research aims to clarify the creative steps involved in producing batik using the splash technique, as practiced by PGMI IBN Tegal students during their Art Practice course. The study utilized a descriptive qualitative approach to gather data. Semi-structured interviews were conducted with the students and the batik entrepreneur, Nur Elza. Additionally, direct observations and documentation were incorporated into the research process. To analyze the data, we employed the interactive model developed by Miles and Huberman, ensuring the validity of our findings through the triangulation of various techniques and sources. The results indicate that the creative process, as detailed by Wallace regarding the splash technique in batik, encompasses several stages: preparation, incubation, illumination, and verification. Each stage provides students with both theoretical insights and practical experience in splashing batik techniques, thereby enhancing the competencies of future elementary school teachers to better respond to the dynamic landscape of education in Indonesia. Furthermore, the collaborative learning approach with a resource person has resulted in heightened student engagement, positively impacting learning outcomes and achievements. Students exhibited more significant effort, persistence, and enthusiasm while undertaking the challenge of creating batik using the splash technique. This experience has also expanded their understanding of Tegalan Batik, characterized by its unique attributes distinct from other regional styles, significantly enriching their learning experience in the Art Practice course.



INTRODUCTION

Creativity is an ability that humans must support in their lives. Creativity includes human thought patterns to solve various problems experienced. Humans are equipped with reason that distinguishes them from all His creations. Creativity is born at the same time humans are born into the world. Creativity is the general ability to create something new to provide ideas that can be applied in problem-solving or the ability to see new relationships between previously existing elements (Setiawati and Ningsih, 2017: 248). This shows that creativity equips humans to learn new things that benefit themselves and others. In the context of batik art, the splash technique is significant as it allows for the creation of intricate and unique patterns, adding a layer of complexity and beauty to the final product.

One of the results of Indonesian people's creativity is batik. Batik is a medium for expressing expression, a form of painting development that involves drawing an object on a piece of cloth using canting and wax. Batik became an intangible cultural heritage by UNESCO on October 2nd, 2009. Indonesian people need to preserve it, not only using it but also knowing the raw materials and the process. Creativity is a skill that must be possessed by someone living in the 21st century. In this case, creativity takes the form of understanding the batik-making process, from knowledge of raw materials, tools, and processes to marketing. For prospective elementary school (MI) teacher students, this skill is very equipped to increase their self-confidence when teaching. Apart from that, teachers' professional competence does not only understand the theory of batik but also its practice.

Wallace in Nuriawati (2021:80) formulate the creative process by including four stages: 1) Preparation, the emergence of a person's creative interest to prepare themselves to solve problems; 2) Incubation, to search for and collect data for follow-up; 3) illumination, the stage where inspiration/new ideas arise along with the psychological processes that initiate and follow the emergence of new ideas; 4) verification/evaluation, where ideas/creations are tested in reality. The creative process is experienced by students Madrasah Ibtidaiyah Teacher Education IBN Tegal through the Art Practice course (Dance, Music, and Fine Arts). The courses taken in the odd semester with two credits have the course achievement of students being able to practice various arts learning, namely dance, music, and fine arts. Aspects of fine art are art that's used by the sense of sight and has a form based on visual elements (points, lines, planes/spaces, shapes/forms, colors, and textures) (Suryahadi in Susilowati et al., 2021: 66). Fine arts can fulfill the needs of expression and applied functions. Fine art is used as a medium for channeling expression in the expression function, while the applied functions are to fulfill human needs.

Application of the Praktek Seni course (Dance, Music, and Fine Arts) to the art aspect, namely fine arts through batik activities. Batik making is part of the Art Practice course material. Batik making is a specific skill for PGMI students that

differentiates it from another department at IBN Tegal. This material is a form preserving the local wisdom of the Tegal district called 'Tegalan Batik.' However, gaps were found in data collection at the beginning of this research: 91% of students understood the types of batik, and 63.3% lacked knowledge of batik techniques. This is inversely proportional to the fact that PGMI IBN Tegal students are residents of Tegal Regency, which has a cultural heritage of local wisdom of Tegalan batik, which is famous throughout Indonesia apart from the cities of Solo, Yogyakarta, and Pekalongan as batik producing areas. Therefore, students should have the knowledge and skills to prepare for batik in the future.

Rasjoyo in Kasan, et al. (2023: 252) state that batik is the result of depicting various decorative patterns on cloth using canting as a drawing tool and wax as a blocking agent. Making batik provides skills for PGMI students when they enter the school. Batik making is not only an introduction; students learn about creating, which indirectly increases creativity and trains concentration, patience, and perseverance. (Damayanti, 2018: 80). Nasyiithoh (2019: 73) the batik techniques known are canting/writing, stamping, printing, and dyeing. A new technique in batik has emerged, known as splash batik. The difference in making splashed batik is that it does not use a canting but a brush. The splash technique spreads the wax onto a cloth medium using a canting, broomstick, brush, etc., to form a beautiful and unique motif. This motif certainly comes from a creative process based on simple media and processes. Damayanti's Research results (2018: 84) show an increase in the percentage of artistic creativity through splash technique batik activities from 56.5% to 83.7%. The connection with the creative process is that splash techniques can measure student creativity.

Based on this literature, the researcher directed PGMI students to make batik using the splash technique because the students' abilities were minimal. Even though they were born and live in the Tegal regency, they are weak in knowledge and the process of making batik. The splash technique is an easy-to-make batik, which gets better results and vice versa. Research conducted by Erlinda and Ismadi in Nasyiithoh (2019: 71) shows that the splash technique makes it easier for students because it does not go through a patterning process and sometimes hinders batik work. Therefore, learning new techniques for making batik increases student motivation to attend lectures. Apart from that, students unknowingly take part in preserving Indonesia's cultural heritage. Preserving Indonesia's cultural heritage also trains PGMI students' creative processes. The creative process of making batik starts with an easy thing, the splatter technique, before using canting and wax. Through easy things, it is hoped that student creativity will grow. So, this research describes the creative process of batik making by PGMI students using the splatter technique in the Praktek Seni course.

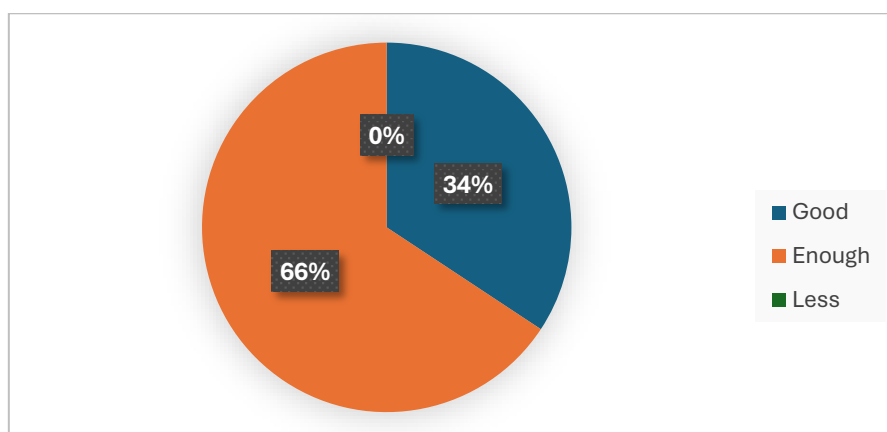
METHODS

A descriptive qualitative approach was chosen for this research method. Sugiyono (2014:1) adds that qualitative research is a method for examining natural objects' condition. This study uses splash techniques to describe and analyze the creative process in batik-making skills. PGMI students of the class of 2021 who have minimal knowledge and skills can increase the creativity needed in the 21st century through the stages of the Wallace creative process. This research describes the creative process of PGMI IBN Tegal students in batik-making activities using splash techniques. Batik lectures in the PGMI IBN Tegal are supported by collaboration Nur Elza Batik Gallery owner, which is located at Benge Village, Talang District, Tegal Regency, with the number cooperation agreement 110/008/SU-FITK-IBN/XI/2019. The research participants were 17 PGMI IBN Tegal students, class of 2021, consisting of 5 men and 12 women. Data collection techniques using semi-structured interviews, observation, and documentation. This research starts from August until October 2024 at Nur Elza Batik Gallery Benge. Data analysis uses the Miles and Huberman interactive model. The interactive analysis includes data collection, reduction, display, and conclusion drawing. The triangulation technique in this research is technical and source, which uses interviews, observation, and documentation with Nur Elza Batik's owner.

RESULTS

Preparatory

Students get an overview of batik theoretically. The researcher delivered the material presentation during the lecture. Apart from general batik material, unique material regarding Tegalana Batik was also presented. The researcher showed examples of Tegalana Batik in front of students to introduce Tegalana Batik motifs and create imagination in making batik motifs. Students' cognitive understanding of Tegalana Batik has a percentage in the fair category of 66% and the excellent category of 34%.



Graph 1. Students' Understanding of Tegalana Batik

Based on Graph 1, students' understanding of Tegal Batik is in the enough category with a percentage of 66%. The intended knowledge is about the philosophy, characteristics, and motifs of Tegal Batik. Even though some students were born and lived in the Tegal Regency, they have just realized that their area has batik motifs that are no less competitive. In the Praktek Seni course, students opened insight into local and regional wisdom because they have yet to study Tegal Batik in depth.

The focus of delivering batik material is on the batik technique, namely the splatter technique. The researcher also explained the tools and materials and the simple manufacturing process. Hopefully, students will enjoy the batik-making process using the splatter technique. The complicated batik-making process does not burden students so that they can develop skills both for self-development and future teaching skills. Results of the interview regarding students' understanding of the splash technique in batik found that the splash technique is part of the batik process. It was found that some students did not know that the splash technique was part of the batik.

"Before Mrs. Queen explained material about splash batik, I did not know the splash batik technique at all. I know batik uses canting. My knowledge about batik is really lacking." (AF/student/interview/2024).

"If there was not this course, I might not know how to do batik using the splash technique." (MAK/student/interview/2024).

"I did not know that there was a batik-making technique using splash technique only during the lecture about batik because what I know about batik-making technique is only stamp and using canting" (FHS/student/interview/2024)

Based on interviews, the ability of PGMI students regarding splash techniques in batik is minimal. Therefore, researchers collaborated with the owner of Nur Elza Batik Bengle to improve their knowledge of batik using splash techniques. Students understand the theory of batik, especially the splash technique. The simple batik technique motivates students to dare to try it directly. Apart from the presentation from the researchers, students received additional theory from the source, the owner of Batik Nur Elza. Students combine theories from literature and theories directly from batik owners. Figure 1 Batik owner Nur-Elza explains the splatter technique in batik.



Figure 1. Students listen to explanations regarding batik techniques

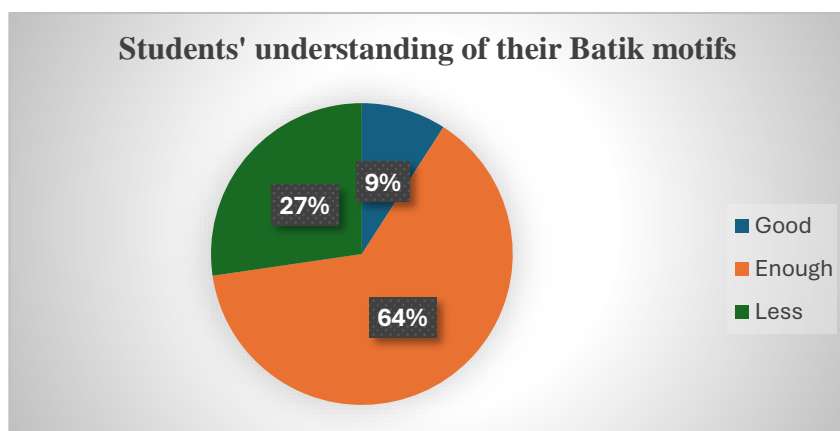
Figure 1 shows that the owner of Nur Elza Batik explains knowledge about batik, especially Tegal batik. Then, explain the use of tools and materials for batik making. How batik making technique from the stamp, use canting then a splash. Explanations from owner Batik Nur Elza and researchers increase students' knowledge about batik using the splash technique. Even though this technique is relatively easy, students who have never made batik still need to learn more about its steps. Students are enthusiastic about direct lectures in the batik gallery because they can practice the theory they have learned, and the learning environment is fun apart from being on campus.

Incubation

In the incubation stage, students were divided into several groups to create splash technique batik on a 120 cm x 120 cm tablecloth. One group consists of 4-5 heterogeneous students. The researcher informed the group divisions simultaneously while the batik material was delivered. In this process, students look for ideas about batik motifs that are applied using the splatter technique based on Tegal batik motifs. Students confirm Tegal Batik motifs through various literature. Students realize that Tegal district has local wisdom of Tegal Batik, which is no less competitive with Batik from other regions. The results of interviews with informants stated that Tegal Batik has distinctive motifs and colors. Typical Tegal Batik motifs include the teapot, tofu Aci, etc. The colors are also more varied than batik, generally dominated by *sogan*/brown shades.

Students can indirectly identify their batik clothing after gaining theory regarding batik motifs, especially Tegal Batik. Students are starting to pay attention to local and regional wisdom through their batik. Everyone has batik cloth

sewn into clothing, especially PGMI students who use batik as daily clothing for both formal and non-formal events. PGMI students who work in the education sector are not far from wearing batik and are more sensitive to batik motifs on their clothes. The Javanese proverb "*Ajining Rogo Ono Ing Busono*" means a person's self-esteem can be seen from their clothes. This means that clothes can give an aura to those who wear them. This is continuous with the use of batik motifs in the fabric of human life. Batik cloth motifs depict the theme of a particular event. The machete batik motif, for example, cannot be used to attend weddings. This motif is used for state events. Students can differentiate between Tegalana batik motifs and batik from other regions. Graph 2 shows the percentage of students' understanding of their batik motifs.



Graph 2. Students' understanding of their Batik motifs

Based on Graph 2, the percentage of understanding about batik motifs obtained is 64% in the enough category, 9% in the excellent category, and 27% in the less category. Students' knowledge of batik is theoretical and has increased to an understanding of the batik clothing they own. Based on understanding batik motifs, it turns out that it is not easy for students to understand the batik technique, namely the splatter technique. The owner of Nur Elza Batik Gallery and PGMI students discussed understanding the splash technique.

"Batik splash technique is easier than other techniques. This technique indirectly motivates students to study batik more deeply" (BR/owner/interview/2024)

"My experience learning to make batik has made me understand various batik techniques. It turns out that the splash technique is straightforward: just splashing wax onto the batik cloth. This differs from using a canting, which requires concentration to get satisfactory results." (ZL/student/interview/2024)

The interviews showed that students only knew batik techniques, writing/canting, and stamping. Students have not yet received information about the splash technique of making batik. Students learn splash techniques in class. The splash technique, which is easier to implement, is still unfamiliar to students. This becomes new knowledge and skills for students to make learning more meaningful. Students learn a series of splash batik techniques directly after receiving material from the resource person. The splash batik techniques consist of preparing more cloth, sprinkling heated wax or using a brush, coloring the fabric with dye, removing the wax from the cloth, and drying.

Illumination

Along with the incubation stage, students' level of cognition increases in the application stage, namely the application of knowledge and understanding regarding splash batik techniques. Students know the steps in making batik, although occasionally, the resource person accompanies them when the practice takes place. Apart from the students having a picture of the motifs made based on observations of the Tegal batik motifs, this stage turned out to be anti-climactic because the discussion process between students in groups regarding the batik motifs continued. Discussions that should be carried out at the incubation stage develop when students practice directly in the field. Discussions make students more confident and confident in the stages of the splash technique they are learning and able to create their creativity in making motifs.



Figure 2. Owner Nur Elza Batik Gallery Practicing Sprinkling Batik Technique

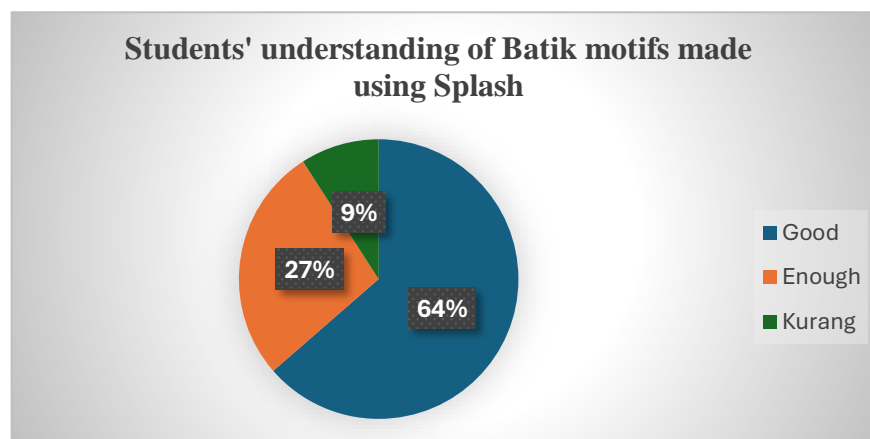
Figure 2 shows that the students went through the illumination stages well. This can be seen in the splash batik technique, which students use confidently and enthusiastically. The results of the questionnaire support this before the practice, which showed that the percentage was 63.6% poor to 54.5% good. Occasionally, the

resource person accompanied him to check for night splashes and coloring, which had to be even. Students express their creativity in making motifs using splash techniques. Group discussions at this stage produce motifs and colorings that are agreed upon by each group. Students apply the splash technique to a piece of cloth used as a tablecloth. This tablecloth is used for special activities in the PGMI department.

The creative process when making batik is not only when making batik but also when determining a theme. Each group member knew what to put on a piece of cloth. This trains students to solve problems by communicating. Decisions are based on deliberation to reach a consensus. Students discussed the theme of the motif and the location of the wax/candles using sprinkling and coloring techniques. Each group has its batik theme: flowers, abstracts, and even palms. The key to this technique is the even distribution of batik wax. The splash technique does not require special skills; you must be diligent. Students enjoyed the illumination stage through splash technique batik activities. Students can express creativity through batik. Even though, in theory, it feels easy, in practice, students still find it difficult because it requires much creativity. Creativity is gained by learning techniques and practicing them.

Verification/Evaluation

The verification stage of the creative process in the splash batik technique is the evaluation of each group's batik results. The method of making batik for each group in stages using the splatter technique is done according to the directions of the resource person and the theory studied. The batik results were according to the student's expectations: theme, wax method, and coloring. Students are proud of their batik work using the splatter technique. Graph 3 shows the percentage of students who understand the batik motifs they make.



Graph 3. Students' understanding of Batik motifs made using Splash Technique

Based on Graph 3, the percentage of students who use the splash technique to make batik motifs is classified as good, with a rate of 64%. This is marked by batik results from group members' discussions. The discussion became interesting because it did not stop at the incubation stage but continued at the illumination stage. Communication was well established, although there were several points of disagreement because each group member's ideas wanted to be expressed; however, with mutual acceptance and listening attitude, the batik theme was still decided together. Students indirectly learn self-control and ethics when communicating.

Students realize that making batik requires high creativity. Creativity is produced through a long process that requires persistence. Making batik is about putting wax on cloth and considering the media, hand pressure, and artistic spirit. The batik produced by PGMI students has aesthetic value, namely the combination of colors, affixing wax, and philosophy—an example of a floral splashed batik motif with three different color gradations. A large flower motif is placed in the middle, and each corner is given curves that resemble flower petals. The coloring of the batik motif appears in Figure 3.



Figure 3. Sprinkled Flower Batik Motif by PGMI Students

Figure 3 shows the coloring in the splash technique done after applying wax. Coloring is done using a different brush from the wax/wax brush. The colors used in this group are red, yellow, and blue. Making batik using the splatter technique takes a short time, especially in this project, where the students only made a piece of tablecloth. Evaluation of the process of making batik with this technique is the

final stage of ngelorod (removing the wax/wax on the batik), and drying is not carried out by the students but by the resource person due to limited space and the use of chemicals.

DISCUSSION

Preparatory

Collaboration between researchers and resource persons in providing a theoretical basis regarding batik enhances student understanding. Researchers with limitations regarding batik techniques were refined by resource persons who are batik makers and owners of the Nur Elza Batik Gallery, Bengle, Tegal Regency. PGMI students have initial knowledge about batik, making it easier for researchers to direct this project. However, it is still unfortunate that students have not fully realized the importance of Tegal Batik. The local wisdom of the Tegal Regency area is introduced to students through the Art Practice course.

The preparation stage is based on Cambell's creativity mechanism in Masganti et al. (2016: 6), which states that preparation is the stage of laying the foundation and learning the ins and outs of the studied field. Even though not everyone is creative, success can be achieved and last for quite a long time through long hours of flying and hard work. Ferdiani et al. (2022: 467-468) have produced research that at the preparation stage, apart from students receiving material from the lecture, students also looked for literature from other sources and related it to the material being taught. This indicates that the collaboration of knowledge from the lecturer, Nur Elza Batik Gallery owner, and students' search strengthens their confidence in solving problems. PGMI students received material on splash batik techniques from researchers and batik studio owners and then combined it with information. This information is comprehensive, from text form to the context studied (Kusumadhata et al., 2021: 81).

Based on this explanation, it was concluded that the preparatory stage in the creative process of splashing batik techniques carried out by PGMI students was obtained from the collaboration of researchers and resource people and searching for information by students so that essential knowledge regarding splash techniques was able to equip students for practical activities.

Incubation

Students' cognition regarding batik motifs was initially limited to knowledge, but understanding increased. Students identified Solo, Yogya, and Tegal batik motifs and could even name them on their clothes. This is supported by a percentage of 64% of students' ability to understand batik motifs. Understanding batik motifs for students has become a culture because PGMI students whose output is becoming educators cannot be separated from using batik as a uniform, whether in their

profession as educators or outside of learning activities at various events. Of course, students should know the motifs and types of batik cloth they have so they can look appropriate for the event. Efianingrum supports this in Abiyoga (2021: 62), who said that culture, such as ways of thinking, behavior, and physical or abstract values, are naturally inherited from generation to generation.

Nur Elza Batik Gallery students incubate splash batik techniques through direct practice. The creative process that develops influences the creation of motifs and coloring. This is supported by the research results of Fatmala and Hartati (2020: 1151), which states that batik activities provide the opportunity to design patterns using wax and coloring, encouraging imagination through batik techniques. Batik-making activities create a feeling of confidence in making other creative ideas. Incubation of batik techniques and designs is a way, method, and means of educating consumers, lovers, and batik business actors in the future (Wahyuni et al., 2023: 796).

Arts training can improve cognitive function, which identifies stronger attention networks as the mechanism. The research also gives parents and educators one more reason to encourage young people to find an art form they love and pursue it passionately. Training in the arts likely yields cognitive benefits that go beyond "art for art's sake." Or, to put it another way, the art form that you truly love to learn may also lead to improvements in other brain functions, (Posner and Patoine, 2009: 6). Especially for PGMI students who will become training teachers, they are equipped with the pedagogic competencies needed to solve students' social problems. The cognitive function can open up knowledge and provide many solutions to social problems experienced by students that impact the learning process.

Based on this explanation, the incubation stage for PGMI students in making splash technique batik involves understanding batik motifs and direct practice using the splash technique in the batik-making process. Students adapt through direct practice after understanding the steps for making batik splash techniques. Students learn to use a brush as a medium and apply wax to more cloth, applying the primary color of the fabric until the final stage. Apart from practicing batik, understanding existing batik motifs equips students to adapt their appearance to the activity.

Illumination

The illumination stage appears at the student's level of cognition, which increases from knowing to understanding and applying the splash technique in the batik-making process. With a good percentage of 54.5% regarding splash batik techniques, students receive knowledge limited to theory and practice and have discussion skills to solve problems during the activity. This is in line with the opinion of Marhaeni (2016:3), who states that the ideal learning process for producing

creative products with geometric and non-geometric motifs on batik material is undoubtedly supported by encouraging factors for students. The illumination stage is a stage of enlightenment that makes an 'instant flash' moment, the culmination point of a train of associations that ends with a 'click!' (Wallas in Kusumadhata et al., 2021: 82).

Stenberg in Marhaeni, (2016: 9) creativity meets three psychological attributes: intelligence, cognitive style, and motivation. These three things are the background for creative individuals. Through batik material in the Art Practice course, students can practice their creativity with a fun learning process. The illumination stage makes students aware that the creative process needs to be sharpened and can measure one's abilities, which makes students understand that becoming a creative person requires a process that is not instantaneous.

Finlay and Kahu in Michel and Förster (2025: 6) Explain that active engagement is key to students' interaction with new information and the construction and assimilation of knowledge. Especially for active and collaborative learning, student engagement is linked to learning outcomes and achievement. Given the findings that engaged students show more effort, persistence, and enthusiasm while working on their challenge, they might experience more mastery, success, and achievement, which is described as a source of self-efficacy. Engaged students benefit from more social integration with peers, like their interdisciplinary project team, teachers, and external stakeholders.

It was concluded that the illumination stage of making batik using the splash technique of PGMI IBN Tegal students made them aware that it requires creativity, experience, and a long process. This stage trains the problem-solving skills experienced by students when harmonizing theory and practice in the field. Students communicate the theme and the application of wax and coloring with group members when making batik using the splash technique. This ability is a creative thinking skill in the creative process, including a process that produces a wide and varied range of possible ideas and methods.

Verification/Evaluation

At the verification stage, students double-check the results of the splash technique batik made with their group. The re-check includes the suitability of the theory and practice of splashing batik techniques. The creative process in batik takes place according to Wallace's stages. PGMI IBN Tegal students go through the stages of making splash technique batik from preparation to verification. This stage hones creative thinking skills, supporting this class's creative process. Creative thinking or creativity, according to Coon and Mitterer in Haryanti and Saputra (2019: 60), is a problem-solving activity carried out through a subconscious experiential process. It

includes fluency in generating ideas, flexibility, using the time to produce various solutions, and novelty of new ideas that go through several stages.

The ability to make batik in Fine Arts subjects, apart from understanding the elements and principles of art being taught, can enable students to be creative, work, develop creativity, express feelings, talents, motivation, and be independent (Alfiana et al., 2017: 46). The subject at MI/SD, Seni Budaya dan Prakarya (SBdP), teaches aspects of fine arts, which are applied through batik activities. Moreover, in the Merdeka Curriculum, schools can choose aspects of art learning to have more in-depth knowledge and skills. The fine arts aspect of batik also equips students to face competencies in their lives. Moreover, batik skills shape one's identity as an Indonesian citizen.

It can be concluded that the students passed the verification stage well. This can be seen in the students' ability to harmonize the theory and practice of making splash technique batik. Students go through a creative process by developing batik creativity. Students can solve problems encountered when aligning the theory and practice of batik-making. Problems require solving through communication between students and students with resource persons.

CONCLUSION

The process of creating batik using the splatter technique involves several key stages. Wallace's creative process has shared valuable insights with the students of the elementary education department (PGMI) at IBN Tegal, highlighting that creativity is a skill that can be developed. His framework includes stages such as preparation, incubation, illumination, and verification, helping students understand, explore, and effectively practice batik art through this method. As they navigate this process, students gain the essential skills for making batik and sharpen their problem-solving abilities.

Despite growing up in the Tegal Regency, the Art Practice program has uncovered an interesting trend: many students have limited awareness of the local Tegal batik motifs. This course tackles that knowledge gap by providing a deeper understanding of the motifs and the history behind Tegal Batik. By blending theoretical knowledge with hands-on experience, the program equips students to become elementary school teachers. Moreover, while enhancing professional competencies aligned with a dynamic curriculum, the skills developed through this course significantly boost their creative potential.

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