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Art Activities as A Medium for Critical Thinking in the "Let's Share the Art" Program

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Abstract. Political provocation on governor election in Jakarta had its spill-over effect on youths' increased prejudice in a national scale. With this concern, stakeholders initiated an intervention program named "Let's Share the Art" for high school students to facilitate discussions that promote cognitive flexibilities. The program was held once per week in 7 meetings. It was expected that the program will lower the need for closure (NFC) and raise the critical thinking mindset (CTM) scores of the beneficiaries. Two high schools that partnered with the program initiator were selected, with a total of 82 students participated in the research. Contrary to the hypotheses, we found no significant change in both measurements from both schools. However, separated analysis showed that there are some indications of changes regarding to certain situational and contextual matters. Notwithstanding the fact that the result could not be generalized on Indonesian youth, but the subtle impact of art activities on cognitive flexibility for teenagers was discussed, with the additional notes on how to implement such program in the future.

Keywords: art activity, need for closure, critical thinking mindset, youth

In the midst of the heated political event in 2017 that riddled with religious provocations, the people of Jakarta and its surroundings faced an additional problem, the provocations around the campaign had been spread to students through social media exposure. The situation of how children were exposed to hoaxes was discussed on National Children's Day 2017. Arist Merdeka Sirait, Chairman of the National Commission for Child Protection discussed how children discriminate their friends due to the religion because adults taught them the hatred by involving them in political activities, which to this day are fraught with identity issues (Andayani, 2017). Henny Supolo, an activist at the Kebhinekaan Teacher School, revealed that the impact of elections using religion as a campaign tool set a bad example for children in accepting differences ("Student Tolerance", 2017).

In the era of internet, information disclosure does not necessarily make people insightful, people actually have difficulty drawing conclusions from the information overload.

Since the early era of the internet, social psychology researchers Januszewski and Koetting (1998) had indicated that the pressure to keep updated on the latest news made people gullible for hoaxes. Their research explained that vulnerability to hoaxes happened because people did not browse information as a whole, they did not seek for clarity of information nor the credibility of the sources.

A study on Facebook's comment section illustrated how hoaxes cause some people to fall into this type of fraudulent and inaccurate information. The study showed that when a person is an active reader of a conspiracy topic, it is very likely that he will become a reader of other conspiracy topics (Bessi et al., 2015; Zollo et al., 2015). Aside from the personal interest, conspiracy topic usually tied with certain social situations, one of them is the presence of intervening outgroup within a society. Thus, one's belief in conspiracy news is a mechanism to accept something that threatens the value he adheres to (Van Prooijen, 2012). These findings illustrate how the ongoing socio-political situation at that time might explain how students got absorbed in the provocations based on conspiracy topics.

Despite the fact that hoaxes are mostly shared by people aged 45 years and over (Guess et al., 2019), children and adolescents rely on them as the source of information because they see the adults as the authority figure (Kruglanski, 2004). If they receive information from their parents or teachers when the adults are being provoked, it is possible that the youths will resonate what the adults do. Kruglanski (2004) explains that children need their own time to be able to behave from the reception of this information, or in other words they need to search for information and the formation of their perception independently.

The problem of this spill-over provocation effect has moved The Indonesian Arts Coalition and Ganara Art to initiate an intervention program aimed at to resist the effect of provocation by promoting critical and inclusive thinking activities through an art activity entitled "Let's Share the Art" (Mari Berbagi Seni/MBS). This program was implemented in 2018 as a response to concerns about the side effects of political provocations on students after the DKI Regional Election in 2017.

This article elaborates the rationalization of the program, the process, and the analysis of how critical thinking progress through art activities was occurred during the

program. Considering the main problem to be solved was inability to accommodate multiple perspective in thinking, we used the theoretical approach of critical thinking and how art can be utilized to facilitate the intended increase on critical thinking habit.

Aspects of Motivation in Thinking

How do artistic activities psychologically relate to the habit of critical thinking? To answer this question, we must first get acquainted with the concept of critical thinking. In the American Philosophical Association, Facione (1990) defines critical thinking as the cognitive ability to perform analysis, meaning, conclusion-making, explanation, evaluation, and monitor and correct one's own thinking. Critical thinking is defined as a way to answer various problems with a strong belief in facts, the desire to have complete information, consider alternatives, be fair to the opinions of others, and a willingness to admit mistakes when they misunderstand something. The behaviors associated with critical thinking are believing in truth, flexible, and sensitive (Facione, 2015).

Based on that idea, an assumption arises that a person with critical thinking habit will always apply that ability on the daily life. From the outset, Facione (2000) refuted that assumption. The habit of critical thinking does not necessarily make a person think better, but there is indeed a positive correlation between those two. In a study with a sample of 276 nursing science students, it was found that there was a balanced correlation of thinking ability and critical thinking habits as measured through the California Critical Thinking Disposition Inventory (CCTDI) with ACT (American College Testing) and SAT-Verbal (Facione & Facione, 1997) scores. The moderate correlation indicates a connection between the two but thinking habits and thinking abilities have their own dimensions.

Based on the findings above, Facione (2015) continued the research aimed at looking more concretely at what activities can spur critical thinking, instead of simply measuring thinking ability with the question, "am I capable of critical thinking?". Through this research, it will be known which individuals in their daily lives have the habit of thinking critically, and vice versa, it will be possible to know which individuals do not have the habit of thinking critically. The habit of critical thinking is something that

can be shaped and improved through the widest exploration with strong methods, principles, and theories and avoiding insight input through indoctrination and attachment to various alternatives (Facione, 2015).

Motivation in thinking as one of the aspects that is different from the ability to think is also conveyed by Kruglanski (1989) in lay epistemic theory or theory on a way of thinking. According to the theory, there are three components in thinking: the ability to think, the content of the thought, and the motivation to think. Thinking abilities include a person's expertise in processing numerical data, verbal intelligence, memory power, and spatial intelligence. In addition to ability, a person's thinking also includes the content he thinks about, be it in the form of buying and selling foreign exchange, transportation routes, or campaign strategies. The content of a person's thoughts is closely related to where he is located and the tasks and roles he has. The last component, that is, the motivation to think, is the component that indicates a person's thinking habits. Motivation for thinking includes how long a person is willing to think, how quickly he finishes his thinking activity and then draws conclusions, willingness to retest the conclusions that have been made, and other things related to the high and low of a person's desire to do thinking activities.

A person's thinking motivation is reflected in how far he needs certainty of answers to the problems he faces. Webster and Kruglanski (1994) refer to it as the need for closure (NFC). NFC is defined as a person's desire to answer a question and his aversion towards ambiguity. The ambiguity in question is the ability to see more than one interpretation. The term 'need' refers to the tendency of how they process information. Individuals with a high level of NFC take answers that are binary, contradictory, and mutually extreme so that they tend to resist variations and possibilities. Meanwhile, individuals with low NFC will process answers with a wider scope of consideration so that they are better able to see alternatives and can accommodate different ideas (Kruglanski, 2004). Individuals with high NFC levels take shortcuts to draw conclusions, such as using associations that are accessible to their minds (Jung & Kellaris, 2004). One example of a shortcut is to refer to the prevailing culture to assess an issue so that one does not have to bother considering situational

aspects or various other explanations in order to draw conclusions immediately (Fu et al., 2007).

The concept of the need for certainty of answers was developed by Webster and Kruglasnksi in 1994 through a study to validate the NFC concept they proposed. They performed a Known-Groups Validity test or tested on two groups where the difference was known. The object of his research is a student majoring in art and accounting. Weber and Kruglanski chose the two majors based on the theory of careers by Holland (1985) which states that there are vocational behaviors or differences in behavior in each profession. In Holland's theory, there are various personality types in the professional world. The two personality types that Weber and Kruglanski (1994) assessed as opposing each other in the NFC spectrum are the conventional personality (liking the explicit, structured, and regularity thing) and the artistic personality (liking the implicit, exploratory, and freedom). The measurement results showed that students majoring in art have a lower need for closure than students majoring in accounting. In other words, thea person's habit in thinking in education may reflect their thinking disposition, the motivational component of thinking. In art majors, the habit of seeing and dealing with different points of view in a work is a factor in shaping the low need for definite answers when compared to accounting majors who demand absolute answers.

Motivational Thinking and Art

Some studies have found a consistent relationship between motivation to think and art. One of those studies is Jakesch and Leder's (2009) study on how an individual's mind processes ambiguity in a work of art. Researchers presented paintings to be assessed by participants. They presented three different descriptions to the participants, each of which was grouped into low levels of ambiguity (literal and close to meaning to images), moderate ambiguity (symbolic and close to meaning to images), and high ambiguity (symbolic and have no closeness of meaning to images). For example, for Theo van Doesburg's paintings, the descriptions circulated include "elementalism", "concrete art", "static", "homogeneous", "constructed", and "rigorous". The results showed that participants liked and were interested the most in ambiguous-medium description than the ambiguous-low or ambiguous-high level. The researcher concluded that the

monotonous description of a work does not arouse the interest of the people with whom it interacts, nor does the description that is too ambiguous.

A work of art contains such a symbolic meaning that presents ambiguity in its interpretation. In cognitive psychology, ambiguity is processed and can be enjoyed through a complex thinking activity called higher-order cognition (Leder, Carbon, & Ripsas, 2006). The process of seeking, deciphering, and understanding symbolic meaning in an artwork includes the stages of analysis, evaluation, and synthesis, which are series of processes in critical thinking activities. This type of thinking occurs when one is interpreting a work of art that cannot be defined literally, or in the terminology of Jakesch and Leder (2009), the individual gets "a space to play with ambiguity".

The relationship of cognition and art have also been studied through the disciplines of cognitive neuroscience and evolutionary psychology, mainly to know how a person understands art and appreciates it. De Smedt and De Cruz (2010) examine this by relying on two complementary principles to look at the evolution of the behavior of living beings: proximate causal mechanism direct cause (the biological structure responsible for a behavior, such as hormones, genome, or brain) and ultimate function the main function (why it contributes to the power of the capabilities of an organism). Cognitive neuroscience sees the existence of an artistic attitude in an individual by looking for its immediate cause, while evolutionary psychology sees the consequences of this artistic attitude as a qualification in that individual.

Neuroscientists Zeki and Marini (1998) discovered how brain process of how our brain process colors that gives us brief explanation on how we process artworks. When we see a work of art, our brain activates a nervous system that processes the detection of appearance, emotional signals, and information systems. This trace of reaction is agreed to have long existed and is considered a primitive psychology over the stimulation of visual stimuli and the transmission of signals to other parts of the psyche and consciousness such as thinking, remembering, and guessing. When we look at an expressionist painting, for example featuring an object of blue strawberry fruit and a human face with a green hue, our brain not only performs the detection of colors and shapes previously recognized in memory that such is the shape of the strawberry and the hue of the face, in which both are red. At the same time, our brain also evokes another

neural pathway related to our perception of that form, namely the dorsolateral frontal cortex brain system for memory and attention, which provides an explanation for why the painting attracts our attention (Zeki and Marini, 1998).

So far, artistic traits according to cognition and evolution are more supported by the principle of ultimate function than proximate causal mechanism. If artistic traits were a process of adaptation or natural selection in the past that our ancestors faced, then we would have a hard time finding traces of random genome intermingling over the artistic attitudes of a person, trained and untrained, who became an artist and a non-artist. Some experts in evolutionary psychology agree that art is a by-product of human beings, one of which is Steven Pinker. Pinker (1997, in De Smedt and De Cruz, 2010) states that the main function of art is not to advance our biological qualifications as a species, but rather to "activate a sense of joy". For him, the analogy about art is when he is hungry and wants to eat tarts. What we aim for is not just a feeling of satiety, but a sense of satisfaction enjoying the combination of cream and chocolate. This explains how a society, across cultures and times, has a tendency to continue creating and consuming art. Cognitive neuroscience researchers do not say that artistic behavior has no connection with reality. But instead, they argue that the historical discipline of art can inform what the journey of the fruit of the human mind looks like beyond its biological function as a living being, that is, in addition to eating and reproducing.

The research of Chirumbolo, Brizi, Mastandrea, and Mannetti (2014) regarding a person's thinking motivation and his preference for abstract and realist paintings explains in more detail about cognition and art. In the study, the high-and-low motivation of thinking of a person determines whether he can enjoy abstract painting or not. Participants who had a need for low answer certainty, or in other words were willing to think carefully and not quickly jump to conclusions, showed a higher preference for abstract painting. In this study it was also found that those with an art education background and had a good intelligence test score had no relationship with their preference for abstract painting. The relationship between motivation to think and art in this study, also in webster and Kruglanski's previous research (1994) implies that a person's motivation for thinking can be intervened through art.

From the explanation above, researchers wanted to see the impact of Let's Share the Art: Critical Thinking and Social Inclusion through Art (Mari Berbagi Seni/MBS) activities on changes in the thinking motivation of their participants which was illustrated through the need for closure (NFC) (Webster & Kruglanski, 1994) and critical thinking habits (Facione, 2015). We predict that the need for closure (NFC) will decrease after participants join the MBS program. In addition, we also predict that critical thinking habits will increase after participants join the MBS program

Method

This intervention is an activity that focuses on the individual that is intended to improve attitudes, behaviors, or beliefs in the individual (Fraser, Richman, Galinsky, and Day 2009). In this study, interventions were made to improve critical thinking habits. Interventions that are carried out in schools on students are intended to improve the quality of students who are later will have an impact on strengthening the social environment, organizations, and social infrastructure in society (Wagner, Swenson and Henggeler 2000).

This study used a quasi-experimental design of one group pretest and post-test, where there was only one experimental group that received intervention through MBS program in which the assessment was administered before and after the program was commenced. Participants in this study were students who participated in the MBS program from two partner schools, each in the cities of Makassar and South Tangerang. From the collected data, it was recorded that there were 77 participants filling out the initial test and 57 participants filling out the final test in South Tangerang. While in Makassar, there were 63 participants filling out the final test and 46 participants filling out the final test. Technical problems prevented some participants from participating until the final stage. For this reason, only matching data (students who filled pre-test and post-test) totaling 82 pieces will be processed and analyzed.

The instrument used in this study is the Need for Closure scale (Weber & Kruglanski, 1994) to measure the level of need for certainty of answers, consisting of 15 items of statements, and the responses were recorded with Likert scale from 1 (strongly disagree) to 7 (strongly agree) by participants. Examples of items in NFCS are, "I don't

like statements that have double meanings or can be interpreted differently" and "I rarely go through the wide variety of opinions before drawing a conclusion". To measure critical thinking habits, we used a Critical Thinking Mindset self-rating form (Facione, 2015) which consists of a list of 20 behaviors that reflect critical thinking habits with 10 items of the score are reversed, and the participant answers with a choice of "yes" or "no". Examples of statements in this habit of critical thinking such as, " Showing an attitude of tolerance towards the beliefs, ideas or opinions of others that I do not agree with" and, "Supporting friends not to underestimate the ideas and opinions that others convey".

In the process of adapting the instruments, researchers use the adaptation rule of Beaton (2009) which emphasizes culture-sensitive translation to avoid Western-centered measurement. Thus, adaptation is carried out by first translating the original English instruments into Indonesian language by someone who knows what the research variables are and someone else who does not know them. The results of the two translations were synthesized by researchers into a single Indonesian-language measuring instrument. The next step is to test the readability of the measuring instrument in the form of a questionnaire against the target demographic of the study, which is about a person aged 16-18 years. Researcher invited seven high school students in Jabodetabek as a representation of the target participants who were high school students as well.

During the implementation of the program, the pre-test was conducted at the first meeting before the MBS activities began. The final assessment (post-test) is carried out at the last meeting of art activities before visits to special needs school and art exhibitions. The distance between the initial test and the final test was six weeks. Before filling out the final questionnaire, which contains the same questions in the initial test, participants were first instructed to write five of the most memorable things from MBS to restore MBS's memory and experience so that the impact can be remembered when filling out the post-test questionnaire.

Let's Share Art (MBS) Activities and Procedures

The Critical Thinking and Social Inclusion through Art Program is a series of activities to create various works accompanied by interactive discussions. In the

preparatory stage, a number of facilitators from the target area were recruited as program guides. They are first selected and given training so that they can run a module that will be applied for three months, once a week for an hour. Each facilitator is tasked with handling a group of 5-7 people. This program is usually done during the art class hours which are carried out one day a week. Facilitators also coordinate with the school, especially the principal and/or the school's art teacher. There are no specific provisions in the selection of schools. In this study, Makassar and South Tangerang were selected as the study case areas, where they are two of The Indonesian Arts Coalition cultural hotspot network areas. The module used in the Let's Share Art program consists of a series of activities as follows:

1. **Create Natural Images of Objects (Still Life) from Everyday Objects**

   Participants were divided into groups and sat in a circle within their groups. In the center of them are laid several painting objects. The facilitator explains the object, the task of drawing the object in front of them, and the painting tools that have been provided. Participants are free to draw in any style and interpretation of the object in front of them. After the drawing time is over, each participant shows the result and is welcome to explain why they drew it in such a way. The discussion was held to discuss the diversity of points of view and interpretation that occurred in each group, with the questions asked by the facilitator as follows:

   a. What determines the differences in the work of each person in this group?

   b. Which image best tells about the object being drawn? Is there the most 'correct' perspective on the object?

   c. Are there any everyday examples (of diversity of viewpoints)?

   d. What would be your attitude if you were in a group that had a different point of view?

2. **Separated** then Unified

   This activity was inspired by the work of artist Eko Nugroho with character characteristics surrounded by ornaments and organic patterns. Each participant in their respective groups is assigned to draw an organism that is matched with various, separated ornaments found on the game board. After each participant

gets five ornaments from the dice roll, they are welcome to paint from the ornaments. Participants then show the results of their group's unified images with discussions that include the following questions:

a. What are the challenges in creating a unified image?
b. What is your process of thinking so that a unified image is created?
c. If each ornament represents one characteristic in society, what would you like to describe?
d. What is the key to harmony in your opinion?

3. Mandala

"Mandala" is a form of design pattern that symbolizes the universe with circles made to represent wholeness. Its main philosophy is the balance of various components in the universe. This time, participants worked for their group. Each group gets painting tools in the form of canvas/paper, paint, and brushes. Participants were freed to use objects in nature such as rocks and leaves as additional materials. Each group determines the composition and elements to be arranged in the mandala, where each participant is given a specific task. After completion, the work and concept of the Mandala mixed media painting were presented to other groups. The activity continued with a discussion which included questions:

a. How is the process of you and your group mates in determining the elements and compositions in this mandala?
b. How do you guys align ideas in groups?
c. How do you interpret "balance" in this work?

4. **The Spectrum of Hues**

The philosophy of this activity is the combination of colors and patterns through marbling techniques on paper as the medium. This technique focuses on the occurrence of alignment by adding some dye to the liquid-flavored medium, after which it is allowed to form its own combination of colors and patterns. The tools provided include paper, trays, shaving cream, chopsticks, thin wooden boards, and various food colorings. The initial step, the shaving cream is poured into the tray until it covers the entire surface of the tray. Each participant, in turn,

dripped food coloring with the amount and point of droplets as they wished. After all it gets its turn, the paper is pasted over the surface of the shaving cream which then produces a multi-patterned image of the colors. The result of the drawing on the paper became the work of each group. Discussions after the activity included questions:

a. After doing this activity, how do you define 'beauty' and 'the right design'?
b. Please experiment with one color, two colors, and more colors. How do you define the differences in the results?
c. What color is there that we can find in our society/group/community?

5. The Diversity of Nature in Artwork

This activity is to paint canvas hats with plants and animals' motifs that are unique to their area. Participants are also allowed to draw plants and animals from the area where their parents, siblings come from, or any region they know about. The facilitator explained how the motifs of regional plants and animals can be an element of the beauty of a work. The following questions became the subject of discussion at the end of the activity:

a. What uniqueness are you most proud of about your area?
b. How do other regions view its uniqueness?
c. Is there any diversity that comes in the uniqueness, characteristics, biological wealth that you want to tell from your area?

6. Special Needs School Visit

After the series of art activities at the school were completed, the participants were invited to visit special needs school. They were invited to do painting activities together with special needs school's students and apply the same activity techniques as they had previously obtained from the MBS program. This activity was intended to let the beneficiaries of MBS program share the knowledge as well as promoting knowledge about diverse learning situation.

7. Artwork Exhibition

The exhibition of all the artworks by participants of MBS in the art galleries of each city respectively. The exhibition in Makassar was held at Rumata' Art Studio

Makassar, while the exhibition in South Tangerang was held at Ganara Art Studio Jakarta. The exhibition is open to the public. They also worked with the facilitators to prepare the display of the work. On the day of the exhibition visit, participants will help explain their work to the visitors, both consisting of teachers at their school, their parents, their friends, and the general public.

Results

From the collected data, we only analyzed the complete data filled in before and after the program, or in other words, the researcher analyzed the scores of the same person and compares the scores using paired sample T-test to see if there is a significant change in the need for closure and critical thinking mindset in participants after the completion of the program.

In the combined total data from the participants of Makassar and South Tangerang, there was no change in critical thinking mindset (t (73) = -1.22, p = .23, ns) nor the need for closure (t (81) = .75, p = .46, ns). Thus, the main hypothesis is not proven. At first glance, there is a trend of decrease in the need for closure and an increase in the critical thinking mindset (see Table 1), however, each city shows its own trend of change.

Tabel 1.
Overall's score of Need for Closure and Critical Thinking Mindset

Measurement	Mean	Sd	t	Df	Sig. (2-tailed)
NFC total pre-test	72.09	11.53	.75	81	.459
NFC total post-test	71.18	10.80			
Total CTM pre-test	69.13	13.77	-1.22	73	.226
Total post-test CTM	71.28	14.26			

[a] *NFC = Need for Closure*; *CTM = Critical Thinking Mindset*.

In the aspect of the need for closure (NFC), no significant changes were found, either in Makassar (t (37) = 1.27, p = .21, ns) or South Tangerang (t (43) = -.25, p = .81, ns). However, the Makassar chart shows an indication of a decrease in NFC compared to the South Tangerang chart.

Table 2.
South Tangerang's score of Need for Closure and Critical Thinking Mindset

Measurement	Mean	Sd	t	Df	Sig. (2-tailed)
NFC total pre-test	70.36	10.91	-.25	43	.808
NFC total post-test	70.75	10.84			
Total CTM pre-test	69.59	13.86	.40	36	.691
Total post-test CTM	68.51	15.13			

[a] *NFC = Need for Closure*; *CTM = Critical Thinking Mindset*.

In the habit of critical thinking or critical thinking mindset score, no significant changes were found in the participants of South Tangerang (t (36) =.40, p = .69, ns). On the other hand, there was a significant increase in Makassar participants (t (36) = -2.49, p = .02). Participants in Makassar showed higher critical thinking habit scores after MBS activities (M=7 4.05, SD= 12.95) than before MBS activities (M= 68.67, SD= 13.86). From the overall results, it can be concluded that the MBS program did not show any significant changes in the participants. However, if you look specifically at the participants in Makassar, participants experienced a significant increase in critical thinking habits after participating in the MBS program.

Tabel 3.
Makassar's score of Need for Closure and Critical Thinking Mindset

Measurement	Mean	Sd	t	Df	Sig. (2-tailed)
NFC total pre-test	74.11	12.03	1.265	37	.214
NFC total post-test	71.68	10.87			
Total CTM pre-test	68.68	13.86	-2.487	36	.018
Total post-test CTM	74.05	12.95			

[a] *NFC = Need for Closure*; *CTM = Critical Thinking Mindset*.

Discussion

From the concerns about the spillover effects of political provocations on students, a program entitled "Let's Share the Art" was designed as a mean to practice critical thinking and accepting multiple perspectives. This research assessed the need for closure (NFC) and critical thinking mindset (CTM) before and after the program to see if there's any significant changes from participants. The overall results showed no significant changes from participants regarding their NFC and CTM levels. However, participants in Makassar showed a significant increase on critical thinking mindset.

In general, the results of this study do not support the main premise that art activities can have an effect on a person's thinking style. But those influences can still be found when the results are analyzed contextually. We discuss several aspects that explain why the results of the study are quite different from the initial conceptualization and hypotheses. These aspects include measurements, program implementation notes from the facilitator, the impact of art on cognition and the dynamics of individual thinking styles.

The first thing that we strongly suspect as the reason why the hypotheses were not supported is the limitation of measurement. Indeed, previous research has indicated how art activities play a role in presenting absurdism that in turn will stimulates thought (Jakesch & Ledder, 2009; Chirumbolo et al., 2014) and in a systematic curriculum environment, the art department makes its students have a higher tolerance for uncertainty than other majors such as accounting (Webster & Kruglanski, 1994). Meanwhile, in this study, although it is aimed at measuring the dynamics of changes in thinking motivation, we only capture two constructs of the many constructs that represent the motivation or thinking style. This study does not capture other forms of motivational thinking such as the desire to think (Cacioppo & Petty, 1982; Petty et al., 2009) or enjoyment in processing the absurdity of an art object (Jakesch & Ledder, 2009; Chirumbolo et al., 2014). Because there is a possibility that a change in thinking occurs in these various constructs, not in the need for closure or critical thinking mindset.

The second aspect is still related to the limitations of measurement, there is a variety of other information that is not recorded through the construct of the need for closure and the critical thinking mindset. One of them is record of the activity dynamics and participants' responses that we gathered from a focused group discussion with facilitators from each city. During the discussion that held every after-art activity, facilitators in South Tangerang reported that there were a lot of discussion about latest celebrity news, while facilitators in Makassar reported that many discussions occurred related to the ongoing terrorism news and many other news. All facilitators reported that there were discussions related to political provocations, but participants in both regions were equally reluctant to get involved in them.

The presence of more serious issues in Makassar's discussion session can be explained by Bower and Forgas (2000) regarding the memory recall process that related

to the involvement of a person's affection and cognition in the activity they are engaged in. There will be a lot more to discuss when the participants are truly engaged in the activities. It has been confirmed too through the FGD that the participants in Makassar showed more indications of enthusiasm. Philippot, Neumann, and Vrielynck (2008) found in a study that individuals who are able to explain their emotions and thoughts in more detail and elaboratively will find it easier to face problems and learn new alternatives. This may explain why participants in Makassar showed more significant changes than participants in South Tangerang.

Third, we underlie the rationalization of this intervention program based on the finding that art can facilitate one's thinking flexibility so that it can ultimately hone individual thinking to be open-minded. But what needs to be noted is the limited duration to do the art activities in this program, only once a week, and six meetings in total. While in the research of Webster and Kruglanski (1994) using a sample of students majoring in art, and the research of Jakesch and Ledder (2009) was conducted on people who basically had an interest in art and were interested in attending exhibitions. Therefore, it can be concluded that art activities are likely to have an impact on thinking when carried out systematically and in a prolonged time, even more so if it becomes a habit. The duration in our program setting might not be sufficient to present a substantial change for one's thinking trait.

Focusing back to the interventions for thinking motivation and thinking styles, the results of this study are in line with a series of other findings that state that a person's thinking patterns tend to be unchanging, and it is necessary to deal directly with the mental representation of things learned (content of the thought) to be able to find flexibility in them (Spiro et al. 2012). The impact of existing changes in thinking can be seen in a proper conditioning of habit changes, one of the examples is how terrorist inmates experience conditioning to be able to express emotions and practice flexible thinking prior to a critical discussion about their ideology (Muluk, Umam, & Milla, 2019). Another example is the importance of the choice of stimulus that precede the effects of the need for closure when someone is considering rational decisions, this has been found in a study about the framing of news that has a great impact on the conclusions drawn by readers (Nisbet et al., 2013).

Overall, the results of this study show the potential of art activities in honing students' thinking style. This research also indicates the difference between art that is carried out as a short activity and art that is part of a person's daily life. Further research to see the differences between the two is needed to see the consistency and to come with conclusive results.

Conclusion

Research shows the impact of art and art activities on a person's thinking flexibility and indicates support for critical thinking. However, the results of this study showed that these impacts cannot be immediately obtained from short art activities alone. Art intertwines with a person's thinking when he becomes a habit or becomes an integral part of one's life. This can be considered when there are interventions is being made based on art activities in the future.

Suggestion

Comparisons with control groups can provide a clearer picture for intervention models like this. Researchers also need to pay attention to how it can allude to sensitive issues such as provocations in intervention programs in a more subtle and acceptable manner so that stakeholders will not become reluctant to the research programs and the procedures offered.

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