

## Learning Model Gawi Sabumi Based on Local Wisdom to Improve Student's High Order Thinking Skills and Multiple Intelligence on Elementary School



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**ABSTRACT:** The purpose of this study is to produce a new learning model and find out the effectiveness of the learning model GAWI SABUMI to improve the critical thinking, creative thinking, problem-solving, analytical thinking, and logical thinking (high order thinking skills) and multiple intelligences of elementary school students in South Borneo. This study used the type of research and development consisted of three phases to find the effectiveness of the model on the dependent variable through the quasi-experimental research. The research data were analyzed using sequential data analysis to determine the feasibility of the model. The sample was 40 students of Sungai Miai 7 Elementary School Banjarmasin. The result of quality evaluation of the blended learning model GAWI SABUMI was at a high level ( $X = 4.57$ ) ( $SD = 0.17$ ). The characteristics of the Gawi Sabumi model included ten stages: Group, Analysis, Work together, Inform, Solve the problem on outdoor, Actualization of the solution, Battle games, Unity on role play, Manage conclusion and Invent the creation. Students had post-test on high order thinking skills average scores higher than pre-test at ( $X = 3.59$ ) ( $SD = .78$ ) and students who have highly skilled criteria at linguistic, musical, logical mathematic, visual-spatial, kinesthetic, interpersonal, intrapersonal, naturalist, and existentialist intelligence average scores higher than pre-test at ( $X = 3.55$ ) ( $SD = .88$ ). It means that the GAWI SABUMI model meets the criteria of being valid, reliable, and feasible to be implemented and potential to improve students' high order thinking skills and multiple intelligences.

**KEYWORDS:** Learning Model, Gawi Sabumi, High Order Thinking Skills, Multiple Intelligence, Local Wisdom

### I. INTRODUCTION

The learning process in the industrial revolution 4.0 era requires learning activities that lead to the development of higher-order thinking skills consisting of critical thinking, problem-solving, creative thinking, communication, collaboration, analytical thinking, and logical thinking (Agusta & Noorhapizah, 2020; Arifuddin, 2020; Metro, 2015; Yanuardi et al., 2018). The development of these skills requires the cooperation of teachers, principals, and parents. Future human resources will face challenges in developing information and technology literacy skills, critical thinking skills and creative thinking, communication, and collaboration (Agusta & Noorhapizah, 2020; Noorhapizah et al., 2021; Sholiah et al., 2020; Suriansyah et al., 2021). On the other hand, the main components in 21st-century learning are skills, knowledge, metacognition, and character. We must be committed to designing learning activities that develop these skills so that learning outcomes are not only oriented towards cognitive skills.

Beside That, developing students' multiple intelligences is a challenge in the learning process, especially in South Kalimantan. Learning that leads to the development of multiple intelligences will run optimally if professional teachers carry out learning in the classroom (Agusta & Noorhapizah, 2020; Agusta & Sa, 2021). Experienced teachers are required to be able to display their skills in front of the class. One of these skills is the ability to present meaningful learning experiences. To be able to provide meaningful, effective, and efficient learning to develop students' multiple intelligences. Teachers need to have a learning model with steps that lead to students' multiple intelligences (Ahsan & Indawati, 2019; Nurhajarurahmah, 2021).

Learning in the 21st century has experienced major obstacles during the Covid-19 pandemic since February 2020. This condition requires elementary school teachers to change the learning paradigm that was originally carried out face-to-face, to online-based learning. Such learning methods should not be an obstacle to the development of skills that are a priority to be developed in the current learning process such as critical thinking skills, creative thinking skills, problem-solving, logical thinking, and analytical thinking (Aizikovitsh-Udi & Amit, 2011; Laely et al., 2020; Supriatin et al., 2020; Yavich & Rotnitsky, 2020).

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The need for developing learning models to facilitate skills-oriented learning processes in the era of the industrial revolution 4.0 and students' multiple intelligences is supported by previous research conducted by Agusta & Noorhapizah (2020) that 71.23% of State Elementary School teachers in Banjarmasin City do not know how the concepts and achievement of higher-order thinking skills in the form of critical thinking skills, creative, logical and problem-solving. Furthermore, the same research also revealed that the learning process carried out in the classroom, namely 82.35% of public elementary school teachers in Banjarmasin City had never packaged learning by integrating critical, creative, logical and problem-solving thinking skills. The cause of the facts that occurred is that one of the teachers was never provided with in-depth knowledge of higher-order thinking skills and there were no teaching materials that lead to higher-order thinking skills that made it easier for teachers to carry out the learning process expected in the era of the industrial revolution 4.0. Furthermore, Agusta & Noorhapizah (2020) states that the learning process in one elementary school in Banjarmasin is still knowledge transfer and has not developed student creativity. The same thing was also stated by Suriansyah, Agusta & Setiawan (2020) that elementary schools in the city of Banjarmasin still have not developed student independence in learning. A similar condition was also stated by Noorhapizah, Agusta & Pratiwi (2020) that the learning process at elementary school in Banjarmasin still makes the cognitive domain the main demand.

The results of preliminary observations by researchers in the field starting from April 02 to 29, 2021, found 122 of 150 teachers in Banjarmasin City were still using the lesson plans that were prepared only without paying attention to the achievement of students' higher-order thinking skills in both the design of learning activities and evaluation. 103 of the 150 teachers surveyed have never done learning with a variety of learning models. Specifically, researchers conducted interviews about teachers' knowledge of students' high order thinking skills, 135 persons stated that they did not know in detail and had never developed such high order thinking skills on the learning process using learning models that lead to the development of each student's skills.

The need for developing learning models to facilitate skills-oriented learning processes in the industrial revolution 4.0 era and students' multiple intelligences is supported by previous research conducted by Noorhapizah and Agusta (Agusta & Noorhapizah, 2020; Agusta & Sa, 2021; Noorhapizah et al., 2021), that 71.23% of State Elementary School teachers in Banjarmasin City do not know how the concepts and achievement of higher-order thinking skills in the form of critical thinking skills, creative, logical and problem-solving. Furthermore, the same research revealed that the learning process carried out in the classroom, namely 82.35% of public elementary school teachers in Banjarmasin City, had never packaged learning by integrating critical, creative, logical, and problem-solving thinking skills. The cause of the facts is one of the teachers has never been provided with in-depth knowledge of higher-order thinking skills. There are no teaching materials that lead to higher-order thinking skills that make it easier for teachers to carry out the learning process expected in the industrial revolution 4.0 (Agusta & Noorhapizah, 2020; Agusta & Sa, 2021).

The problem that is still a contributor to the low quality of learning is the ability of teachers to package the learning process using innovative, creative, practical, fun learning models oriented to various skills in the era of industrial revolution 4.0 and the development of students' multiple intelligences. Teachers are still comfortable with practical learning processes with simple learning models even without using learning models that can motivate students to learn and can develop students' skills and multiple intelligences. In comparison, learning models can trigger the implementation of educational goals by providing the experience of becoming a democratic person and growing students' multiple intelligence and social skills by utilizing the community as a learning resource. Furthermore, Agusta, Setyosari, and Sa'dijah stated that the learning process in one of the elementary schools in Banjarmasin is still a transfer of knowledge and has not developed students' creativity (Agusta et al., 2018; Agusta & Sa, 2021). The same thing was also stated by Pratiwi & Adenan that elementary schools in Banjarmasin still have not developed student independence in learning. Dewi & Martini, Laily et al. informed that the learning process at elementary school on Banjarmasin still made the cognitive domain the primary demand (Dewi & Martini, 2020; Laely et al., 2020).

The latest interviews were conducted on May 10 to 18 on 378 elementary school teacher education students to explore data in 13 districts and cities. The survey data show that of 378 respondents who developed linguistic intelligence-based learning, only 35 respondents, only 47 respondents developed musical intelligence-based education, only 87 respondents developed mathematical logic-based education. These respondents developed visual-intelligence-based understanding. Only 63 people developed spatial intelligence-based learning, only 63 respondents developed kinesthetic intelligence-based learning, only 31 respondents developed interpersonal intelligence-based knowledge, only 53 respondents developed naturalist intelligence-based learning. Only 47 respondents developed interpersonal intelligence-based understanding (survey in 13 districts and cities in South Kalimantan, 2021).

This data shows that the learning process during the Covid-19 pandemic cannot optimize learning based on the development of high order thinking skills and multiple intelligences. Respondents who gave statements that they could not carry out learning activities based on students' multiple intelligences acknowledged that online learning could not carry out learning steps that contained the development of students' high order thinking skills and multiple intelligence as in face-to-face activities. The research shows that teachers' perceptions of learning innovations during the Covid-19 pandemic are still very limited. Even though the learning process in the pandemic demands the creativity of teachers to be able to design learning models and strategies based

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on the development of students' intelligence. Teachers also admit that they do not know how to package learning to develop students' high order thinking skills and multiple intelligences.

Based on the problems, we need to design innovative blended learning models to improve students' multiple intelligences. The innovation was carried out by creating the learning model GAWI SABUMI. The learning model GAWI SABUMI is designed with three parts of innovation, the first is technology. Technology that we use on this blended learning is platform for learning like google meet, zoom meeting, whatsapp, and google classroom that is never use on the learning process before. student Beside that, we use the android application that we designed as learning media. We called the application as BARAMIAN Students can access the learning media on their gadget or laptop. The second part, the blended learning model GAWI SABUMI use the learning stage that can improve student's multiple intelligence, every stage will exercise student's multiple intelligence like linguistic, musical, logical mathematic, visual-spatial, kinesthetic, interpersonal, intrapersonal, naturalist, and existentialist intelligence. The third part, this blended learning content use the Wetland environment and local wisdom as the base of learning content. We use the wetland environment on every part of learning material. This is consistent with the wetland environment condition on Banjarmasin that daily students encounter. We also use the local wisdom on the learning material that's close to the daily life of the students. The local wisdom that we use on the learning material like fruit, animals, culture, story, song, dance, food, tribal house and community norms. This learning material is the part of social science education.

The purpose of this research are (1) to produce a step model of blended learning GAWI SABUMI; (2) determine the validity of the GAWI SABUMI blended learning model based on the local wisdom so that it is feasible to use; (2) determine the effectiveness of the GAWI SABUMI blended learning model based on local wisdom to improve students' high order thinking skills and the multiple intelligence of elementary school students.

## **II. RESEARCH METHOD**

Based on the problem to be solved, the research uses study methods in the form of research and development. This study produced innovative learning models that are different from other products, both modified and new products to support work in the world of education and learning. There are three-phase of this study, there is the development of a blended learning model, the Efficiency Investigation of the blended learning model by 5 experts, quasi-experimental research to find the effectiveness of the blended learning model.

The researcher is studying the basic information about the learning process during the covid-19 pandemic on elementary school, principles, concepts, literature, and related research to create the step of blended learning model. In this phase, the researcher develops the learning processes and activities including the creation of research tools and assessment forms for learning activities and students high order thinking skills. The experimental tools are : Lesson plan by combining classroom face to face and online learning, design and organize learning activity that improves high order thinking skills with six lesson plans and investigate the appropriateness them by 5 experts.

Learning step consist of Group, Analysis and observation, Wondering observation result, Intensive data collection, Making experiment on outdoor, Analysis the result, Negotiation of the solution, Using Technology, Necessity intelligence development, Task Product Creation, Unity on presentation and role-play, Network Tournament and Games. Communicate between learners and teachers to do activities according to the learning management plan and deliver learning activities in each step. Besides that, the researcher develops the collecting data tools are : Learning outcome assessment form to be used to evaluate the student work result and rubric score assessment.

Learning record and assessment form after the students do all activities to reflect learning result, self-assessment, and student opinion sheet about learning activities, which is divided into: (1) issues related to learners, (2) instructors and media, (3) the appropriateness of activities and the duration of learning activities, (4) summary and evaluation of learning.

High order thinking skills assessment form consists of critical thinking, creative thinking, problem-solving, logical thinking and analytical thinking was assessed during learning management by using rubric score assessment.

Every assessment and evaluation tool were analyzed validity by four experts consist of lesson plan evaluation expert, learning step evaluation expert, learning outcome assessment evaluation expert, and high order thinking skills assessment evaluation expert. They will evaluate the assessment tools to find the index of consistency (IOC) by selecting questions and questionnaire items that have validity between 0.05-1.00 considered the valid questions that can be used in the research.

High order thinking skills assessment to find the score of student's skills before and after learning with blended learning GAWI SABUMI according to Fitriah, Hasanah and Gistituati (2018), Supriatin, Zulela and Boeriswati (2020), Suriansyah, Agusta and Setiawan (2021), is a multiple-choice question of 50 items, with the Conbach's alpha score 0.86 (Fitriah et al., 2018; Supriatin et al., 2020; Suriansyah et al., 2021).

### ***A. Validity Investigation Of Blended Learning Model***

The prototype of the blended learning model has investigated the quality and the validity of four experts using a questionnaire and suggestion sheet. The criteria for investigation of the quality and validity of the blended learning model created in each step

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must have a result that is not lower than the good criteria, with an average score from 3.00 up. Besides that, the researcher use the suggestions from four experts to improve every step of the blended learning model, lesson plan and assessment to be more quality. Then, the researcher using the developed blended learning model to pilot an experiment with 40 students in elementary school, which is non-sample groups of Sungai Miai 7 Elementary School in the second semester, the academic year 2020/2021. The researcher also prepares the teaching observation sheet to guarantee the implementation of all steps of the blended learning model GAWI SABUMI, questionnaire for teachers, to analyze the feasibility of practice and the learning process, according to the users of the blended learning model.

### *B. Quasi-Experimental Research to Find the Effectiveness of Learning Model*

1. The population of this research is the fifth grade students on Sungai Miai 7 Elementary School. The sample group for experiment used 5A. The students on 5A was treated using the blended learning model GAWI SABUMI.
2. Research tool, used the developed tool and improved the quality from the phase 1 of the experiment
3. The research scenario to be a quasi-experimental research, One group pretest-posttest design was conducted as the following steps :
  - a) Preparation before teaching and learning process with orientation about learning strategy, mapping students group, register and practice using the Zoom Meeting, Google Meet, application of learning media (Baramian App). After that, the researcher allow the students to do measurement of high order thinking skills before study.
  - b) Conduct teaching according to the developed blended learning GAWI SABUMI, which is a combination of face to face and online learning using activities for students as the planned. Learning step consist of Group, Analysis and observation, Wondering observation result, Intensive data collection, Making experiment on outdoor, Analysis the result, Negotiation of solution, Using Technology, Necessity intelligences development, Task Product Creation, Unity on presentation and role play, Network Tournament and Games. After that, the researcher collect data and evaluate during learning process.
  - c) Measurement of high order thinking skills after completing the experiment, according to the learning plan. The test technique is used to explore students' skills in critical thinking, creative thinking, problem solving, analytical thinking and logical thinking. The test instrument used essays and multiple choice are arranged based on cognitive domain verbs related to critical thinking skills, creative thinking and problem solving start from fourth level.
  - d) The researcher measures the high order thinking skills after the students are finished study.
4. Data collection from learning process use various instrument, includes various events that occurred during teaching and learning by recording and assessment forms after the discussion and commenting with group members, work pieces stored in the Google Classroom and Google Drive, and presentation of learning outcome in the classroom
5. Data analysis, the researcher analyze all of the data collection as follows :
  - a) Learning outcome, the researcher use the students work result, find the average and standard deviation, and translate the mean value into learning level.
  - b) High order thinking skills assessment as critical thinking, creative thinking, problem solving, logical thinking and analytical thinking by finding the mean and standard deviation and translating the mean to each skill level and compare with the criteria and interpret the meaning as the setting and concluded that the students have the level of learning skill for each level.
  - c) Score of the higher order thinking skills test before and after study, analyzed by finding the mean and standard deviation, comparing the average score before and after learning by using t-test in a single sample group.

Conclusion of learning outcomes base on the developed learning model. Evaluation of effectiveness of blended learning model GAWI SABUMI that use on the learning activities to develop students skills in high order thinking skills, the characteristics as follows students have an average score from the higher order thinking skills test after study higher than before study at .01 level of significant.

### III. RESULT

The development stage begins with the define stage by collecting information to analyze the needs at Sungai Miai 7 elementary school. Information is collected through five analytical activities (front-end analysis, learner analysis, teacher analysis, skill development analysis, and (specifying instructional objectives).

Product development begins with determining the substance of the blended learning model GAWI SABUMI. The GAWI SABUMI model is a blended learning model that combines virtual or online learning and face-to-face but is accompanied by activities to improve critical thinking, creative thinking, problem-solving, analytical thinking, and logical thinking. The design of the blended learning GAWI SABUMI is as follows:

**Group**, the activity begins with **gathering teachers and students in a virtual classroom using Google Meet or Zoom Meeting. That is the part of use technology on learning.** At this meeting, the teacher uses audio to provide a detailed explanation

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of the substance of the physical activities carried out. Descriptions can be done directly or using voice recordings. Videos support reasons to offer more concrete knowledge to students. The teacher will present as many questions and answer activities as possible to allow students to answer questions and provide arguments. The teacher will also enable students to answer other students' questions so that various solutions appear. Students are required to present solutions in the form of logical facts based on the material discussed. This activity indeed cannot be separated from training students to raise many questions because the teacher's explanation will provoke students to express their curiosity about the problems that occur and encourage students to prepare solutions that will give. The student will delivered on the social science education education content on elementary school.

Analysis, student will analyze the learning material and more information on BARAMIAN application. The activity was continued by distributing student worksheets containing several solutions offered by the student group. Students will be directed to analyze what will happen if the answer is implemented. The analysis activities are equipped with worksheets that will guide students to express their opinions and reasoning on the solutions. Each group must organize their learning experience to find material concepts based on the problems posed by the teacher. Analytical activities will formulate the results of reasoning that will be carried out on physical activity.

Work Together, students will be divided into groups of 3-4 people. Students will be directed to negotiate with friends in groups. Negotiation is a follow-up activity from observing and asking questions that have been raised in Auditory activities. Negotiations started with the teacher distributing number cards with different issue, and the cards were given in the WhatsApp application group in the form of pictures. The issue is about wetland and local wisdom as the part of social science education on elementary school. The teacher will place students with the same issue in a group, and the group is formed with a particular WhatsApp group containing 3-4 students. The teacher provides different factual issues for each group to try to analyze each issue presented. The Students will negotiate in groups to formulate in detail what issues are happening, what will happen if the issues are left unchecked.

Solve the Problem on Outdoor, students will be directed to do physical activities that will train students to test the results of reasoning about the solutions given with friends in groups. The physical activity contains exploration activities of things that can find in the environment around children. The group will investigate critically, systematically, and logically to formulate their findings about wetland and local wisdom. Before students do physical activities, the teacher will provide clear directions starting from the activity steps to the final result obtained in the form of collecting data through information gathering activities. so that their critical thinking skills will be honed through this activity.

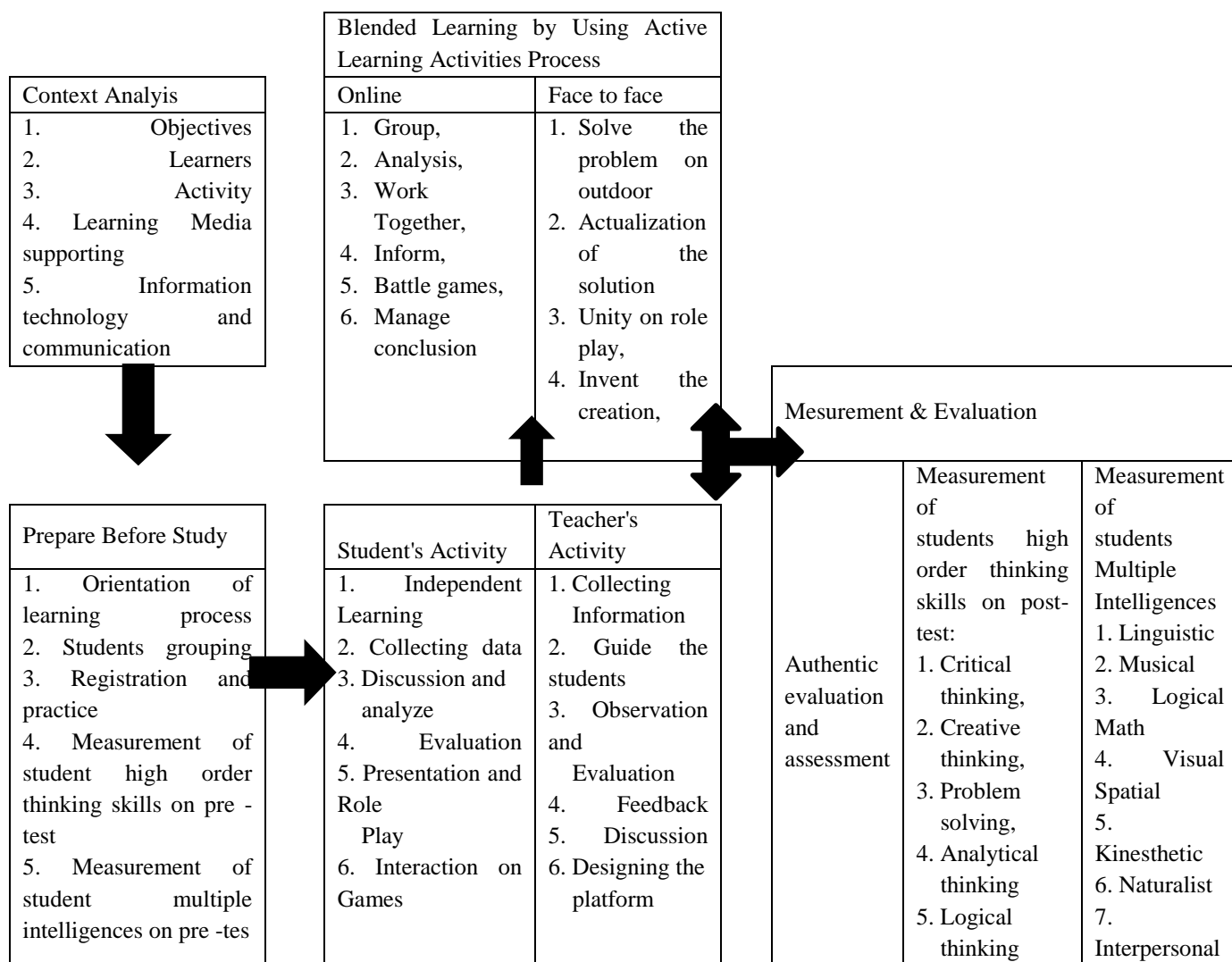
Actualization of Solution, the results obtained from physical activity are used to carry out administer information activities using group worksheets. Group worksheets are distributed through WhatsApp groups. Students who have conducted experiments individually are grouped into groups to divide participants into groups on the Zoom Meeting or Google Meet application. Another alternative that teachers can do is use WhatsApp media by forming small groups. Students will work together to identify each question item related to the activity of trying/digging information. Students will administer the information that has been obtained and hone knowledge, and express the meaning of the process of trying/extracting information on physical activity.

Battle games, students are invited to play games. The game is designed to be flexible and not bound by rules. The game is intended to provide fun activities for students even though they are studying online at home. The game is designed to allow students to interact with each other, either by using WhatsApp, Google Meet, or Zoom Meeting applications.

Unity on role play, this activity is filled with illustrating events related to the subject matter involving students as the main actors. The presentation of illustrations is carried out in the form of stories and, at the same time, provokes students' enthusiasm in practical activities through movements and words. The teacher prepares scenarios before the start of learning to clarify the learning material to be delivered. The teacher prepares a plan before learning to explain the learning material provided or given to students. The teacher asks each group representative to come forward to get information on the learning material that the teacher will deliver.

Manage conclusion and Invent the creation, making conclusions from learning and carrying out physical activities with various variations, teachers can present activities that stimulate creativity by utilizing objects and objects around children, not forgetting that teachers will involve the participation of children's families at home to assist in making children's creative works.

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**Fig. 1. The blended leaning model GAWI SABUMI to improve students' high order thinking skills and Multiple Intelligence**

## A. Development Blended Learning Model GAWI SABUMI

The efficiency of the blended model step design that has been compiled is then validated by lesson plan evaluation expert, learning step evaluation expert, learning outcome assesment evaluation expert, and high order thinking skills assessment evaluation expert with construct validity was at a very good level ( $X= 4.57$ ) ( $SD = 0.17$ ) and can be used to achieve the objectives of the learning model (see Table 2).

**Table 2. The Efficiency Investigated of Blended Learning GAWI SABUMI by Experts**

Evaluation Aspect	Result		
	$\bar{X}$	S.D.	Efficiency Level
The concept of Learning Model	4.71	.547	Very Good
The objective of Learning Model	4.68	.547	Very Good
Context Analysis	4.78	.547	Very Good
Preparation before study	4.72	.547	Very Good
Blended learning by using active learning activities process	4.73	.547	Very Good
Online Learning			
a. Group,	4.66	.547	Very Good
b. Analysis,	4.78	.547	Very Good

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c. Work Together,	4.50	.547	Very Good
d. Inform,	4.60	.547	Very Good
e. Battle games,	4.67	.547	Very Good
f. Manage conclusion	4.65	.547	Very Good
Face to face learning			
a. Solve the problem on outdoor	4.72	.547	Very Good
b. Actualization of the solution	4.73	.547	Good
c. Unity on role play,	4.71	.547	Good
d. Invent the creation	4.66	.547	Very Good
g. Measurement and Evaluation	4.67	.547	Very Good
h. The possibility to utilize blended learning model by used active leaning activity to use in	4.77	.547	Very Good
<b>Average</b>	<b>4.69</b>	<b>.547</b>	<b>Very Good</b>

From the introduction of the developed learning model to pilot experiment with 40 students with non-sample groups of Sungai Miai 7 Elementary School. Teachers' activity by six activities. The results of the improvement of high order thinking skills found that, in general most students understand with the learning activity as well as learning model and satisfied with the teaching and learning process. Using media, equipment and learning resources that support learning management both in classroom and online learning. In addition, most students are able to show their role appropriately, allowing them to continue to learn, according to the learning model that has been developed continuously. Almost every component of the supporting factor gets suggestions and input from the validator. These suggestions include the need to reconsider between activities and the allocation of learning time. According to experts, there are too many learning activities with learning objectives, so it requires more time allocation. Revisions are made by improving the learning objectives at each meeting so that learning activities do not exceed the allotted time.

In addition, according to experts, there are dissimilarities between lesson plans and teaching materials. The activities written in the student's lesson plan only make study visits. This is because the study visits are carried out outside of class hours so they are not included in the learning activities written in the lesson plans, but the directions for conducting study visits are explained in the closing part of the lesson plans. Home visits study are more effective and efficient when carried out outside class hours so that they do not interfere with class hours. Study visits outside of class hours are not limited by class hours so that students can explore more knowledge related to burnt batik and can use study time effectively and efficiently. After the revision was made according to the input, the validation was declared feasible by the three experts, this was because improvements had been made in accordance with the suggestions from the experts.

### B. Results of Used Learning Model

The researcher implement the blended learning model obtained from the research in phase 1 to experiment in order to find the effectiveness of the learning model on the improve of student high order thinking skills. Including, studying the opinions of students towards the learning model developed by the researcher. The sample of experiment group of 40 students in Sungai miai 7 Elementary School. Information and Communication Technology for Teachers, spent 6 weeks in the experiment, of completing the learning activity. The researcher evaluated learning outcome of high order thinking skills and the competency reach.

Students high order thinking skills by using the test of critical thinking, creative thinking, problem solving, logical thinking and analytical thinking after study which is the same version that the students have done before teaching and learning. The results of analysis of higher order thinking skills, students reach the higher order thinking skills competency after learning, according to the overall was at very good level. And when considered in each skill was found that learners with the highest level of thinking skills in attributing and checking skills (see Table III) and from post-test scores, found that learners had higher level of higher order thinking skills after learning, developed in all skills at .01 level of significant (see Table 4). Based on the evaluation of the high order thinking skills scores after the study, shows that learning through blended learning GAWI SABUMI can help improve students high order thinking skills.

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**Table 3. N Gain Analysis students' high order thinking skills on first and sixth meetings**

High Order Thinking Skills	Items	N = 40)				t	p*
		Pre-test		Post-test			
		$\bar{x}_1$	SD.1	$\bar{x}_2$	SD.2		
Critical Thinking	8	3.57	.999	6,78	.891	-15.434	.000
Creative Thinking	9	3.64	.532	6,34	.752	-15.832	.000
Problem Solving	8	3.65	.679	6,78	.712	14.102	.000
Logical Thinking	8	3.55	.465	6,45	.794	-17.954	.000
Analytical Thinking	9	3.57	.588	5,45	.712	-14.699	.000
Average Score		3.59	16.98	31,8	3.785	-958	.000

The increase in the value of knowledge is dominated by the "high" category because the learning presented provides very high motivation to students. The learning process is also not dominated by the transfer of knowledge in the form of theory, but students are brought to participate in learning with a variety of collaborative and independent information mining activities. Students are also led to exploring various problems that occur around them so that they are not required to memorize theories that make learning less meaningful.

Aspects of critical thinking in this study also increased significantly. This is because learning is packaged with directions following indicators of critical thinking skills. Students are also guided to carry out the critical thinking process intensively. Students are guided to recognize different ways of critically analyzing and developing questions and answers from multiple perspectives. With the guidance of teachers and students feel challenged to explore in-depth information and look at various problems and solutions from various sides.

Learning is also directed to foster creative thinking. This can be seen from the percentage gain with the high category very dominating. This is because learning is provided with clear directions and communicative learning resources and contains detailed narrative directions for various activities, making students less dependent on the teacher. A very encouraging condition was that at the last meeting students explored alternative problem solving through projects, in this activity they did not need teacher guidance. They are very enthusiastic about arguing to contribute creative thinking to solve current problems and provide a thorough explanation of the completed projects.

An aspect that is no less important in this study, namely solving problems has also increased significantly. This is because all indicators of problem-solving skills are peeled off one by one and developed for all students through the guidance of teachers and students. All students feel challenged to explore the problems that occur and find alternative solutions to problems with friends in the group. Teachers and students give appreciation and reinforcement to students' abilities to explore and solve problems, even though the results obtained are not too perfect. This appreciation and reinforcement from the teacher also provoke students' motivation to always try and try without fear of making mistakes.

Another aspect that also continues to increase is logical and critical thinking. A significant increase occurred in a short time because it was carried out with intensive guidance from teachers and students. Learning is directed at extracting information about problems that arise in the surrounding environment or that are familiar among them so that their logical and analytical thinking can be developed easily. This makes it easier for students to recognize the problems that occur. The activity is continued by looking for alternative problem-solving with colleagues in the group. This activity is also designed to be as attractive as possible even though it is only carried out online through the Zoom Meeting, Google Meet, or WhatsApp pages. This becomes a new routine for students so that it provokes student motivation and has an impact on increasing the quality of learning significantly.

Research in the large-scale trial phase also explores learning outcome data before and after using the GAWI SABUMI blended learning model. In addition to learning outcomes, all skills were also analyzed for improvement using the N-gain analysis to obtain an average of 0.59 in the "medium" category. The results of N gain analysis on large-scale trials can be seen in Table II:

**Table 4. N Gain Analysis the operational students' multiple intelligence on first and sixth meetings**

Multiple indicators	Intelligence	Items	N = 40)				t	p*
			Pre-test		Post-test			
			$\bar{x}_1$	SD.1	$\bar{x}_2$	SD.2		
Linguistic		5	3.45	.432	6,78	.889	-14.112	.000
Musical		4	3.55	.531	6,34	.876	-14.321	.000
Logical Math		5	3.55	.423	6,78	.812	13.102	.000
Visual Spatial		6	3.50	.465	6,45	.811	-15.594	.000



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Kinesthetic	5	3.50	.588	5,45	.821	-15.699	.000
Naturalist	4	3.55	.679	6,78	.813	15.702	.000
Interpersonal	5	3.45	.512	6,78	.843	-16.411	.000
Linguistic	5	3.55	.465	6,45	.882	-16.524	.000

The increase of student multiple intelligence is dominated by the "high" category on the last meeting because the learning presented provides very high motivation for students. The learning process is also not dominated by the transfer of knowledge in the form of theory. Still, students are brought to participate in learning with various collaborative and independent information-gathering activities. The activity was continued by finding alternative solutions to problems with colleagues in the group. This activity is also designed to be as attractive as possible even though it is only carried out online via the Zoom Meeting page, Google Meet or WhatsApp. This stage becomes a new routine for students so that it provokes student motivation and has an impact on increasing the quality of learning significantly. The multiple intelligence on this research is developed at every stage of the learning model GAWI SABUMI.

The linguistic intelligence in this research has also improved significantly. This intelligence is because learning is designed with directions following the indicators of linguistic intelligence. Students are also guided to Have good writing skills, Tell stories and present arguments, Have a good memory about things, Arrange words, Read skills, And communicate with others with correct vocabulary. With guidance from teachers and researchers, students feel challenged to dig deep information and see various problems and solutions from multiple sides. With this activity, student's linguistic intelligence increased significantly in the fifth meeting. The exercise which can increase student's linguistic intelligence is on the learning stage Group, Analysis, Work Together, and Actualization of Solution.

We designed the learning stage on this learning model consisting of music and the sing a song method. The music and song which is delivered in this learning process are based on local wisdom. We use the traditional song to make the learning process meaningful. Besides that, we use conventional and straightforward household appliances. The learning stage, which increases student musical intelligence, is on the Solve the Problem on Outdoor and Unity on Role Play.

An aspect that is no less important in this research is Logical Mathematics intelligence which has also increased significantly. Problem-solving skills indicators are discussed one by one and developed for all students through the guidance of teachers and researchers. All students feel challenged to explore the problems and look for alternative solutions to problems with friends in the group. Teachers and researchers appreciate and reinforce students' ability to analyze and solve problems, even though the results are not yet perfect. This appreciation and reinforcement from the teacher also provoke student motivation always to try and try without fear of mistakes. The activity which can increase student's logical mathematic intelligence is the Analysis, Actualization of Solution, and Battle Games.

Learning is also directed to increase Visual-Spatial intelligence. This intelligence can be seen from the percentage acquisition in the high category, which dominates. The learning process is provided with clear directions and communicative learning resources. It contains detailed visuals and audiovisual with narrative suggestions for various activities, making students motivated and meaningful learning. The movement which can increase student's Visual-Spatial intelligence are on the Group, Work Together, Analysis, and Invent the Creation.

A significant increase also occurred in the Kinesthetic Intelligence, and almost all students obtained very good criteria. Because the learning process prioritizes group learning and fosters a kinesthetic in students, all students are guided not only to do the assignments but to cultivate kinesthetic activity. We suggest the student do the personal and group action, which is consists of moving activity. The activity that can increase student's Visual-Spatial intelligence is solving the problem on outdoor Battle games and Unity on Role Play.

Learning in the control class uses a cooperative learning model with a scientific approach. Teaching materials used by the control class are student handbooks circulating in school so that student's knowledge of the environment is limited. Students in the control class obtained material only from the teacher who conducted lectures. Whereas in the experimental category, the learning uses the GAWI SABUMI blended learning model, which directs students to learn more meaningfully with diverse and innovative learning activities. In addition, the teaching materials used in the experimental class are teaching materials that contain multiple intelligence.

#### IV. DISCUSSION

The GAWI SABUMI blended learning model is an idea to overcome learning problems during the COVID-19 pandemic. Even though this country is still in a state of a virus outbreak, learning in schools cannot be sacrificed. The learning process must continue, either in the form of knowledge transfer or skill development. The GAWI SABUMI learning model is an alternative solution to develop student skills even though learning is only carried out from home. This blended learning model is designed for student's learning use technology. Technology that we use on this blended learning is platform for learning like google meet, zoom

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meeting, WhatsApp, and Google Classroom that is never used on the learning process before. student. Beside that, we use the Android application that we designed as learning media. We called the application as BARAMIAN. Students can access the learning media on their gadget or laptop. This is in line with the results of research by Agusta & Sa'dijah (2021), Noorhapizah, Agusta, and Pratiwi (2021) that the learning process must run optimally even though conditions require teachers and students to interact online from their respective homes (Agusta & Sa, 2021; Noorhapizah et al., 2021).

The GAWI SABUMI learning model is also an alternative solution to develop student skills that can be used by teachers as a reference because according to research by Noorhapizah, Agusta, and Pratiwi (2021) most teachers still have not mastered the concept of skills that must be developed in elementary school students and have not been able to package learning content those skills (Noorhapizah et al., 2021). The development of the GAWI SABUMI model is based on the demand to produce elementary school graduates who have multiple intelligences. We use the wetland environment on every part of learning material. This is consistent with the wetland environment condition on Banjarmasin that daily students encounter. We also use the local wisdom on the learning material that's close to the daily life of the students. The local wisdom that we use on the learning material like fruit, animals, culture, story, song, dance, food, tribal house and community norms. This learning material is the part of social science education.

The blended learning model GAWI SABUMI is designed with every stage will exercise student's multiple intelligence like linguistic, musical, logical-mathematic, visual-spatial, kinesthetic, interpersonal, intrapersonal, naturalist, and existentialist intelligence. The intelligence that must be developed since elementary school age is Linguistic, Musical, Logical-Mathematical, Visual-Spatial, Kinesthetic, Naturalist, and Interpersonal.

Linguistic intelligence is a type of intelligence related to a person's ability to speak. Linguistic intelligence is the ability to use words effectively, both spoken and written (Ahsan & Indawati, 2019; Al-Qatawneh et al., 2021; Nurhajarurahmah, 2021). The learning steps in this study that aim to improve students' linguistic intelligence are the Group, Analysis, Work Together, and Actualization of Solution steps. In the Group step, students are required to present answers in the form of logical facts based on the material discussed. This activity certainly cannot be separated from training students to raise many questions, because the teacher's explanation will provoke students to express their curiosity about the problems that occur and provoke students to prepare solutions that will be given. In the Work Together step, students will be directed to negotiate with friends in groups (Diana & Paidi, 2019; Dong & Huang, 2020; Jayaseely, 2020; Muchlis et al., 2021; Shahzada et al., 2021). Negotiation is a follow-up activity from observing and asking questions that have been raised in Auditory activities. Negotiations started with the teacher distributing number cards with different problems, the cards were given in the WhatsApp application group in the form of pictures. While in the Actualization of Solution step, students will work together to identify each question item related to the activity of trying/digging information. Students will administer the information that has been obtained and hone knowledge and express the meaning of the process of trying/digging information on physical activity (Al-Qatawneh et al., 2021; Dewi & Martini, 2020; Jayaseely, 2020; Maharani et al., 2020; Sholiah et al., 2020).

Another intelligence that is improved in this study is musical. Musical intelligence is the ability to perceive, distinguish, change, and express musical forms (Fadilloh et al., 2021; Hilyana & Khotimah, 2021; Shahzada et al., 2021). Musical intelligence is the ability to develop, express, and enjoy forms of music and sound, such as sensitivity to rhythm, melody, and notation, playing musical instruments, singing and composing songs, music, and songs (Feng et al., 2021; Yavich & Rotnitsky, 2020). In this study, the learning steps that can improve musical intelligence are Solve the Problem on Outdoor and Unity on Role Play. We designed the learning stage on this learning model consisting of music and the sing a song method. The music and song which is delivered in this learning process are based on local wisdom. We use the traditional song to make the learning process meaningful. Beside that, we use the traditional and simple household appliances (Abdulhalim & Alnajjar, 2016; Al-Qatawneh et al., 2021; Hilyana & Khotimah, 2021; Shahzada et al., 2021; Treviño et al., 2020; Yavich & Rotnitsky, 2020).

Another intelligence developed in this research is logical-mathematical. This intelligence is related to a person's proficiency in using logic or reasoning, abstracting, using numbers, and critical thinking (Hasmiwati & Widjajanti, 2020; Hilyana & Khotimah, 2021; Irawan et al., 2016). Logical-mathematical intelligence is the ability to use numbers effectively and for a good reason. This intelligence includes sensitivity to logical patterns and relationships, questions and propositions, functions, and other related abstractions (Al-Qatawneh et al., 2021; Diana & Paidi, 2019; González-Treviño et al., 2020; Hasmiwati & Widjajanti, 2020; Karbono & Retnawati, 2020; Peterlin et al., 2021; Yavich & Rotnitsky, 2020). Those who have high logical-mathematical intelligence are generally interested in mathematical exploration activities such as classifying, calculating, proving, or generalizing (Buot, 2019; Feng et al., 2021; Hernández-Barco et al., 2021; Muhassanah et al., 2014; Ndia et al., 2020; Siregar et al., 2021). Students will favor the discovery method with high logical-mathematical intelligence. The learning steps in the GAWI SABUMI model that increase logical-mathematical intelligence are Analysis, Actualization of Solution, and Battle Games. Students will be directed to analyze what will happen if the solution is applied in the Analysis step. Each group must organize their learning experience to find material concepts based on the problems posed by the teacher. Activity analysis will formulate the results of reasoning that will be brought to physical activity (Kalimaya et al., 2021; Muchlis et al., 2021; Muhassanah et al., 2014; Shahzada

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et al., 2021). Students will work together to identify each question item related to the activity of trying/digging information. Students are directed to play games that contain logic and mathematical thinking skills in the Battle Games step. The game is designed to provide opportunities for students to interact with each other, either by using WhatsApp, Google Meet or Zoom Meeting applications (Kalimaya et al., 2021; Shahzada et al., 2021; Siregar et al., 2021).

The intelligence that is also important to be developed in this research is Visual-Spatial. Visual-spatial intelligence relates to a person's ability to visualize images in their mind. Visual-spatial intelligence is the ability to understand pictures and shapes, including the ability to interpret the dimensions of space that cannot be seen (Al-Qatawneh et al., 2021; Azid et al., 2019; Hilyana & Khotimah, 2021; Jaramillo et al., 2020; Nurhajarurahmah, 2021). The activity which can increase student's Visual-Spatial intelligence is the Group, Work Together, Invent the Creation. In group activities, the teacher uses pictures and audio to provide detailed explanations about the substance of the physical activities that have been carried out (Pan, 2020; Shahzada et al., 2021; Sholiah et al., 2020; Y. E. Wibowo et al., 2020). Descriptions can be done directly or using voice recordings. Videos support explanations to provide more concrete knowledge to students. In Work Together activities, to support meaningful learning, the teacher presents visuals in the form of pictures and videos relevant to the problems to be solved. The learning process is directed so that students view information from images using various points of view (Rosa et al., 2021; Siregar et al., 2021; F. C. Wibowo & Suhandi, 2013). The visuals they saw in the Work Together step will be continued by making creations in visuals and 3-dimensional objects in the Invent the Creation step. Students will be trained to have high visual-spatial intelligence with the ability to recognize the relationships of things in space correctly; have the correct perception from various angles; graphic representation; image manipulation or drawing; easy to find your way in the area; high imagination; sensitive to the line, color, and shape. Mathematics teachers can present specific material using near power points: color, there are pictures in two or three dimensions, there are exciting graphs, sketches, diagrams, or illustrations to help students use and develop their visual-spatial intelligence (Ismah et al., 2020; Kornhaber, 2019; Pan, 2020).

The intelligence that is developed further is bodily-kinesthetic. This intelligence is related to a person's expertise in using or moving his whole body to express ideas and feelings (Al-Qatawneh et al., 2021; Jayaseely, 2020; Nasri et al., 2021; Siregar et al., 2021; Sun et al., 2021), [50], [51]. According to Gardner, bodily-kinesthetic intelligence is the ability to physically use all parts of the body, such as using the hands, fingers, arms, and various other physical activities to solve problems, make things, or produce multiple kinds of products. The activity that can increase students' visual-spatial intelligence is solving the problem of outdoor Battle games and Unity on Role Play. In the Solve the Problem on Outdoor step, students will be directed to do physical activities that will train students to test the results of reasoning about the solutions given with friends in groups. Physical activity contains exploration activities of things that can be found in the environment around children. In the Battle games step, the game is designed with physical activities that will direct students to move, such as looking for, doing, and collecting various objects or information around them (Al-Qatawneh et al., 2021; Jayaseely, 2020; Siregar et al., 2021). Students will be trained to be able to control part or all of the body members, Have high body flexibility, Move the limbs to express ideas, Move the limbs to produce various products, and Touch and hold when seeing something (Al-Qatawneh et al., 2021; Sholiah et al., 2020; Viana et al., 2019; Y. E. Wibowo et al., 2020).

The intelligence that is needed to be developed in the future is naturalist intelligence. Naturalist intelligence is related to one's sensitivity to natural phenomena (Fadilloh et al., 2021; Laely et al., 2020; Yavich & Rotnitsky, 2020). Naturalist intelligence is a person's ability to identify and classify natural patterns (nature). Naturalist intelligence can also be interpreted as the ability to categorize and create hierarchies of the state of organisms such as plants, animals, and nature (Fadilloh et al., 2021; Feng et al., 2021; Tang, 2021; Viana et al., 2019). Learning activities developed to improve naturalist intelligence are Solve the problem on Outdoor and Actualization on solutions. The Solve, the problem on the outdoor step, is presented by giving directions to students to explore information from the natural environment and society (Ardiyanti & Winarti, 2017; Garmen et al., 2019; Maharani et al., 2020; Putra, 2017; Winarti et al., 2019). The learning process is also directed so that they respect the environment as a source of human life. The cases presented in the learning process are also related to environmental problems around students (Ardiyanti & Winarti, 2017; Fadilloh et al., 2021). While in the Actualization of solution learning step, students will work together with their group friends to administer the information that has been obtained and hone knowledge and express the meaning of the process of trying/digging information on physical activity.

The intelligence that is developed further is interpersonal. This intelligence is related to a person's ability to understand, interact, and cooperate with others. The learning steps taken to improve this intelligence are Work Together and Unity on Role Play. In the work Together step, students will be directed to negotiate with friends in groups. Negotiation is a follow-up activity from observing and asking questions that have been raised in Auditory activities. Negotiations started with the teacher distributing number cards with different problems. The cards were given in the What's App application group in pictures. This activity will also train students' independence in learning so that self-confidence grows (Abenti, 2020; Hilyana & Khotimah, 2021; Jayaseely, 2020; Mahmoud & Alaraj, 2019; Pérez et al., 2021). Students will try to recognize the character of each group member and respect any differences of opinion (Abenti, 2020; Jayaseely, 2020; Maharani et al., 2020).

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Meanwhile, the Unity on Role Play step is filled with illustrating events related to the subject matter involving students as the main actors. The presentation of illustrations is carried out in the form of stories and, at the same time, provokes students' enthusiasm in practical activities through movement and words. This stage will undoubtedly provide a meaningful experience so that students live every condition to appreciate the character of each person and feel what others are feeling (Abenti, 2020; Jayaseely, 2020; Maharani et al., 2020; Y. E. Wibowo et al., 2020).

### V. CONCLUSIONS

- 1) The characteristic and implementation of the blended learning model GAWI SABUMI consist of Mapping problem, Administer information, Resolution, Technology, Analysis, Project invention, Unity on games, Role playing, and Art;
- 2) Blended learning model GAWI SABUMI is appropriate to be used according to the results of the validation from 3 experts with validation percentage of learning steps get high criteria,
- 3) blended learning model GAWI SABUMI is effective to be used in learning based on the results of evaluations using instruments of multiple intelligence.
- 4) The improvement after implementation blended learning model, the students who are getting high criteria on Linguistic, Musical, Logical Mathematic, Visual Spatial, Kinesthetic, Naturalist and Interpersonal from low criteria increase to high criteria more than 75%.

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