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# Digital Literature: A Combination of Blended Learning and Guided Inquiry in Mathematics Learning for Salaf Students

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Article Info	Abstract
Article History	This study aims to determine how mathematics learning applies that maximizing
Received: 01-10-2021	digital literacy skills to students studying at the Salaf Islamic boarding school Al
Revised: 30-10-2021	Asy'ariyyah Kalibeber Wonosobo using the blended learning model combined
Accepted: 19-11-2021	with guided inquiry. This study is a second-cycle class action research, adopting
Keywords:	including a) Planning consisting of 1) Problem Mapping FGD (Forum Group
Digital-Literacy; Learning; Mathematics; Salaf Students.	Discussion 2) Needs Analysis 3) Action Plan Formulation 4) Action Plan FGD 5) Validation Action Plans. b) Implementation, c) Evaluation, d) Conclusion. The research instruments are the observation sheet, learning observation sheet, student response questionnaire, and question sheet. Before using research data, three expert validators validate the instruments and learning tools, and the average result is excellent. The population of this research is students of Takhassus Al- Qur'an Wonosobo High School, and the sample is class X students. The results of this study are that the general application of digital literacy in mathematics learning for salaf students can be declared victorious. Evidence of effectiveness can be seen from the results of data and information that show improvement and refinement in the second cycle compared to the first cycle, both from the delivery of the teacher, student learning outcomes, and student responses regarding ongoing learning.

## **INTRODUCTION**

The government, through Law Number 18 of 2019 concerning Pesantren, states in articles 15, 16, and 17 in general that Pesantren carries out the function of education as part of the implementation of national education as shown by the existence of students who excel in filling Indonesia's independence and can face the times. Moreover, pesantren are also given the right to organize formal education where the state recognizes the legality of the graduates [1]. Based on the essence of the pesantren law, it can be concluded that there is state recognition of pesantren graduates and guarantees for the uniqueness of pesantren in developing da'wah to spread Islamic teachings, also opening up vast opportunities for pesantren for community empowerment [2]. Along with the development of the times and technology and the demands of the world of education, Pesantren is increasingly preparing themselves to contribute to the nation's intellectual life. The impression of pesantren is identical to its traditional appearance, especially salaf pesantren, and it tends to close the current developments; it no longer exists. Many millennial Santri is born from the openness of pesantren to the development of the times and technology. Although the pesantren has become more modern in its development, the pesantren still maintains the traditional values of the pesantren, which make the characteristics of the Salafpesantren with other pesantren. As is the case in the teaching process at pesantren, there are two traditional methods, such as sorogan and *bandongan*. Modern teaching and pedagogics began to influence teaching methods in pesantren when society began to demand the development of teaching methods. Some pesantren have started to develop their curriculum to include national curricula, such as mathematics, history, English, and religious studies. The development of technology towards the digital era makes students, teachers, coaches, and caregivers more creative and innovative in carrying out the learning process in Pesantren [3], [4], one of which is the Al-Asy'ariyyah Islamic boarding school Kalibeber Wonosobo.

Since 1950 the pesantren has been led by KH. Muntaha Al-Hafidz, various innovative steps, and developments began to be carried out. KH. Muntaha Al-Hafidz has a guideline "Preserving good old traditions and making new, better traditions." KH. Muntaha Al-Hafidz still maintains an education system that studies the Qur'an and the study of the Yellow Book as preservation of good old traditions and one form of realization of the guidelines for taking new, better habits he is establishing formal schools from early childhood education to higher education level. The aim is for the students can compete in the changing times and participate in the national development of the Indonesian nation [5].

One of them is establishing a top-level formal school at Takhassus Al-Qur'an High School, Kalibeber, Wonosobo. Apart from being students at the Al Asy'ariyyah Islamic boarding school, they also gain proper knowledge, so it is not surprising that many students attend Takhassus Al-Qur'an High School in Wonosobo. It makes the students have a busy schedule. They have to divide their time to study religion and learn the knowledge and tasks they get from school. Moreover, based on the observations and experiences of researchers in dealing with students, they often neglect their duties and obligations obtained from the school, such as students rarely repeating school lessons, students forgetting or even not having time to do assignments, and no one to guide them in doing projects. It is because their schedule at the boarding school is very tight. They have to start activities after Asr prayer until 23.00 and start activities again at 03.00 in the morning until 05.30. this is very time-consuming and students' opportunity to work on or re-learn the material. School materials so that learning patterns can touch and take advantage of students' free time to study.

Digitization in education will bring speedy progress, namely the emergence of various learning resources and the spread of mass media, especially the internet and electronic media, as a source of knowledge and educational centers [6], [7]. This phenomenon makes students prefer to seek information on learning resources from outside the classroom rather than at school using internet access or other information technology, and socially currently, the interaction of teachers with students in the school seems to be seamless, as well as when outside the classroom [8]. The development of the digital world affects the way students learn by optimizing the use of digital libraries in meeting the needs of their curiosity about teaching materials, along with the development of digital technology in Indonesia by realizing the needs of students who are in curriculum policies that require the use of full-day school learning hours [8]. The full-day school policy provides a breath of fresh air to apply the lifelong learning principles, where learning is not limited by learning space and time. Learning can be done anytime and anywhere. Paulina [9] states that the learning process is no longer limited to a place and time. Students can study anywhere and from anywhere and anytime. This condition is very supportive and makes it easier for teachers who have students looking at Pesantren. With this paradigm, students can learn on the sidelines of their activities while studying and participating in activities at Pesantren. They can search for learning resources through internet access or other information technology platforms, exchange knowledge and discussions in communication application groups where there are teachers who monitor and guide the discussion and exchange of opinions and make the transfer of their expertise and understanding faster. With this line of thinking, students will have good digital literacy because students will become more familiar with mastering and utilizing technological products resulting from the digital era to support their learning needs.

This digital literacy also supports students' learning activities during distance learning due to the Covid 19 pandemic. The pandemic is no longer a barrier or an obstacle to the state's efforts in educating the nation's life according to the mandate of Pancasila and the 1945 Constitution. According to Ali & Happy [10] at a national education seminar, the phenomenon of the Covid-19 pandemic opened the eyes to the whole world that change was inevitable. Especially the changes in the digital world that penetrated the world of education where everything uses digital means during this pandemic. These changes can be started by revolutionizing teachers who will bring change to students. If all education is ready to implement these changes, it will prepare students and graduates to face a world full of digitalization and a different character in the future. The development of the 4.0 era is momentum for teachers so that the learning process should be able to improve the quality of personal and student competencies. The use of technology in today's sophisticated tools is balanced with the ability to carry out well-organized efficient methods in receiving education to transfer knowledge [11].

The selection of the suitable learning model can liaison students' needs, especially students studying and expect effective learning outcomes in the digital era. In addition to the model being easily applied by teachers, the learning model must also be compatible with educational needs and answer existing problems, especially in mathematics. In a distance or online learning currently being carried out due to the pandemic, learning mathematics cannot necessarily only be done through online learning. Applying mathematics material and requiring direct explanations from the teacher must also go through regular and continuous practice questions. So in treating mathematics learning during a pandemic, in particular, teachers can not direct students to study independently, seek their knowledge through digital libraries or other online-based learning resources without any assistance and direction. So in responding to these conditions, many teachers use blended learning. Blended learning can be applied in elementary schools in an offline or hybrid way of learning. Learning with blended learning can be done using a variety of online platforms [12]. Research conducted by Hendri & Fuadi [13] state that students become able to control the number of learning experiences that occur and are owned, develop skills and insights and relate materials to one another, can change themselves to the best performance/performance, student selfmanagement, and self-motivation and self-assessment. This is by the objectives of self-directed learning.

Blended learning is classified as effectively applied, but based on the study and analysis of researchers, the application of this learning model is not explained in detail about how it is treated to students. Sources and references only describe the ways and steps of learning, combining traditional learning with internet/online-based learning. For this reason, it is necessary to mix models with learning that have the same characteristics and provide clarity of detail on the treatment of students. One of them is the guided inquiry learning model. According to Suprapti, Rejeki et al. [14], the guided inquiry learning model forms students' thinking patterns and skills to present challenging ideas/thoughts in learning. The first step of the guided inquiry learning model

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is that students find problems, then the teacher guides students to encourage creative thinking to find new ideas or discoveries. The collaboration of excellence from blended learning and guided inquiry can create a transparent form of learning in terms of the learning stages and detail on how to treat students technically. With this learning model, students can learn anytime and anywhere without being hindered by space and time, and with teacher guidance, they can find their knowledge. Research on the application of collaborative learning has been carried out by Mulyani and Fuadi [15], with the results of guided-inquiry-based blended learning being effectively used in learning social studies courses in the pandemic era. The difference with this research is the object, namely students at universities and social studies courses with students studying in Pesantren and mathematics lessons.

### **RESEARCH METHOD**

This research is a two-cycle McKernan classroom action research, with research steps in each process including a) Planning consists of 1) Mapping Problems FGD 2) Needs Analysis 3) Formulation of Action Plans 4) Action Plan FGD 5) Validation of Action Plans. b) Implementation, c) Evaluation, d) Conclusion [16], with the research population being Takhassus Al-Qur'an High School Wonosobo students and the sample being class X students who are studying in Pesantren. The research instruments are observation sheets to find out the problems and needs of teachers and students, learning observation sheets to ensure that the process of applying the model is by learning syntax, questionnaire sheets to find out student responses after treatment, and question sheets to see the frogs ability of students' cognitive learning outcomes. Three expert validators validated all research instruments and learning tools before collecting research data and information. The study used quantitative and qualitative methods and technical qualitative data analysis to describe the questionnaire results. In contrast, quantitative data analysis was used to describe the effects of questionnaires, observation sheets, and graphic commentary to determine the increase in treatment results in each cycle.

## **RESULT AND DISCUSSION**

### 1. First Cycle

The planning stage in the first cycle began with a group discussion forum with fellow math teachers at Takhassus Al-Qur'an High School, KalibeberWonosobo, accompanied by an expert math teacher. Based on the observation sheets that were distributed and also the results of the discussion, information was obtained that there are learning obstacles for students at this time, this is because first the Covid 19 pandemic that requires online learning, on the other hand, students who are also studying have difficulty in obtaining their knowledge, especially in mathematics. Students experienced obstacles before the pandemic was when they wanted to repeat the material or wanted to clarify their knowledge or when doing assignments but lacked mastered material and had difficulty finding references or directions. While seniors or boarding school assistants were less reliable, they spent time repeating school material during breaks during Islamic boarding school activities or after the evening activities. The students who are queued are separated into different dormitories. Hence, it becomes difficult if they have to take the time to gather.

For this reason, it is necessary to have teacher actions that can create a learning process that can be carried out at any time and media for practical and easy discussions. One of them is creating discussion groups through online applications. Here students and teachers can still interact in finding knowledge, deepening material, and also discussing assignments. Moreover, the students will not have the wrong concepts and steps in finding their knowledge with the teacher's assistance. It turns out that the problem has not been resolved. Students are not allowed to bring communication tools inside the boarding school, and the hostel supervisor holds all communication tools to respond to this. Of course, they need to cooperate with the hostel supervisor so that during student hours, there are no hours of activity at the boarding school. Students are given the freedom to lend, or communication tools are provided and, of course, accompanied to avoid misuse of students.

The action plan formulation is based on the problems and needs in the field, both teachers and students. These problems and the results of observations obtained information which then formulates the need for learning that can be done offline and online. This is to answer issues regarding limited time to meet and the need for speed of access to information and exchanging experiences so that the blended learning model is the right one. However, there is a need for guidance and direction in students finding their knowledge in its application. Students are not left without supervision and advice because it can create misconceptions in their understanding. So the touch of guided inquiry in blended learning is ideal in its application. Blended learning is learning that bridges communication without being constrained by time and place. While the guided inquiry is learning that is carried out continuously where the teacher always guides and escorts students in finding their knowledge [15]. So that in the next step, discussing and asking for opinions from mathematics teachers and guidance from accompanying expert teachers regarding the design of how to apply mathematics learning patterns for students who are studying, input is obtained that in its application, the teacher is demanded to be more active and continuously monitors the course of learning in discussion groups and this requires more energy. Still, it can be handled with open hours or on the sidelines when studying at the Islamic boarding school. Moreover, in the next step, the researchers made learning tools and their supporting instruments according to suggestions from other math teachers and math expert teachers.

Three expert validators then validate all instruments and learning tools that have been compiled. Each validator has its expertise, including material experts, learning model experts, and educational evaluation experts. The three experts obtained validation results which can be seen in table 1.

No	Datad Instruments	Validator	Description	
	Rated Instruments	Average		
1	Observation sheet	86,71%	Very good	
2	Learning Observer Sheet	91,66%	Very good	
3	Student Response Questionnaire	91,66%	Very good	
4	Lesson plan	100 %	Very good	
5	Cognitive Test Question Sheet	86,71%	Very good	

Table 1. Results of the Validation of Learning Instruments and Devices

Based on the validation results, the data for the observation sheet has a validity of 86.71% with a very good predicate, and the validator provides input for the question more straightforwardly and in a language that the recipient quickly understands the meaning of the question. Plus, questions so that respondents can evaluate the course of learning and improvement in the second cycle. The validation results on the observation sheet show an average validity level of 91.66%, with excellent information. The validator's observation sheet provides input to adjust observations

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to the stages contained in the RPP, both online and offline. The questions are also more detailed in the learning stages. The results of the validation on student responses were 91.66%, with excellent information. In this questionnaire, the validator provides input for the language to be easy to understand and not too complicated. As well as question indicators to be further clarified. As for the results of the validation of the Learning Implementation Plan, the three validators agreed that the validation level was 100%, this is because the learning steps are clear, according to the syntax, in theory, the learning objectives are clear, the indicators of achievement are apparent, by the competencies of the students who want to be explored.

Moreover, on the cognitive exam question sheet, the researcher only uses construct validation and does not validate the items, with a significant achievement of 86.71% with input from the validator for the questions to pay attention to the short-medium. Challenging compositions describe the indicators of accomplishment you want to see and imperative sentences and formats to conform to the standard. The reason the researchers did not validate the questions by conducting test questions was that with the consideration that the questions used questions from the question bank that were often used and could be declared valid and mapped the easy and challenging questions and the average items included in the question section that had high reliability, good.

Table 2. Observation Results of the First Cycle Learning Implementation

The application of mathematics learning with a combination of blended learning and guided inquiry in the first cycle with the results can be seen in table 2.

No	Implementation Of Learning	Number Of Questions		Score			
			Of	Offline		Online	
			<b>O</b> <sub>1</sub>	$O_2$	<b>O</b> <sub>1</sub>	$O_2$	
1	Preliminary activities	4 item	4	4	3	2	
2	Core activities:	6 item	5	4	4	3	
3	Closing activity	2 item	2	2	2	2	
	Total score	12	11	10	9	7	
Average		9,25					
	Yield Percentage	9,25: 12 x 100% = 77,08%					

Based on observations from observers of the course of learning, information was obtained that the learning process when the teacher was offline was classified as being able to carry out learning according to the syntax in the lesson plan, providing guidance and direction to students very well, patiently, full of smiles and energetic. Moreover, doing offline learning closures is also perfect. This is because the teacher already has good teaching hours so that in this case, there is no problem. However, during online learning, teachers cannot supervise, control, guide, and assist students in finding their knowledge. As seen in the preliminary activities, the teacher cannot attract attention or create something that focuses students' attention on the teacher. Teachers tend only to give short sentences where students become unable to understand the meaning of the sentence. In the core activity, the teacher only seemed to tell him not to issue statements that stimulated students' curiosity about the material. Besides that, the teacher in answering student questions was sometimes late. This was because the teacher, when he was at home, also carried out home activities as a housewife, but to closing activities, the teacher performed according to the syntax in the lesson

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plan. Teachers with Indonesian characters can protect, accompany with love, patience, and sincerity[17].

Student learning outcomes with linear equations and inequality one variables containing absolute values, where offline students do a student pre-test and after blended learning students also do post-test can be seen in Figure 1. With information, indicators of achievement can be seen in table 3.



Indicator Code	Indicator			
IN - 1	Understand and explain the concept of absolute value.			
IN - 2	Determine the solution to the equation of the absolute linear value of one variable.			
IN - 3	Determine the solution of the linear absolute value inequality of one variable.			
IN - 4	Using the concept of absolute value to solve contextual problems related to absolute value.			
IN - 5	Using the concept of equations and inequalities to determine the solution to absolute value problems.			

Based on students' cognitive learning outcomes, it was found that the increase was minimal. The increase only occurred in three achievement indicators. There are still many students who do not understand, and another factor is that students come from various regions with different levels of ability to absorb and discuss the material. Many students are late listening to the teacher's directions because they have to take turns using smartphones. Besides that, there are still many students who joke in group discussions. This makes the absorption of the material less than optimal. Students still lack the initiative in finding learning resources, they still have to be provoked and shown links to learning resources, and there are still many students who depend on the results or answers of friends.

The results of student responses to the combination of blended learning and guided inquiry in the first cycle can be seen in Figure 2, with the indicators in Table 4.

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Table 4. Student Response Indicators

No	Measured Indicators		
IRS-1	Student acceptance of Learning		
IRS-2	The ability to grow students' self-competence		
IRS-3	Students' ability to present mathematics material		
IRS-4	Ability to grow student collaboration competence		
IRS-5	The impact obtained by students as an extension of the ability to cooperate		
IRS-6	Ability to develop communication competence		
IRS-7	The impact obtained by students as an extension of communication skills		
IRS-8	The level of understanding of student's concepts of the material being taught		
IRS-9	Sustainable use of Learning		
IRS-10	Student acceptance of the material explanation by the teacher		
IRS-11	The impact of developing material explanations by the teacher		
IRS-12	Student acceptance of guidance by the teacher		
IRS-13	Student acceptance of direction by the teacher		
IRS-14	The impact of the development of mentoring and direction by the teacher		
IRS-15	Student acceptance of the learning mechanism by the teacher		

Based on the student response questionnaire results, many things must be addressed so that this learning becomes more effective, although based on the graph, the students have accepted and are happy to apply this learning. However, the formation of self-competence regarding the material and its presentation is still not optimal. Students are also not many who are familiar with how to communicate through information technology media. It is still difficult to express what they do not understand. So that in acceptance, students are less able to apply it in solving the problem.

Moreover, based on the 14th indicator, the students also felt that the guidance from the teacher was less than optimal. The teacher rarely monitored the discussion in the group, gave insufficient explanations, and was more impressed with just ordering. However, overall, students like all the activities carried out by the teacher in the learning.

Evaluation is carried out based on the implementation of the model in the first cycle, based on data, information, and input, from the teacher so that they can better assist and guide students in discussions in the group, between students and teachers to agree about the hours that both parties are ready to meet more effective. The teacher does not sacrifice time for the family, and of course, both parties agree on the curfew. Where the time is used for rest, the teacher can be more nurturing and patient in giving explanations and directions to students. While students are more severe in carrying out online learning, literacy searches through their skills in using digital technology to be more optimal. So that learning resources or literacy are reliable literacy, students focus on searching for written material and look for information and explanations of material through the youtube channel or the like so that students do not depend on their friends or teachers alone. This will reduce the misconception factor and can increase students' initiative in problemsolving.

Moreover, solving problems for students who do not have access to smartphones because they do not have smartphones. The teacher coordinates with the dormitory supervisor to help the smooth learning of their fostered students. The teacher asks for a dormitory supervisor in which there are five coaches in each dorm if they are willing to lend and always stand by during student hours participating in online, blended learning.

From the activities in the first cycle, it can be concluded that the application of blended learning and guided inquiry to students who become students at the Salaf Asy'ariyyah Islamic boarding school in Kalibeber Wonosobo goes well when offline learning. Offline learning is carried out with stringent health protocols even though the Takhassus Al-Qur'an High School environment was in the green zone during data collection. However, there are still problems when learning online, both from the teacher's side who tend to be less able to guide and direct because this is a new habit pattern that must be done and from the perspective of students who are less severe in online learning, for that, the existence of introspection from both parties is significant. Help in the second cycle to run smoothly.

### 2. Second Cycle

Planning in the second cycle was based on the data obtained in the first cycle. This was done by researchers and class teachers asking for input from other mathematics teachers and expert teachers from the seconded service at Takhassus Al-Qur'an High School, KalibeberWonosobo. The discussion of problem mapping is clear, namely from teachers who are less responsive to students' difficulties during online learning, from students who are less severe and joke a lot during group discussions, as well as external factors, namely the presence of students who do not have smartphones, and the schedule of activities at the boarding school. Boarding schools are less known by teachers and other students because each dormitory has a different schedule. The need for selfconditioning is more ready in the application of this learning model both from students and teachers as well as coordination with the hostel supervisor is also very much needed, and notification to the coach that students are being treated with blended learning in collaboration with guided inquiry so that there are no problems for students.

Formulating the action plan that will be applied in the second cycle also pays attention to the material given to students directly. The delivery of material to students also impacts the absorption and mastery of students. The teacher must be ready when students are resting at their boarding school activities and when they have free time in the morning after the dawn prayer when preparing to shower, have breakfast, and go to school. While waiting for the queue to take a shower, students can use their time for learning. After being felt ready by the teacher, the next anticipatory steps to overcome the problems in the first cycle were discussions with other mathematics teachers and

expert teachers, and the instruments and learning tools did not change. It was just that the teacher was able to maximize what was written on the learning tools.

The implementation of mathematics learning in the second cycle is by planning, as shown in table 5.

No	Implementation Of Learning	Number Of Questions	Score			
			Offline		Offline	
			$O_1$	$O_2$	$O_1$	$O_2$
1	Preliminary activities	4 Item	4	4	4	3
2	Core activities:	6 Item	6	6	6	6
3	Closing activity	2 Item	2	2	2	2
	Total score	12	12	12	12	11
	Average 11,75					
	Yield Percentage $11.75/12 \ge 100\% = 97.91\%$					

Table 5. Results of Observation of the Second Cycle Learning Implementation

Based on table 5, information is obtained that the implementation of blended learning combined with guided inquiry shows an increase compared to the first cycle, the teacher is more sensitive and patient in guiding, directing, and assisting the discussion process in the WhatsApp group, providing questions or pictures that can trigger the discussion. Students' answers to the problems or difficulties they face this is by Ki Hadjar Dewantara's loving and caring pattern according to Yahya & Prihatni [18], which states that compassion is seen when students find those who have problems understanding the material they are facing. The teacher carefully guides students to understand the problem. Meanwhile, it is not visible during the teaching and learning process. Moreover, with the agreement regarding the hours for meet-ups through digital information technology products, the teacher's role as teaching is maximized, teachers are better able to prepare, and teacher concentration does not differ between obligations as a mother and a teacher who is responsible for educating the nation. Students become more disciplined and in control, and students who tend to be shy also become more courageous in this discussion forum

The students' cognitive learning results also showed an increase in the previous cycle; this can be seen in Figure 3.



Based on the data from figure 3, it can be stated that in the second cycle, students' cognitive test scores have increased, students are more active, more productive in finding learning resources that can be done independently, and the teacher only directs them. These resources include

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YouTube, blogs, articles, and free online tutoring. This shows that blended learning combined with guided inquiry can improve students' digital literacy skills. Students become more familiar with information technology products in this digital era that they can use to accelerate their knowledge acquisition. Yahya & Prihatni [18] also agree by stating that e-learning allows students to share information and access subject matter at any time. Digital literacy affects increasing competence in the skills, knowledge, and attitudes of distance learning students. The increase is in the form of increasing knowledge, such as increasing insight marked by an increase in value after digital literacy. Improved skills are marked by increased abilities and students' creative talents in solving problems [19]. In addition, based on unstructured interviews that students also open networks with other students outside of school. They are not reluctant to discuss the material and ask for opinions and explanations on solving the problem regardless of religion, ethnicity, and ethnicity. They do not show an awkward attitude, prestige, or feeling of being better. In Pesantren, they are taught pluralism and by the goals of Indonesian multicultural education. According to Abdurrohman [20], that education functions as a preventive tool against conflicts of ethnic and religious interests, as a tool to foster an attitude of being willing to give in to the preferences desired by the elite, instilling ethnicity as a source of intrinsic wealth possessed by humans to get to know each other and enrich culture and become one of the social networking media.

Student responses in this second cycle students are more ready in carrying out learning after they can adjust it, they can further develop it based on their creativity, this can be seen in Figure 4



Based on figure 4. It was obtained data that student responses in the cycle increased more than in the first cycle. Students experienced a significant increase in the ability to grow their competence; using digital literacy optimally made it easier to find learning resources to find their knowledge. They are better able to present material and understand better. This is also shown by a rapid increase in indicator three from table 4. This is accompanied by increased students' ability to work together in discussion groups to help each other communicate arguments. It appears to change indicators 6 and 7 in table 4, increasing students' conceptual abilities. Even more, Marfuah's opinion [21] states that communication that takes place in the learning process is not just how a teacher conveys teaching materials but also is done to develop students into whole individuals,

such as solving problems together in groups and fostering a spirit of mutual learning among fellow students.

Moreover, this opinion is corroborated by Lalu, Astutik & Wijayanti [22], which states that Guided inquiry learning also provides opportunities for students to work together in groups. Thus the guided inquiry learning model can improve students' ability to solve problems with their groups and have a learning experience. It is easy to understand the concepts they are studying. Inquiry learning is designed to develop scientific abilities and motivate students to be mentally and physically involved in the learning process, solving problems and making decisions.

Students also feel the role of the teacher in Learning to experience changes for the better from figure 4, which is shown in indicators 12 to 15, sharing a rapid increase. The results in the second cycle are in Nurhadi's opinion [23], which states that blended learning is efficient to improve students' abilities to be fun. Students' interest in learning is greater with a comfortable learning environment. Blended Learning offers better learning, either separately or in groups and at the same or different times.

# CONCLUSION

Based on the application of blended learning combined with guided inquiry in the second cycle, it can be concluded that the whole learning can be declared successful, looking at the implementation and impacts that occur even though in its application it can not be a maximum of 100% in its entirety. Still, it makes up for the problems that happened in the first cycle. Problems occur due to the lack of understanding of both teachers and students in applying the blended learning model combined with guided inquiry because this model is still not familiar to students. Students before the pandemic only received conventional learning, and while they received online learning during the pandemic. In the online process, students do not get the main concepts that can only be done offline and make learning less effective, plus the online learning mindset is very suitable to be included in it, this has proven to be effective. It can be seen from the results of the data and information in the second cycle, which has increased, both from the delivery of the teacher, student learning outcomes, and student responses or responses regarding the ongoing learning.

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