Efforts to Improve Student Creativity using Problem-based Learning Model at SMAN 2 Kota Batu

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Abstract

The problem in this study is the lack of learning methodology, namely the optimization of the use of learning media and infrastructure in learning carried out by the teacher so that the learning process is boring. The result is that students' ideas and ideas do not emerge because of the lack of opportunity and freedom given by the teacher. This research was conducted in class XI 8 SMAN 2 Batu involving 34 students. This study used Action Research which was carried out in 2 cycles, namely cycle I and cycle II. This study aims to increase student creativity using the application of the Problem-based Learning model. The data obtained from this study is that there is an increase from pre-action to cycle I and cycle II. This can be seen from the pre-action results data, it is known that students who have a high level of creativity are as many as 27 people (79%), while 7 people (21%) have a low level of creativity. In cycle I, it can be seen that the increase is around 3% and in cycle II it has increased by 5%, namely, 30 people (87%) have a high level of creativity, while 4 people (13%) have a low level of creativity. Thus, it can be concluded that the application of the Problem-based Learning model in teaching Pancasila education can increase the creativity of class XI 8 students at SMAN 2 Batu.

INTRODUCTION

Indonesian education needs to respond to changes in an increasingly dynamic society with increasing demands for quality of life. The ability to respond to change needs to be developed in every citizen as an educational person as well as capital needed to bring Indonesia to the attainment of prosperity. This can be realized when education is not only seen from the context of the past and present, but also as a process that is able to anticipate and talk about the future. Contextualization of education needs to be directed according to the educational paradigm in the 21st century, namely education that is oriented towards independent learning. The weakness of the educational paradigm in general in Indonesia is still dominated by the view that knowledge is a set of facts that must be memorized so that the teacher's view in the learning process is only completing subject matter, not solving problems. In addition, the findings in the field are that there are still many teachers who still prioritize tests or students' cognitive aspects only. They are of the view that they still prioritize written exams for several reasons. First, with summative exams or assessments, students are motivated to continue learning. Second, a thorough understanding is carried out by students through the summative assessment method. Third, the teacher considers that if a summative assessment is

not given, students will be lazy and underestimate learning.

Teaching methods for teachers who still need learning models that can activate students who experience *loss learning* during the Covid 19 pandemic are a serious problem that has occurred at SMAN 2 Batu. Changes in the level of creativity and skills that had been suspended due to online learning during the Covid 19 pandemic caused students to be less motivated in exploring their abilities. Basically, high school level learning requires creative and conducive learning so that students can not only master the material but also apply knowledge in the form of skills that have been taught in class in everyday life. One of them is the Pancasila Education subject, which basically requires high school students to actively listen to the teacher delivering material but also to actively apply knowledge in their lives. Practice and skills are needed by students of SMAN 2 Batu. The reason is that they are expected to be able to form students who are in accordance with the Implementation of the Independent Curriculum, namely the Pancasila Student Profile Project who not only have cognitive abilities, but also have abilities in the affective and psychomotor fields. They need to be equipped with abilities and skills so that they are ready and declared capable of applying the Independent Curriculum to the Pancasila Student Profile Project. Pancasila education is needed in shaping character, fostering students' skills and creativity in building the true character of Pancasila students. So, it can be concluded that it is important for students to know how important it is to learn Pancasila Education to create creativity in exploring their ability to realize how important it is for them to form Pancasila students.

The approach used in student-oriented learning is that the teacher's role shifts from determining "what will be learned" to "how to provide and enrich student learning experiences". A creativity approach in learning strategies is needed to activate student involvement. The characteristics of teaching and learning include that the teacher must be able to create a conducive atmosphere in order to increase the interaction and participation of students in teaching, because it is the students themselves who are supposed to build their knowledge and the teacher helps this process by choosing teaching alternatives that make information very meaningful and relevant to students by providing direction and opportunities for students to find or define their own ideas so that students consciously use their own strategies for learning, there is no point in carrying out teaching and learning activities, if students are only passive

To be able to improve student achievement, it is hoped that a teacher will play an active role in educating students such as applying an effective approach and so that students understand the material being taught. Therefore, a teacher is expected to be able to guide students to be active and creative in learning, so that these students are not only used to receiving lessons but can also redevelop the knowledge they gain while attending lessons in class. In teaching the teacher must be good at using approaches wisely and prudently not haphazardly which can harm students. In the Law on Teachers and Lecturers No. 14 of 2005 states that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating early childhood students through formal education, basic education, and secondary education.

From this statement it can be concluded that how important a teacher is for the quality of education in Indonesia. The

teacher is one of the keys to the success of an educational institution, so the quality of the teacher or the skills of the teacher in the learning process will certainly greatly affect the achievement of an educational goal. The use of learning methods and models really needs to be considered seeing the characteristics possessed by each student which differ from one another both in terms of their ability to receive lessons or their characteristics. During the learning process, the methods and models used by the teacher will greatly influence the skills and creativity of students. The use of learning methods and models applied by the teacher is not appropriate with the material or content to be discussed.

It is also difficult for teachers to change their teaching style (*content-led*) with the renewal of Pancasila Education. This is caused by the lack of learning methodology mastered by the teacher. The concept of an independent learning curriculum in the school environment emphasizes the view that students are considered as the party who knows best about their needs and is responsible for the results of the learning process carried out. Students are encouraged not only as learning objects but also learning subjects who carry out lifelong learning *activities*. The teacher should be a facilitator, evaluator and mediator in the learning process of Pancasila education. Trends Modern education is in accordance with the 21st century that the learning process must be centered on student independence (*student center oriented*). This is where it is necessary to have learning approaches and strategies which are very important to be applied as part of preparing intelligent, creative, skilled and independent Indonesian people as mandated in the national education goals. This goal is stated in Law Number 20 of 2003 (National Education System Law) Article 3 concerning the goals of national education

which reads, "*to develop the potential of students to become human beings who believe and fear God Almighty, have noble character, are healthy, knowledgeable, creative, independent and become a democratic and responsible citizen*".

Rusman (2014) said that learning will be more meaningful when schools are closer to the community environment (not physically close). However, functionally what is learned at school is always in contact with life situations and problems that occur both in the family environment and in the community environment. It is also added that learning that positions students to connect material content with the context of everyday life can find meaning (Johson & Hayes, 2016). Creativity can decrease due to mistakes in educating children. Parents' mistakes in motivating children and learning systems in traditional schools can turn off children's instincts to learn. If a child's instinct to learn is inhibited by the surrounding environment, the child will have difficulty finding lots of ideas and ideas. The existence of this problem of creativity requires learning that is created by teachers in schools that are oriented towards accelerating humans in building their civilization. This has consequences for the need for teachers to prepare learning that is adapted to the context of environmental changes both locally, regionally and internationally. Learning that is not juxtaposed with the dynamics of society will only produce people who are left behind. Changes in teacher teaching models and methods in accordance with the development of students' abilities and potential in the learning process can be achieved through the application of the *Problem Based Learning* (PBL) model. The material for Pancasila education in the elements of the 1945 Constitution of the Republic of Indonesia is dynamic. This means that these elements become a serious

and relevant discussion if studied in the school environment and are constantly experiencing developments in accordance with the needs of society and the times.

Talking about the implementation of PBL, it is hoped that students will be directly and actively involved in the learning process in the classroom, which means "experiencing" and not "memorizing". PBL is interpreted as a creative learning strategy that is very suitable for use in learning at school secondary school and required in the Independent Curriculum. PBL is a learning strategy that involves students in solving problems by integrating various concepts and skills from various disciplines (Bern and Erickson in Komalasari, 2010). PBL can be a solution to the problem of citizen education, including in Pancasila Education. Winataputra (2012) said that Pancasila education is designed to develop *smart and good citizens* for all paths and levels of education. The concept of a *smart and good citizen* is in accordance with the mandate of the national goal as stated in the fourth paragraph of the Preamble of the 1945 Constitution which "*…to educate the life of the nation".*

Winataputra (2015) explains that socio-politically and culturally, Pancasila education has an educational vision that is "*to educate the nation's life".* The purpose of "to *educate the nation's life"* is to develop citizenship intelligence which is a prerequisite for the development of democracy in a broad sense, which requires the realization of a culture of citizenship as one of the determinants of the growth and development of a democratic country. From this understanding, the function of Pancasila education is derived as a systemic vehicle for educating the nation's life (Winataputra, 2015). Wahab and Sapriya (2011) explain that Pancasila education is specifically contained in Article 37 of Law

Number 20 of 2003 concerning the National Education System which reads: "*Pancasila education is intended to form students into human beings who have a sense of nationality and love for the motherland".* Winataputra (2015) further mentions that Pancasila education is related to national education which is a systemic vehicle for educating the nation's life which is carried out through the Pancasila educational praxis which includes knowledge, character and skills. Of the three clusters of capabilities that make citizens ideal and democratic in making decisions intelligently and reasoned (*reasoned decision makers*).

In fact, what is happening in Indonesia today is still dominated by the conventional system, so that the implementation of learning is still student-oriented through the concept of being contextualized with *multiple perspectives* "is still far from expectations (Komalasari, 2009). However, as time goes by, Indonesian education is currently moving towards in *medium/moderate citizenship education* where learning has started trying to make changes (*learning to do*), no longer *learning to know* (Winataputra, 2015). In a change towards *learning to do*, it requires competence, intelligence and creativity from students in understanding learning materials in accordance with the elements of the 1945 Constitution of the Republic of Indonesia. The problem of student creativity indicates that this is one of the causes of the low quality of human education today and in the future. Therefore, there is a need for breakthroughs and efforts to increase student creativity through *problem-based learning models*, especially there is SMAN 2 Batu.

RESEARCH METHOD

Researchers use this type of action research (*Action Research). Action Research* is a form of self-reflective investigation carried

out by researchers in certain situations and conditions to increase the rationality of their thinking and their understanding of these practices (Emzir, 2014). Action research is carried out by the researchers themselves, so it is often referred to as practitioner-based research and involves researchers to think about and reflect on their work, in other words it is a form of self-reflection practice (Emzir, 2014). Based on the information above, it can be concluded that *Action Research* is interpreted as a form of reflective study by actors of action. These actions are carried out to increase the rational stability of their actions in carrying out daily tasks, deepen understanding of the actions taken and improve the conditions of the learning process that has been carried out. To realize these goals, *Action Research is* carried out in a systematic process consisting of four stages including: a) building and analyzing problems *(Constructing),* b) planning action *(planning Action),* c) Carrying out actions *(Taking Action),* and d) evaluating actions or *Evaluating Action* (Neiff in Emzir, 2014).
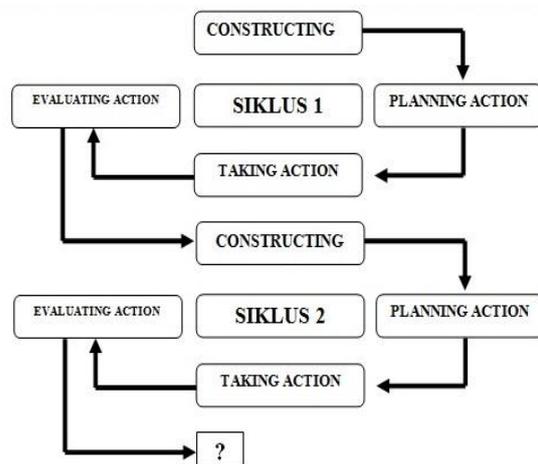

Figure 1. Flow of Action Research (Action Research).

Research or *Action Research* is usually carried out at least 2 cycles. The first cycle is carried out starting from building and analysing the problem. Before carrying out

action research, researchers should analyze various problems that are currently happening and arrange them as concepts. After the problem has been arranged, the researcher plans the actions to be taken, in this case the researcher will use the *Problem Based Learning model* in overcoming the problem of creativity experienced by students of class XI SMAN 2 Batu. Furthermore, in the action stage, the researcher carried out the teaching and learning process with pre-planned planning. Then the researcher evaluates the students' activities and activities during the learning process. The results of this evaluation determine the next plan for the second cycle. The stages in the second cycle are the same as the stages in the first cycle. Research can be said to be successful and stopped when the researcher is satisfied with the results obtained.

Data collection techniques used in this study were observation, interviews, documentation studies and questionnaires. After obtaining the relevant data, the researcher will conduct data analysis. In analyzing the data in this research, the researcher refers to the *Action Research data analysis model,* in which the researcher does not only conduct the research but the researcher becomes the main (key) actor in the research. This is done in order to make changes for the better, study events carefully regarding the changes that occur (Baburoglu & Ravn, 1992). In *Action Research* there are several factors that must be passed in analyzing data including contextual factors, quality of relationships, quality of the *Action Research process,* and the output of the *Action Research* itself.

Contextual factors, namely the problems that arise in this study are lack of creativity of students in exploring or exploring their ideas and ideas. This is because the models and learning methods used by teachers are not quite right. Based on these problems, the

researchers applied the *Problem Based Learning model* as an effort to overcome the problem of student creativity in the elements of the 1945 Constitution of the Republic of Indonesia, the *Merdeka* curriculum at SMAN 2 Batu. The role of researchers in the implementation of learning using *Problem-Based Learning* models also aims to facilitate research evaluation and produce accurate or valid data. The position of the researcher here is as one of the students who has the task of practicing theory obtained during lectures in the Pre service Teacher Professional Education (PPG) program based on the Independent Curriculum and then testing it out in schools (SMAN 2 Batu). In carrying out the research process, the researcher prepared a plan carefully such as making teaching modules and learning objectives flow independently, managing research time as best as possible and obtaining data and information through observation, interviews and documentation.

Process quality in *Action Research* emphasizes and concentrates on two activities namely the process of investigating the problem and implementing the solution. In this study the problem that is happening is that the learning methodology used by Pancasila education teachers has so far been boring and uninteresting. The learning methods and models applied are very dominant in lectures which make students less given the opportunity to explore their ideas and creativity independently or in groups. From this problem the researcher applied the *Problem Based Learning model* as a solution in overcoming problems that occur in schools, namely the problem of student creativity in the content of the elements of the 1945 Constitution of the Republic of Indonesia. The outputs or results of *Action Research* aim to increase teachers' understanding in using appropriate learning models and methods

according to the context and subject matter. Apart from that, as a facilitator and motivator, the teacher is tasked with accompanying students to explore their potential and creativity. The implementation of the *Problem Based Learning model* is expected to be able to overcome the creativity problems experienced by students.

RESULTS AND DISCUSSION

Based on the results of observations of the odd semester Pancasila Education learning activities for the 2022-2023 stage of cycle I, the elements of the 1945 Constitution of the Republic of Indonesia contained material about analyzing products legislation and evaluate discrepancies between statutory products were carried out in class XI8 students. In this learning the teacher has used the contextual teaching learning model , but learning activities tend to be teacher-centered or sometimes the teacher suddenly gives assignments that are not understood by students because the delivery of content is not understandable. Pancasila education teachers in conveying material to students still use the lecture and assignment method so that students only act as passive listeners and are not given the opportunity to be creative in their learning. As for the results of the questionnaire on student pre-action on material about analyzing products legislation and evaluate incompatibility between statutory products, namely that there were as many as 7 students who lacked the potential to increase their creativity and as many as 27 students had high creativity. Based on the results of research in the field, researchers then classify research results according to table 1.

Table 1. Student Creativity Questionnaire Results in Pre-Action

Total students	34 Students	
High Student Creativity	27 Students	79%
Low Student Creativity	7 Students	21%

These results were obtained from a questionnaire given to students before using the *Problem Based Learning model*. Based on table 1, information is obtained that the level of creativity of class XI 8 students at SMAN 2 Batu is still classified *as* medium. This is because many students answered the questionnaire very low, especially with regard to their creativity and the learning model applied by Pancasila Education teachers was boring, still *teacher-centered learning* and exam-based. From the results of the pre-action observations, it can be concluded that the level of student creativity is still relatively low. With these facts, the researchers took the initiative to use the *Problem Based Learning model* to provide an interesting, fun and meaningful learning experience. Based on data analysis, the level of student creativity increased by 3 % in the first cycle and then increased again in the second cycle by 5 %. The second cycle of this research achieved the achievement indicators expected by the researchers, namely 87 % (30 of 34 students) had a high level of creativity and 13 % (4 of 34 students) had a low level of creativity. This is evidenced by the results of student questionnaire answers and also compared with the results of observation 1 and interviews conducted by researchers during the learning process.

Application of *Problem Based Learning* Models

Research by applying the *Problem Based Learning model* to Pancasila education subjects with material content analyzing products legislation and evaluate incompatibility between product legislation class XI 8 SMAN 2 Batu was carried out in two cycles. Each cycle consists of 2 meetings with a time allocation of 2 x 45 minutes each meeting. The first cycle was carried out on Wednesday 16 November 2022 followed by the second cycle on Wednesday 23 November 2022.

The cycle I meeting was held on Wednesday 9 November 2022 and was carried out in accordance with the learning steps that referred to the flow of learning objectives and teaching modules prepared. The teacher enters the room greets students by greeting and invites students to start learning by praying. The teacher checks the attendance list of students. After that, the teacher explained about the *Problem Based Learning model* and its purpose. The teacher gives a text in the form of a case that must be solved jointly by students. Previously, students were in groups determined by the students themselves. Each student chooses a group without discriminating against his colleagues. The selected group gathers according to their choice and discusses the chosen theme or topic.

1st meeting of cycle I, I will be held on Wednesday 16 November 2022 at 08.30 to 10.00 WIB according to the modules with teaching modules and ATP that have been prepared. As usual the teacher enters the room to greet students by greeting and invites students to start learning by praying. The teacher checks the list of student attendance and the teacher provides stimulus and stimulation to students to compose a number of questions, then the students answer and respond to them. The absence of student readiness makes the learning process still one-way; teacher dominance is very visible in Pancasila education learning.

Each group continues its group assignments actively and seriously. Group

reports are made in the form of Student Worksheets (LKPD) . Each group at the next meeting will present the results of their report. At the second and third meetings in cycle II on Wednesday 23 November 2022 at 08.30 to 10.00 WIB the results were very satisfying. Between groups answer each other and respond to questions and objections in turn. Differences in views between groups provide a different color for each group. The dynamics and the learning process become livelier and fluid, at the end of the lesson the teacher provides evaluation and reinforcement regarding the themes and topics that have been discussed by each group.

Increased Student Creativity after applying the *Problem Based Learning Model*

Research that has been done by researchers in two cycles shows that the Application of the *Problem Based Learning Model* can increase the Creativity of class XI 8 students at SMAN 2 Batu. *Problem-Based Learning* Models is one of the active and creative learning models used by teachers in order to increase student creativity through active participation and collaboration in the form of discussion groups. Response to a behavior that is intentionally given so that the behavior can be repeated or not at all. Giving the response given by the teacher is very important for students, because this will be a motivation for students in learning. The recapitulation of student creativity in the pre-action stage, cycle 1 and cycle 2 is shown in the following table 2.

Based on the table above, creativity in cycle 1 has increased by 3 %. This can be seen in the comparison of the results obtained at the end of cycle 1 with the results of the pre-action questionnaire. In the Pre-action Stage students who have creativity are 27 students out of 34 students while 7 students out of 34 students have a

low level of creativity. After the Problem *Based Learning* model was applied in cycle I, the creativity of students changed to 28 out of 34 students who had creativity while 6 out of 34 students had low creativity.

Table 2. Recapitulation of Student Creativity in the Pre-action Stage, Cycle 1 and Cycle 2

Cycle	Student Creativity		
	Total students	(%)	Information
Pre-action	27	79	Tall
	7	21	Low
Cycle 1	28	82	Tall
	6	18	Low
Cycle 2	30	87	Tall
	4	13	Low

After evaluating and reflecting on the weaknesses that occurred in the first cycle of action, especially with regard to the readiness and time given by students. When cycle II was carried out, the change became positive and it increased significantly. In cycle II, students are more prepared in planning, they master the discussion results and active participation from other groups is seen in providing responses and questions to the presenter. This *Problem Based Learning* model is able to increase the creativity of students and is in accordance with the criteria expected by researchers. The results of the research show that the learning process of Pancasila education in increasing the creativity of students through *Problem Based Learning* is well implemented. Implementation of *Problem Based Learning* begins with learning steps from preliminary activities, core activities and closing activities. The learning process is in accordance with the view of Sprenger (2011) which states that the learning process must include several things, including: a) The teacher determines in advance what he wants to achieve; b) The teacher then makes

an assessment; c) The teacher gives clear goals to students; d) The teacher plans learning that directs students to the target; e) Teachers provide important information that is useful to students and they use in the real world; f) The teacher has created a class that harmonizes the brain; and g) Although lessons are given to be remembered, what the teacher needs to teach more is understanding concepts. The results of this study are almost the same as research conducted by Rosnawati (2013) that the learning process in the classroom using *Problem Based Learning* is better than the learning process using conventional strategies.

In addition, with the implementation of *Problem Based Learning* student participation increased significantly. This is evidenced by the ability of students to express ideas, listen to ideas, make and implement decisions, consider the pros and cons. Another ability is that students can influence other people, resolve conflicts, be forward -oriented, make decisions, and think before acting in experimental class students which can be achieved well compared to the control class. Suryantini's research (2011) also strengthens. That the use of the *Problem Based Learning model* has a significant impact, especially in improving their skills in working together in groups, skills in communicating, searching and processing information. Students are also able to think critically and analytically, obtain their own sources of information, and look for relationships between one source and another. Therefore, students' habits in solving problems will have an impact on their level of creativity.

Increasing student creativity requires other aspects that support the learning system. This aspect is the interaction between teachers and students and the learning patterns created to explore their abilities. This is also reinforced by the opinion of James (1997) which states that there are 3 systems in increasing creativity in the realm of education, including; a) The creativity approach is a system of how students learn; b) How is the interaction of teachers and students, colleagues, and the material/material that has been explained; and c) How the pattern of learning creativity in class can be explored by students. This can also be understood from the basis of rational considerations that in order to increase the creativity system needs to be nurtured, developed and improved. Craft & Jeffrey (2004) provide a different opinion that creative practice does not always lead to student creativity, but provides an open context for teachers and students to be creative, using the available space to maintain and develop their own creative learning. In this context, there are several things that have in common between Craft & Jeffrey and the results of this study, namely the practice of fostering students' creativity involving their active role in determining the search for knowledge and information that will later be investigated and obtained. The teacher here is only a facilitator and mediator in the learning process while students have a very important role in increasing their creativity through mastering their knowledge, attitudes and skills.

The process of learning Pancasila education through *Problem Based Learning* is preferred by almost all students. They can explore what they know and experience, what they hear from other people so that various ideas and ideas arise. Furthermore, during discussions with fellow group members and teachers, they even had the courage to respond to statements made by other group members. The teacher understands that the emergence of various variations of answers from different perspectives and points of view causes the teacher to evaluate objectively while still

paying attention to aspects of knowledge, attitudes and skills. In increasing creativity, problem solving, and various thinking skills are themes that are expected to emerge from the answers given by students and teachers as facilitators (Jankowska & Atlay, 2008). Therefore, the process of learning Pancasila education in increasing student creativity through *Problem Based Learning* is expected to start getting used to and be carried out in a planned, measurable and sustainable manner. The teacher first identifies the problems that will be discussed in class, pays attention to the class atmosphere, the readiness and conditions of the students so that the learning created will be more meaningful, interesting and fun.

CONCLUSION

The application of the *Problem Based Learning* Model to increase student creativity in learning Pancasila Education class XI 8 at SMAN 2 Batu showed that in cycle I, 28 out of 34 students had increased creativity and 6 out of 34 students still had low creativity. In cycle II, it was found that 30 out of 34 students had increased creativity and 4 out of 34 students still had low creativity. The implementation of the Problem *Based Learning* model in the Pancasila Education subject resulted in an increase in student creativity which was different in each cycle. There are significant differences in learning outcomes between before and after applying the *Problem Based Learning model* . Increasing student creativity is influenced by good planning and preparation from students and teachers. The better, the model offered and used by the teacher will have a positive impact on increasing student creativity.

Efforts to increase student creativity in class XI 8 SMAN 2 Batu through the *Problem Based Learning model* have been carried out well. Previously, the teacher gave an initial description and explanation to students regarding the steps for using the *Problem Based Learning model*. It is intended that students understand how to study in groups, learn to communicate well, explore and develop their ideas and ideas. The teacher acts only as a facilitator and mediator of learning, the teacher only serves students when they experience difficulties in the learning process. Learning is oriented to the problems offered by the teacher, then formulated and determined by students as material for discussion. Problem solving begins when they discuss with their fellow group members to find information and data regarding the results of the analysis through learning resources and media. They decide and determine the solutions to be presented and the teacher's task after post-learning conveys and completes answers or information that is not yet known and understood by students. The teacher also evaluates the course of learning activities based on small notes that have been written before.

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