Improving Student Learning Independence by Using Models Discovery Learning at School

Rediyono[1*]

[1] Pancasetia College of Economics Banjarmasin, Banjarmasin, Indonesia.

Abstract: This research is motivated by the low independence of students' learning in creative product subjects in class XI SMK Putra Bangsa Bontang, East Kalimantan. One solution to overcome this problem is to use the Discovery Learning learning model. The purpose of this study is to describe the improvement of students' learning independence by using the Discovery Learning learning model in students of XI SMK Putra Bangsa Bontang, East Kalimantan. The research method is Classroom Action Research (CAR) which is carried out in two cycles. Each cycle consists of two meetings and four stages, namely planning, implementation, observation, reflection, and the research time is carried out until August. The subjects of this study were students of class XI SMK Putra Bangsa Bontang, East Kalimantan. Totaling 15 people consisting of 8 male students and 7 female students. The results of the study showed that there was an increase in students' learning independence from pre-action to cycle I by 10.80%. The increase in students' learning independence also showed an increase from cycle 1 to cycle 2 by 24.78%. The conclusion of this study is that there was an increase in students' learning independence overall by 35.58%. Discovery Learning learning must continue to be carried out to improve the learning independence of vocational school students. Teachers need ongoing guidance to be able to apply the Discovery Learning model according to the recommended steps.

Keywords: Action research; Discovery learning model; Learning independence

Introduction

Learning is one of the most important activities in the educational process at Vocational High Schools (SMK). The success or failure of students in following the learning depends on the learning process they follow. In the learning process that occurs in class, teachers should use various methods so that students understand and comprehend the learning that is carried out so that the expected competency is achieved (Ananta et al., 2023).

The methods used by teachers in the learning process in class are not only using. Lecture method to deliver learning materials, but teachers must bring students directly into the learning process so that learning is more memorable for students. What often

happens is that the inhibiting factor in delivering material to students in learning is the lack of teacher variation in delivering learning materials so that learning tends to be watch-only and boring. The learning model used by teachers is less varied so that students tend to be lazy to do assignments, even students sometimes rely on their classmates and parents to complete the assignment. Students' laziness in doing assignments is one of the triggers for students to be less independent in their lives (Usman et al., 2022).

Student learning independence is one of the factors that determines student success.in learning (Solissa et al., 2023). This learning independence must be possessed by every student in order to achieve the desired success, in forming student learning independence, parents play

an important role in this (Adi, 2024). However, apart from parents, teachers also play an important role in forming student learning independence in Vocational High Schools (SMK).

Independent learning education given to students is intended so that students are able to develop their potential and abilities in completing tasks independently and it is hoped that in the future they will become independent, qualified, and responsible people (Karyadi, 2023; Mardia et al., 2020; Maryono et al., 2018). Independent learning is an effort to develop freedom for students in obtaining information and knowledge that is not controlled by others. Independent learning like this is not something that is easy for every student to do, most students prefer to learn to be guided by others rather than being controlled by themselves (Edi et al., 2021; Istiqoma et al., 2023; Nyoman et al., 2013; Putra et al., 2017).

Strengthening character education is one of the government's programs to improvenational character. The program carried out is in the form of Strengthening Character Education (PPK) which is implemented by the Ministry of Education and Culture. In Presidential Regulation Number 87 of 2017 concerning the strengthening of Character Education, it is stated that PPK strengthens the character of students through harmonization by the heart, feeling, thinking, and sports with the involvement and cooperation between educational units, families, and communities as part of the National Mental Revolution Movement (GNRM).

Character education is the entire relational dynamics between individuals with various dimensions, both from within and outside themselves, so that the individual can increasingly experience freedom so that they are responsible for their own growth as individuals and the development of others in their lives (Kamalia et al., 2021). Independent learning education given to students is intended so that students are able to develop their potential and abilities in completing their tasks independently and it is hoped that in the future they will become independent, qualified, and responsible people.

Efforts to instill the character of independent learning in students require assistance in the form of a model whose syntax supports and is in accordance with the indicators of the character of independent learning. The model that will be used to help instill the character of independent learning is the Discovery Learning model. Jooligen (2012) explains that Discovery Learning is a type of learning where students build their own knowledge by conducting an experiment and finding a principle and the results of the experiment. Discovery Learning is a component of educational practice that includes teaching methods that promote active learning,

process-oriented, self-directed and reflective (Karagiorgi et al., 2022).

According to Lavine (2005), he argues about the steps of the Discovery learning model Learning, namely 1) stimulation of giving stimulation, the stimulation stage is expected on something that raises questions, 2) Problem identification, the next stage the teacher gives students the opportunity to identify as many problems as possible that are relevant to the learning material, 3) Data collection, when exploration takes place, the teacher also gives students the opportunity to collect various relevant information, 4) Data processing, all information is processed, randomized, classified, tabulated, even if necessary calculated in a certain way, 5) Proof, this stage the hypothesis that was applied previously with alternative findings, is connected to the results of data processing. 6) Drawing conclusions/generalizations, students draw a conclusion that can be used as a general principle.

The right learning model is one that involves students actively and creatively where the teacher acts as a facilitator, coordinator, mediator and motivator in the learning process. Soekamto in Trianto (2010) states that the meaning of the learning model is: "A conceptual framework that describes a systematic procedure in organizinglearning experience to achieve certain learning objectives, and serves as a guideline for learning designers and teachers in planning teaching and learning activities. Creative product subjects are designed to prepare students in developing social sciences, the ability to deal with social conditions, and being able to solve problems in them. Creative Product Learning is expected to be able to shape the personality of students who are more independent and wise, in order to overcome social problems that arise. Creative Product learning is expected to make students have the ability to make decisions so that later students can be responsible for every decision they make. Thus, it is expected to create human resources who have great responsibility for themselves and their social environment (Wijayanti et al., 2014).

To achieve the learning objectives of Creative Products, of course, it cannot be separated from the use of learning models. By using learning models, it is hoped that it can increase students' learning independence in Creative Products subjects. Learning independence helps students understand concepts and improves their ability to complete complex tasks. Without effective learning independence, students can have difficulty understanding the material and their learning goals. Learning independence can also help students become more creative and find new ways to solve problems, if learning independence does not increase, students can have difficulty understanding the material and cannot achieve their learning goals (Mulyono, 2017).

Based on the above, the researcher conducted observations and interviews with teachers XI of SMK Putra Bangsa Bontang Kaltim, on July 17, 2024, the researcher obtained information that the problems that occurred were: 1. Teachers have not used various learning models that can improve students' learning independence, such as providing a variety of models in discussions which have an impact on students' lack of ability to respond, convey ideas and ideas that are believed to be true by students. 2. Most students look passive and only 1-5 students have an independent nature in learning, 3. Teachers are still just teaching so that students' understanding is limited. The researcher found several problems regarding students' learning independence, this problem of learning independence is related to Based on the results of initial observations conducted by researchers on Creative Product learning, there are many students in XI SMK Putra Bangsa Bontang Kaltim totaling 15 students consisting of 8 male students and 7 female students.

This research was conducted at XI SMK Putra Bangsa Bontang Kaltim. The subjects of this study were 15 students of class XI in the 2024/2025 academic year consisting of 8 male students and 7 female students. Data collection techniques were observation techniques and documentation techniques. The research instruments were the syllabus and RPP, while the data collection instruments were teacher activity observation sheets and student observation sheets.

The implementation of the action in this study is self-research. Observers in this study were class XI teachers of SMK Putra Bangsa Bontang Kaltim and colleagues. The action research model used in this study is Classroom Action Research. implemented through four stages, namely: planning, implementation, observation, and reflection. The action was carried out in two cycles, each cycle consisting of two meetings.

One alternative to increasing learning independence is the Discovery Learning learning model. According to Nurlaelah et al. (2020), linking learning models is a learning plan (instructional design) used in determining the intent and purpose of each topic/subject (Goal topic and purposes), compiling specific instructional objectives (Learning objectives), selecting learning content (subject content), conducting pre-tests (Preassessment), carrying out teaching and learning activities/learning resources, providing service support and carrying out evaluations. The above problems cause low learning independence of class XI students of SMK Putra Bangsa. Given the importance of learning independence in vocational schools, researchers are interested in conducting research entitled Improving Student Learning Independence by Using the Discovery Learning Model in Schools.

Method

This study uses a classroom action research method. The subjects in this study were students of class XI SMK Putra Bangsa Bontang. The number of students in this class is 15 students, consisting ofof 8 male students and 7 female students. This research was conducted at SMK Putra Bangsa Bontang in early July 2024 in the odd semester or semester 1 of the 2024/2025 academic year. This research will be carried out in several cycles with two meetings in one cycle. This research will be carried out in collaboration with grade V teachers.

The implementation of the action in this study is self-research. Observers in this study were class XI teachers of SMK Putra Bangsa Bontang and colleagues. The action research model used in this study is Classroom Action Research (CAR) which is implemented through four stages, namely: planning, implementation, observation, and reflection. The action is implemented in two cycles, each cycle consisting of two meetings.

Result and Discussion

The results of the study are shown in table assessment of student learning independence can be seen in the learning process. Then it can be seen that student learning independence in cycle I meeting I, namely: All students showed good and positive things in indicator 1 (Independence on others). All students can do their own assignments only five students with the category Appear with a percentage of 31.25% while the Category does not appear 10 people with a percentage of 62.5%. Students who are independent of others are only two people with the category appears with a percentage of 12.5% while the Category does not appear 13 people with a percentage of 81.25%. Confidence in indicator 2 (self-confidence). Only nine people are able to determine choices in choosing activities with the category Appear with a percentage of 56.25% while the Category does not appear 6 people with a percentage of 37.5%. three people who dare to express their opinions in choosing learning activities with the category Appear with a percentage of 18.75% while the Category does not appear 12 people with a percentage of 75%, while students dare to ask if they disagree there are only five people with the category Appear with a percentage of 31.25% while the Category does not appear 10 people with a percentage of 62.5%. The three indicators of self-confidence appear because the teacher who teaches them is a teacher they do not know. Eleven students showed completion of the tasks given by the teacher in indicator

3 (responsible), the remaining four students have not shown good completion of the task.

Nine students showed that they could carry out the experiment activities on time in indicator 4 (discipline), the remaining six students still had to be accompanied when carrying out their tasks. Ten students were able to collect assignments according to the time given. This

shows the need for action to improve student learning independence. Only five students were able to greet people they did not know in indicator 5 (easy to get along with). Some students were also unable to appreciate the opinions of their friends who gave different explanations. Only ten students showed that they could interact well with their friends.

Table 1. Percentage Student Learning Independence Cycle I Meeting I

Indicator	Descriptor	Appear	Do not appear
independence	Students can do their own assignments without help from others.	5 People (31.25%)	10 People (62.5%)
	Students are not dependent on others.	2 persons (12.5%)	13 People (81.25%)
Self-confident	Students are able to make choices in choosing learning activities	9 People (56.25%)	6 People (37.5%)
	Students dare to express their opinions in choosing learning activities	3 People (18.75%)	12 People (75%)
	Students dare to ask questions if you do not agree	5 People (31.25%)	10 People (62.5%)
Responsible	Students can complete the tasks given by the teacher	11 People (68.75%)	4 People (25%)
Discipline	Students are punctual in carrying out each activity.	9 People (56.25%)	6 People (37.5%)
	Students are able to collect assignments according to the time given.	10 People (62.5%)	5 People (31.25%)
Easy to get along	Students greet people they don't know.	5 People 31.25%)	10 People (62.5%)
	Students can respect their friends' opinions.	5 People (31.25%)	10 People (62.5%)
	Students can interact with his friends.	10 People (62.5%)	5 People (31.25%)
Controlling emotions	Students do not disturb their friends while activities are taking place.	4 People (25%)	11 People (68.75%)
	Students do not fight back when reprimanded by their teacher.	8 People (50%)	7 People (43.75%)
	Students are not depressed when assignments are not finished.	2 persons (12.5%)	13 People (81.25%)
Have initiative	Students answer teacher's questions without being pointed out by his teacher.	6 People (37.5%)	9 People (56.25%)
	Students take the initiative to learn on their own, as can be seen from their initiative to answer questions given by the teacher.	4 People (25%)	11 People (68.75%)

Four students have shown good and positive things in indicator 6 (controlling emotions). Four students did not disturb their friends during learning activities. The learning atmosphere is very conducive to this. Only eight students showed no resistance when reprimanded by their teacher, and 2 students were not gloomy when their assignments were not ready.

On indicator 7 (Having initiative). Students answer teacher's questions without being pointed out byThe teacher only has six students in the category of Appearing with a percentage of 37.5% while the category of not appearing is 9 people with a percentage of 56.25%. Students who take the initiative to learn on their own can be seen from the initiative to work on questions given by the teacher, only 4 people in the category of Appearing with a percentage of 25% while the category of not appearing is 11 people with a percentage of 68.75%.

Students of class XI SMK Putra Bangsa Bontang as a whole in the Cycle I Meeting I stage are included in the category of Quite Independent. This is indicated by the average score of student independence which only reached a score of 6.53 and an average value of 43.7%. Only one person is included in the category of very less independent. Nine people are included in the category of less independent, namely students AR, AEP, BPM, BAP, FZP, JS, JIA, J, and K. five students are included in

the category of quite independent, namely students API, FU, GF, JIA, RH.

Meanwhile, the results of observations of student learning independence at the second meeting of the learning independence assessment can be seen in the table 2. The results of the study are shown in table 2. Assessment of student learning independence can be seen in the learning process. Then it can be seen that student learning independence in cycle I meeting I, namely: All students showed good and positive things in indicator 1 (Independence on others). All students can do their own assignments only five students with the category Appear with a percentage of 31.25% while the Category does not appear 10 people with a percentage of 62.5%. Students who are independent of others are only two people with the category appears with a percentage of 12.5% while the Category does not appear 13 people with a percentage of 81.25%. Confidence in indicator 2 (self-confidence). Only nine people are able to determine choices in choosing activities with the category Appear with a percentage of 56.25% while the Category does not appear 6 people with a percentage of 37.5%. Three people who dare to express their opinions in choosing learning activities with the category Appear with a percentage of 18.75% while the category does not appear 12 people with a percentage of 75%, while students who dare to ask if they disagree are only five

people with the category Appear with a percentage of 31.25% while the category does not appear 10 people with a percentage of 62.5%.

In the 3rd indicator (responsible) only eleven people were able to complete it assignments given by teachers with the category appeared with a percentage of 68.75% while the category did not appear only 4 people with a percentage of 25%.

Nine students showed that they could carry out the experiment activities on time in indicator 4 (discipline),

the remaining six students still had to be accompanied when carrying out their tasks. Ten students were able to collect assignments according to the time given. This shows the need for action to improve student learning independence. Only six students were able to greet people they did not know in indicator 5 (easy to get along with). Some students were also unable to appreciate the opinions of their friends who gave different explanations. Only eleven students showed that they could interact well with their friends.

Table 2. Student Learning Independence at the Second Meeting of the Learning Independence Assessment

Indicator	Descriptor	Appear	Do not appear
Independence	Students can do their own assignments without help from others.	5 People (31.25%)	10 People (62.5%)
	Students are not dependent on others.	2 persons (12.5%)	13 People (81.25%)
Self-confident	Students are able to make choices in selecting learning activities.	9 People (56.25%)	6 People (37.5%)
	Students dare to express their opinions in choosing learning activities	4 People (25%)	11 People (68.75%)
	Students dare to ask questions if you do not agree	5 People (31.25%)	10 People (62.5%)
Responsible	Students can complete the tasks given by the teacher	11 People (68.75%)	4 People (25%)
Discipline	Students are punctual in carrying out each activity.	9 People (56.25%)	6 People (37.5%)
	Students are able to collect assignments according to the time given.	10 People (62.5%)	5 People (31.25%)
Easy to get along	Students greet people they don't know.	6 People (37.5%)	9 People (56.25%)
	Students can respect their friends' opinions.	7 People (43.75%)	8 People (50%)
	Students can interact with his friends.	11 Person	4 People (25%)
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Four people have shown good and positive things in indicator 6 (controlling emotions). Four students did not disturb their friends during learning activities. The learning atmosphere is very conducive to this. Only nine students showed no resistance when reprimanded by their teacher, and 6 students were not gloomy when their assignments were not ready.

In indicator 7 (Having initiative). Students answer teacher's questions without being pointed out by the teacher is only eight students with the category Appear with a percentage of 50% while the Category does not appear 7 people with a percentage of 43.75%, Students who take the initiative to learn on their own can be seen from the initiative to work on questions given by the teacher only 3 people with the category Appear with a percentage of 18.75% while the Category does not appear 12 people with a percentage of 75%.

Cycle II

Overall, at meetings 1 and 2 of cycle 1, the teacher has taken actions in accordance with the lesson plan that was previously made. Data collection on student learning independence at meetings 1 cycle 2 was conducted on Wednesday, July 26, 2024. Student independence data for meeting 1 cycle 2 can be seen in the table 3.

The results of the study are shown in table 3. assessment of student learning independence can be seen in the learning process. Then it can be seen that

student learning independence in cycle I meeting I, namely: All students showed good and positive things in indicator 1 (Independence on others). All students can do their own assignments only five students with the category Appear with a percentage of 31.25% while the Category does not appear 10 people with a percentage of 62.5%. Students who are independent of others are only two people with the category appears with a percentage of 12.5% while the Category does not appear 13 people with a percentage of 81.25%. Confidence in indicator 2 (self-confidence). Only ten people are able to determine choices in choosing activities with the category Appear with a percentage of 62.5% while the Category does not appear 5 people with a percentage of 31.25%.

Seven people who dare to express their opinions in choosing learning activities with the category Appeared with a percentage of 43.75% while the Category did not appear 8 People with a percentage of 50%, while Students dare to ask if they disagree there are only six people with the Appeared category with a percentage of 37.5% while the Category did not appear 9 People with a percentage of 56.25%. The three indicators of self-confidence appeared because the teacher who taught them was a teacher they did not know. twelve students showed completion of the tasks given by the teacher in indicator 3 (responsible), the remaining three students have not shown good completion of the task.

Table 3. Get Percentage Independence Study Student Cycle II Meeting I

Indicator	Descriptor	Appear	Do not appear
independence	Students can do their own assignments without help from others.	5 People (31.25%)	10 People (62.5%)
	Students are not dependent on others.	2 persons (12.5%)	13 People (81.25%)
Self-confident	Students are able to make choices in selecting learning activities.	10 People (62.5%)	5 People (31.25%)
	Students dare to express their opinions in choosing learning activities	7 People (43.75%)	8 People (50%)
	Students dare to ask questions if you do not agree	6 People (37.5%)	9 People (56.25%)
Responsible	Students can complete the tasks given by the teacher	12 Person (75%)	3 People (18.75%)
Discipline	Students are punctual in carrying out each activity.	10 People (62.5%)	5 People (31.25%)
	Students are able to collect assignments according to the time given.	13 People (81.25%)	2 persons (12.5%)
Easy to get along	Students greet people they don't know.	6 People (37.5%)	9 People (56.25%)
	Students can respect their friends' opinions.	9 People (56.25%)	6 People (37.5%)
	Students can interact with his friends.	11 People (68.75%)	4 People (25%)
Controlling emotions	Students do not disturb their friends while activities are taking place.	5 People (31.25%)	10 People (62.5%)
	Students do not fight back when reprimanded by their teacher.	10 People (62.5%)	5 People (31.25%)
	Students are not depressed when assignments are not finished.	6 People (37.5%)	9 People (56.25%)
Have initiative	Students answer teacher's questions without being pointed at by his teacher.	10 People (62.5%))	5 People (31.25%)
	Students take the initiative to learn on their own, as can be seen from their initiative to answer questions given by the teacher.	5 People (31.25%)	10 People (62.5%))

Ten students showed that they could carry out the experiment activities on time in indicator 4 (discipline), the remaining five students still had to be accompanied when carrying out their tasks. Thirteen students were able to collect assignments according to the time given. This shows the need for action to improve student learning independence. Only six students were able to greet people they did not know in indicator 5 (easy to get along with). Some students were also unable to appreciate the opinions of their friends who gave different explanations. Only eleven students showed that they could interact well with their friends.

Five people have shown good and positive things in indicator 6 (controlling emotions). Five students did not disturb their friends during learning activities. The learning atmosphere is very conducive to this. Only ten students showed no resistance when reprimanded by their teacher, and 6 students were not gloomy when their assignments were not ready.

On indicator 7 (Having initiative). Students answer teacher's questions without being pointed out by the teacher is only ten students with the category Appear with a percentage of 62.5% while the Category does not appear 5 people with a percentage of 31.25%. Students who take the initiative to learn on their own can be seen from the initiative to work on questions given by the teacher, only 5 people with the category Appear with a percentage of 31.25% while the Category does not appear 10 people with a percentage of 62.5%.

Table 4. Get Percentage Independence Study Student Cycle II Meeting II

Indicator	Descriptor	Appear	Do not appear
independence	Students can do their own assignments without help from others.	5 People (31.25%)	10 People (62.5%)
	Students are not dependent on others.	3 People (18.75%)	12 People (75%)
Self-confident	Students are able to make choices in selecting learning activities.	14 People (87.5%)	1 Person (6.25%)
	Students dare to express their opinions in choosing learning activities	7 People (43.75%)	8 People (50%)
	Students dare to ask questions if you do not agree	9 People (56.25%)	6 People (37.5%)
Responsible	Students can complete the tasks given by the teacher	14 People (87.5%)	1 Person (6.25%)
Discipline	Students are punctual in carrying out each activity.	13 People (81.25%)	2 persons (12.5%)
	Students are able to collect assignments according to the time given.	13 People (81.25%)	2 persons (12.5%)
Easy to get along	Students greet people they don't know.	8 People (50%)	7 People (43.75%)
	Students can respect their friends' opinions.	11 Person (68.75%)	4 People (25%)
	Students can interact with his friends.	11 People (68.75%)	4 People (25%)
Controlling Emotions	Students do not disturb their friends while activities are taking place.	7 People (43.75%)	8 People (50%)
	Students do not fight back when reprimanded by their teacher.	14 People (87.5%)	1 Person (6.25%)
	Students are not depressed when assignments are not finished.	10 People (62.5%)	5 People (31.25%)
Have initiative	Students answer teacher's questions without being pointed out by his teacher.	12 People (75%)	3 People (18.75%)
	Students take the initiative to learn on their own, as can be seen from their initiative to answer questions given by the teacher.	4 People (25%)	11 People (68.75%)

The results of the study shown in table 4.8 of the assessment of student learning independence can be seen in the learning process. Then it can be seen that student learning independence in cycle meeting I, namely: All students showed good and positive things in indicator 1 (Independence on others). All students can do their own assignments only five students with the category Appear with a percentage of 31.25% while the Category does not appear 10 people with a percentage of 62.5%. Students who are independent of others are only three people with the category appears with a percentage of 18.75% while the Category does not appear 12 people with a percentage of 75%. Confidence in indicator 2 (self-confidence). Only 14 people are able to determine choices in choosing activities with the category Appear with a percentage of 87.5% while the Category does not appear 1 person with a percentage of 6.25%. seven people who dare to express their opinions in choosing learning activities with the category Appear with a percentage of 43.75% while the Category does not appear 8 people with a percentage of 50%, while students dare to ask if they disagree there are only nine people with the category Appear with a percentage of 56.25% while the Category does not appear 6 people with a percentage of 37.5%. The three indicators of self-confidence appear because the teacher who teaches them is a teacher they do not know. 14 students showed completion of the tasks given by the teacher in indicator 3 (responsible), the remaining one student has not shown good completion of the task.

Thirteen students demonstrated that they could carry out the experimental activities correctly. Time on indicator 4 (discipline), the remaining two students still need to be accompanied when carrying out their tasks. Thirteen students can collect assignments according to the time given. This shows the need for action to improve student learning independence. Only eight people can greet people they don't know on indicator 5 (easy to get along with). Some students also can't appreciate the opinions of their friends who give different explanations. Only eleven people showed that they could interact well with their friends.

Seven people have shown good and positive things in indicator 6 (controlling emotions). Seven students did not disturb their friends during learning activities. The learning atmosphere is very conducive to this. Only 14 students showed no resistance when reprimanded by their teacher, and 10 students were not gloomy when their assignments were not ready.

On indicator 7 (Having initiative). Students answer teacher's questions without being pointed out byThe teacher is only twelve students with the category Appearing with a percentage of 75% while the category Not Appearing is 3 people with a percentage of 18.75%.

Students who take the initiative to learn on their own can be seen from

The initiative to work on questions given by the teacher was only 4 people with the Appear category with a percentage of 25% while the Not Appear category was 11 people with a percentage of 68.75%.

Discussion

Learning independence in class XI SMK Putra Bangsa Bontang in planning cycles I and II. Learning plans must be made by researchers because learning must be planned, and planning. The following were carried out for this research: compiling research tools in the form of a syllabus, compiling lesson plans, making observation sheets for teacher and student activities, asking colleagues to observe student and teacher activities, and compiling observation sheets for both.

Identity, core competencies (KI), basic competencies (KD), indicators, learning objectives, materials learning, learning models, learning steps, learning resources, and assessments are some important elements in a learning plan. The learning process of cycle I begins after the planning stage and lasts until the implementation of learning in the classroom using the Discovery Learning model has been evaluated in order to improve student learning independence. If the goal of student learning independence has not been implemented properly, then better planning is needed in cycle II. So after being implemented using the Discovery Learning model and observed by researchers in cycle I, the researcher will prepare a learning plan in cycle II so that the indicators of student learning independence can be achieved. Before carrying out the action, the researcher will provide motivation and enthusiasm for students in accordance with the material being taught so that it is easy for students to understand.

The researcher also studied the advantages and disadvantages that occurred in the classroom so that during the action in cycle II the teacher could plan to guide students in the Discovery Learning model when teaching well, because the Discovery Learning model has weaknesses that need to be reflected in cycle II. Based on the results, increased learning independence cannot be separated from careful planning.

Through the use of the Discovery Learning model, teachers can improve student learning through Discovery Learning, which in turn will encourage students to become more engaged, more independent and more initiative learners (Hockings et al., 2018). In addition, it can encourage focus and emotions of enjoyment when involved in the learning process. The learning model is a systematic and structured reference used during the learning process.

One of the learning strategies that requires students to be involved is Discovery Learning. Acting out dramas

that are relevant to the subject being studied and based on real-world events (Sagita et al., 2022). In this planning, 100% has been implemented from preparing the syllabus, preparing the lesson plan, preparing oneself, preparing teacher and student activity sheets, and independent learning assessment sheets.

Implementation Independence Study Use Model Learning Discovery Learning

Based on the results of the implementation of cycle I, learning is still quite active when the teacher asks questions to improve students' learning independence (Ilmaknun et al., 2023). However, students are reluctant to express their opinions. There are still some students who lack confidence and initiative in the learning process. In addition, educators are very important for the effectiveness of learning. The teacher has not guided the class well. As a result, cycle I was continued with cycle II because independence was still felt to be lacking.

In cycle II, it has been implemented well, because students have been able to carry out learning according to the lesson plan. During the learning process, many students have met the indicators of student learning independence, such as students who are not dependent on others, are self-confident, responsible, disciplined, sociable, control their emotions and take the initiative (Isnawati et al., 2015). Independene learning is very important for educational development in students level (Murnaka et al., 2023; Riyanto et al., 2020). Based on the results of the implementation in cycle I and cycle II, it can be concluded that learning independence using the Discovery Learning model improves the learning independence of class XI students of SMK Putra Bangsa Bontang.

Improving Student Learning Independence by Using the Discovery Learning Learning Model

The increase in students' learning independence in cycle I totaling 15 people, students who reached the category determined by the researcher, namely cycle I meeting I category quite independent there were 5 people (33.3%), less independent there were 9 people (60%), and very less independent 1 person (6.66%). Cycle I meeting II category quite independent there were 6 people (40%), less independent 8 people (53.33%), very less independent 0 people and Independent there was 1 person (6.66%). By using the Discovery Learning learning model, it can be seen from the average learning independence of class XI students of SMK Putrabangsa Bontang in the action cycle I experienced an increase when compared to the average value in the initial conditions. In the first meeting cycle I, students' learning independence reached 40.83%, and increased in the second meeting 46.25% overall.

Meanwhile, the increase in student learning independence in cycle II amounted to 15 people, cycle II meeting I independent category 4 people (26.66%), quite independent 4 people (26.66%), and less independent 7 people (46.66%). Cycle II meeting II independent category 13 people (86.66%), quite independent 2 people (13.33%), Less independent 0 people and very less independent 0 people. in cycle II first meeting 51.66% increased to 65.83% overall.

Conclusion

Based on the results of the research and discussion, it can be concluded that learning using the Discovery Learning model can improve learning independence in creative product learning. The process of improving learning independence of Class XI students of SMK Putra Bangsa Bontang using the Discovery Learning model is: a. students are expected to stimulate students' curiosity in Creative Product learning, b. teachers provide opportunities for students to explore questions from what they want to know related to the material presented, c. students are given the opportunity to collect information related to the material presented, d. students are given the opportunity to analyze the data they found in the previous stage, e. students provide evidence of the problems and answers they find based on the data that has been processed, f. students conclude the stages that have been carried out until the results of solving the problems they obtain and the teacher helps students conclude by explaining what makes things important in the material.

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