Application of the Problem Based Learning (Pbl) Learning Model during the Covid 19 Pandemic in Increasing Student Activity and Learning Result

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ABSTRACT: The motivation for this research was to find out the improvement of learning activities and learning result of class XII students in the subjects of Creative Products and Entrepreneurship (CPE) at HidayatusSholihin Vocational School by implementing the Problem Based Learning (PBL) learning model. This exploration was a study hall activity research to overcome the problems that exist in the homeroom. The exploration was carried out in three cycles and each cycle reflects on the activities given. The information collection strategy used perception sheets, learning outcomes tests, and documentation. Information inquiry was a quantitative illustrative examination strategy. The results showed that the implementation of learning using the Problem Based Learning (PBL) learning model could further develop learning activities and learning outcomes for class XII students on CPE subjects at HidayatusSholihin Vocational School. This can be seen from the animation of students from the main cycle of 62.01%, which increased to 76.30% in the next cycle and increased to 80.19% in the third cycle. Information on student learning outcomes can be seen from the normal value in pattern I of 76 with a half completeness level and increasing in cycle II, normal class gets 80 with a culmination rate of 64% and increases in cycle III. Normal class got 84 with 86% fulfilment rate.
KEYWORDS: Problem Based Learning (PBL), Learning Activities, Learning Outcomes

I. INTRODUCTION

Schools are needed as a driver to plan quality (Human Resource), in the sense of mastering science, having the right things needed for endurance, and dominating innovation to remain aware of opportunities that will later be valuable for the progress of one's own life. And progress of the State and the general public. As indicated by Law number 20 of 2003 concerning the General Instruction Framework Part 1, Article 1 which states that "Training is a conscious and planned effort to create a learning climate and learning steps so that students effectively develop their potential in the eyes of society, and the state" (Law No. 20 of 2003).

Seeing the state of education in Indonesia, maybe we will continue to think about whether it has progressed or is in decline in the midst of an era that requires everyone to master science and innovation that is developing. Discussing the progress of education in Indonesia, of course, cannot be separated from the importance of teaching Indonesian in the eyes of the world. With a comprehensive schooling, it will certainly give birth to individuals who are intelligent and capable in their fields. So, this country will continue to improve with the presence of the next generation of countries who are qualified in their respective fields.

Indonesia Schooling Improvement List (EDI) based on 2016 information, placing Indonesia in 57th rank from 65 countries in the world (this research was distributed by the Association for Monetary Co-activity and Advancement). "In 2017, Indonesia with a score of 0.603 was in the fifth position in ASEAN locale" (OECD, 2016). This reality is certainly torturous for the Indonesian education and there is a need for developing in all perspectives so that it is relied on to have options to work on the nature of schooling as a whole. Indonesia as a country that educates instructors from neighbouring countries like Malaysia, is currently even below the quality. It is said that the Asian Tiger has now lost its teeth.

In Indonesia itself, there are many things that must be addressed related to the nature of schooling. One of the basic instructive problems that must be addressed is how to educate educators. On a regular basis, there are still teaching methods that are overwhelmed by educators. Generally, in the learning cycle, educators are still very dynamic and turn into learning subjects (Santoso, 2013: 54). This condition makes students not allowed to utilize their capacities. Instructors must be inventive in taking advantage of the uniqueness of teaching by changing the style of performance, utilizing instructional media or changing the design of specified connections to create a beautiful learning environment (Marno and Idris, 2010: 141).

Problems learning outcomes also include problems that are also important. In this study, what is meant by the realization of results is the result of changes in student behaviour as well as behaviour due to learning Creative Products and Entrepreneurship. Perceiving one's learning outcomes is important, because by knowing the results that have been achieved, students will try to further develop their learning outcomes" (Hamdu and Agustina, 2011: 90). Furthermore, improving learning outcomes can be more ideal considering these students feel motivated to further develop the learning outcomes that have been achieved previously. However, in reality, the results of business learning, the Inventive Goods Business actually do not meet the assumptions. Learning outcomes are an important issue that must be considered by an instructor or prospective educator because future schools need planned instructors who can expand students' creativity and activeness in finding material freely so that students find its importance in the learning cycle.

Practice from students is the biggest assets to get the highest score in the lesson. The combination of the ability of educators by utilizing learning and training models from students will result in broader learning achievements, especially learning achievements for Inventive Products and Businesses. Looking at the current reality of the grades for the class increase exams obtained by class XII TKJ students in the odd semester of the 2020/2021 academic year, most students score below the basic fulfilment score and in addition the class gets the lowest normal score, it can be said that student training must expanded in order further develop student achievement in class XII TKJ. Of course, it is the obligation of educators of Innovative Products and Business. Efforts for class XII TKJ students is needed to fix the lack of student learning exercises and further develop student achievement. Therefore, it is necessary to change learning models

and approaches to awaken students so that student inspiration increases and students become enthusiastic in participating in learning Creative and Entrepreneurial Products and in the end get maximum results.

II. LITERATURE REVIEW / THEORETICAL STUDY
Learning model

Soekamto, et al (Trianto, 2009:22) stated that the motivation behind the learning model is an applied structure that describes a deliberate technique in arranging learning meetings to achieve certain learning goals, and serves as an assistant for the originator of learning and instructors in managing training and learning.

The term learning model is a combination of broad and extensive learning model methodologies. One example of the learning model is a problem-based learning model, where a group of students work together dealing with a problem that has been agreed upon and approved by the teacher. When the instructor applies this model, students must have the ability to think fundamentally, have the ability to investigate and the ability within to solve a problem. This learning model can be grouped depending on the learning target. As an illustration, it can depend on the objectives, especially direct learning or appropriate learning models to help students acquire basic skills, for example seeing the need for financial training or other matters related to the use of equipment

Problem Based LearningModel

"Problem-based learning is a learning model that relies on guidelines for using problems as an initial stage to obtain and incorporate new information" (Cahyo, 2013: 283). ""Problem-based learning is a type of learning that relies on a constructivist worldview, which lies in the interaction of learning" (Siregar, 2014: 119).

Issue-based learning or Problem Based Learning (PBL) is one of the inventive learning models that can provide dynamic learning conditions for students. PBL is a learning model that involves students to solve a problem through logical strategy stages so that students can learn information related to the problem while having what it takes to deal with the problem. To achieve ideal learning outcomes, problem-based adaptation must be planned by starting from preparing problems according to the educational program made in the classroom, raising problems from students, equipment that may be needed, and assessments used. Educators who apply this model must develop themselves through the experience dealing with

their study space, through the preparation of instruction or proceeding with formal training.

Another assessment recommends that Problem Based Learning (PBL) is a learning climate in which issues are utilized for learning. That is, before students learn something, they must recognize a problem, regardless of whether it is a genuine problem or a case. Issues are presented so that students find the necessary adaptation needs so that they can deal with the issue (Pusdiklat, 2004). More clearly, DUE-like UI Undertaking (2002) proposes ways that are taken in the PBL technique, to be more specific: (1) The problem of discriminating evidence, (2) Investigation of the problem, (3) Speculation / clarification of methodical reasons, (4) Identity Information. , (5) Distinguishing evidence of known information, (6) Assurance of learning assets, (7) ID of new information, (8) Merging old and new information to apply to problems, (9) Repetition of exercises (10) Inferring what has not been realized, (11) Outline of the results/readiness of the report, (12) Application to the following problems.

Learning activity

Interesting learning process will find ways to give them the freedom to study on their own or to do the exercises on their own. The learning interaction carried out by the homeroom teacher is a movement to change information, mentality, and abilities (Martinis Yamin, 2007: 75). Movement is a vital rule or rule in cooperation in education and learning (Sardiman, 2006: 96).

When learning occurs students can give criticism to the teacher. Sardiman (2006: 100) states that learning exercises are physical and mental exercises. In learning exercises, the two are interrelated. OemarHamalik (2009: 179) states that learning exercises are exercises that students complete in learning exercises.

Learning Result

One of the instructions for achieving the learning cycle is by looking at the learning outcomes achieved by students. As stated by Suprijono (2012:5), learning outcomes are examples of activities, values, gains, perspectives, appreciation and abilities. Meanwhile, according to Sudjana (2009:22), learning outcomes are abilities that are driven by many students in accepting their learning meetings.

Within the framework of general schooling, the breakdown of instructive goals, both curricular and educational goals, utilizes the result-taking structure of Benjamin Blom in (Sudjana, 2009: 23) which broadly divides it into three areas, particularly the psychological field, the emotional area and the psychomotor area.

Classroom Action Research (CAR)

As indicated by Daryanto (2011: 4) "Exploration of Study Room Activities is a research led by educators in classroom action research through full self-reflection with the aim of working on the nature of learning interactions in the study room, so that student learning outcomes can be improved."

Meanwhile, according to WijayaKusumah and DediDwitagama (2010: 9), "Exploring Learning Center Activities is research directed by educators in their groups by compiling, implementing and thinking about collective and participatory activities that are determined to further develop their implementation as teachers. , with the aim that student learning outcomes can increase."

III. RESEARCH METHODS

Population is a speculative area consisting of a collection of individuals or events that have certain qualities which considered and terminated. In this study, the population used was class XII students of SMK HidayatusSholihin academic year 2020/2021. An example is a division or component of population-driven quantities and attributes. In this case, we take class XII TKJ SMK HidayatusSholihin for the 2020/2021 school year as sample. The analysis uses a purposive sampling testing strategy. Thistechnique specialists need applicable examples, by using this technique the researcher only takes the tests necessary for the investigation. In this study, analysis needs samples of class XII students of TKJ SMK HidayatusSholihin for the 2020/2021 academic year.

The subjects of this study were students of class XII TKJ SMK HidayatusSholihin for the academic year 2020/2021, totaling 22 students. The object of this exploration were the exercise and learning outcomes of Creative Products and Entrepreneurship (CPE) subject for students of class XII TKJ SMK HidayatusSholihin through the process of the Problem Based Learning (PBL) model. This exploration was completed in July 2020. This exploration was completed at HidayatusSholihin Vocational High School, class XII TKJ.

The exploration referred is an exploration of classroom action research directed in four phases as follows: preparation, implementation, perception and special reflection. Four phases were used in compiling the cycle in this study. In action research itself, there is no setting for the numbers of cycles that must be completed. According to

SuharsimiArikunto (2012: 75) "the number of cycles depends on the achievement of benchmarks, but should not be below two cycles". This exploration has been carried out in cycle II. However, if the results are not as desired, then it is feasible to continue in the next cycle. To obtain information, the analyst uses perception strategies, oral tests and documentation.

Explanation of the investigation is used to describe the information on student learning outcomes in the test class and control class. The information used in this research was obtained from the results of study and observation.

IV. RESEARCH FINDING
Pre Cycle
Before conducting the activity, to determine students' understanding of CPE subjects, the results of the Pre-test were used. The following are the consequences of the students' pre-test, which can be found in the table below:

Table 1

Student Daily Test of Pre Cycle Results

Pre-Cycle Student Daily Test Results	Score
Lowest Score	40
Highest Score	80
Number of Completed Score	7
Number of Incomplete Score	14
Average	67
Percentage of Completeness (%)	32%

Cycle I
Students' perception of learning process was fulfilled during the implementation of the PBL learning model. Perception was carried out to collect information and measure student actions in the learning cycle. As observers in the implementation of these perceptions, especially CPE subject teachers, the consequences of perceptions were recorded in the perception sheet that has been prepared. The results of paying attention to the actions of TKJ class XII students in the principal cycle are as follows:

Table 2

The results of the observation of the activity of class XII TKJ students in the first cycle

No	Observed indicators	Cycle I
1.	The activeness of students when participating in online teaching and learning activities is evidenced by filling out the attendance list.	68,18%
2.	Asking in the comments column if students have difficulty in understanding the learning video presented by the teacher	77,27%
3.	Student activity in submitting assignments	47,73%
4.	Asking questions after watching the video	51,14%
5.	Answering friends' questions when the other asks	53,41%
6.	Expressing opinions after learning or watching videos	69,32%
7.	Writing learning outcomes	67,05%
	Average	62,01%

Based on the table above, it can be seen that in the meeting of the main cycle, student movement was 62.01%. It tends to be seen that during the interaction of learning in the main cycle, PBL learning model it has not been generally accepted by students, but there has been an

expansion that contrasts with the previous learning model. It is believed that the following meeting will achieve the predetermined achievement. After the implementation of the main cycle was completed, reflection will be carried out to encourage the arrangement to work on the consequences of students' actions until they reach the predetermined instructions.

The method of scoring of student learning outcomes was completed at the end of the cycle 1 meeting.

This test was used to measure student learning outcomes towards understanding the material manufacturable. The type of test chosen was to verbally clarify the substance of the material that has been delivered by the teacher. A video is an oral test that was sent directly to the Edmodo application or directly through the educator concerned. Information on student learning outcomes in the first cycle can be seen in the following table:

Table 3
Student test result of Cycle I

Student Test Results in Cycle I	Score
Lowest Score	67
Highest Score	83
Number of Completed Score	11
Number of Incomplete Score	11
Average	76
Percentage of Completeness (%)	50%

Looking at the table above, it tended to clarify that the learning outcomes of class XII TKJ students in cycle I showed normal post-test results in cycle 1, especially the average score of 76 from 22 students who took the exam. The minimum score was 67 and the highest score was 83. The level of fulfilment was half. Aggregate 11 students were in the total class or more than 75. Meanwhile, 11 students were in the inadequate class or below 75.

Cycle II

The perception of student movement was fulfilled during the implementation of the PBL learning model. Perception was carried out to collect information and measure student movement in the learning cycle. Researchers position themselves as eyewitnesses in the implementation of these perceptions, especially CPE subject teacher. Perceptual side effects were recorded in the perception sheet that has been prepared previously. The side effects of movement perception of class XII TKJ students in cycle II can be seen as follows:

Table 4
The results of the observation of the activity of class XII TKJ students in cycle II

No	Observed indicators	Cycle I
1.	The activeness of students when participating in online teaching and learning activities is evidenced by filling out the attendance list.	81,82%
2.	Asking in the comments column if students have difficulty in understanding the learning video presented by the teacher	80,68%
3.	Student activity in submitting assignments	71,59%
4.	Asking questions after watching the video	49,32%
5.	Answering friends' questions when the other asks	72,73%
6.	Expressing opinions after learning or watching videos	81,82%
7.	Writing learning outcomes	76,14%
	Average	76,30%

Based on the table above, it can be seen that in the main cycle meeting, the students' actions were 62.01% and at the next cycle meeting it was 76.30%. The increase occurred at the second meeting by 14.29%. Based on the results above, it was undeniable that the pattern of the second student movements has made progress instructions. During the learning cycle, it tends to be seen that the PBL learning model was generally welcomed by students. Students focused more when the teacher explained during learning process, asked more questions during learning, and answered more questions during internet learning.

The method of taking the post-test learning outcomes was completed in cycle II. This post-test was used to measure student learning outcomes on material understanding for detailing large-scale manufacturing. The type of post-test used was an oral test by making a video that was sent via Edmodo or WA actually. Information on student learning outcomes in cycle II can be seen below:

Table 5
Student test result of Cycle II

Student Test Results in Cycle II	Score
Lowest Score	74
Highest Score	86
Number of Completed Score	14
Number of Incomplete Score	7
Average	80
Percentage of Completeness (%)	64%

Based on the table above, it can be clarified that the learning result of class XII TKJ students in cycle II showed normal post-test results, it was 80 from 22 students who took the exam. The lowest score was 74 and the highest score was 86. The culmination level was 64%. A total of 14 students were in the total classification or more than 75 while 7 students were in the class less or below 75.

Cycle III

Perceptions of student actions were carried out during the implementation of the PBL learning model. Perceptions were carried out to collect information and measure student movement in learning interactions. As observer in the implementation of this perception, especially CPE subject teacher. Perception side effects were recorded in the perception sheet that has been prepared previously. The continued impact of the perception of motion of class XII TKJ students in cycle III can be seen as follows:

Table 6
The results of the observation of the activity of class XII TKJ students in cycle III

No	Observed indicators	Cycle I
1.	The activeness of students when participating in online teaching and learning activities is evidenced by filling out the attendance list.	85,23%
2.	Asking in the comments column if students have difficulty in understanding the learning video presented by the teacher	84,09%
3.	Student activity in submitting assignments	76,14%
4.	Asking questions after watching the video	77,27%
5.	Answering friends' questions when the other asks	78,41%
6.	Expressing opinions after	84,09%

	learning or watching videos	
7.	Writing learning outcomes	76,14%
	Average	80,19%

Based on the table above, it can be seen that in the main cycle meeting the students' actions were 62.01% and at the next cycle meeting it was 76.30% while the next cycle was 80.19%. The increase occurred at the second meeting by 14.29%, and from the second cycle to the third cycle it increased by 3.89%. Judging from the results above, it was still clear that the pattern of student movement in the third cycle has reached signs of progress. During the learning cycle, it tended to be seen that the PBL learning model was generally welcomed by students. Students focused more when

the teacher explained during learning, asked more questions during learning, answered more questions during internet learning.

The method of taking the post-test learning result was completed in cycle III. This post-test was used to measure student learning result in understanding the material to study large-scale manufacturing. The type of post-test used is an oral test by making a video sent via Edmodo or WA. Information on student learning result in cycle III can be seen below:

Table 7
Student test result of Cycle III

Student Test Results in Cycle II	Score
Lowest Score	77
Highest Score	90
Number of Completed Score	19
Number of Incomplete Score	3
Average	84
Percentage of Completeness (%)	86%

Based on the table above, it can be explained that the learning result of class XII TKJ students in cycle III showed an average post-test in cycle III, it was 84 from 22 students who took the test. The lowest score was 77 and the highest score was 90. The percentage of completeness was 86%.

V. DISCUSSION

In the student action section, the perception evaluation model was estimated through seven instructions as follows: (a) Student actions during web-based learning exercises were confirmed by filling in the attendance list, (b) Willing to ask questions in the comments column if students have difficulty understanding the learning video. Introduced by the instructor, (c) Learning actions when collecting assignments, (d) Asking questions after watching the video, (e) Responding to friends'

questions when someone asks, (f) Expressing point of view after studying or watching recordings, (g) Compiling learning result.

Looking from the consequences of learning movement perception, the first and second patterns at the first and second meetings showed a normal level of student activity of 62.01% which indicated that the standard of achievement of activities had not been met. The learning interactions that were completed in the next cycle went better; this was an effort to improve the reflection brought on in the main cycle. The increase in normal student learning movements in the next cycle is 76.30%. Then it increased again in the third cycle, which was 80.19%. The continued impact of widespread student movement in cycles I, II and III can be shown in the following table:

Table 8
Results of Increasing Student Activeness in Cycle I, II and Cycle III

No	Observed indicators	Cycle I	Cycle II	Cycle III
1.	The activeness of students when participating in online teaching and learning activities is evidenced by filling out the attendance list.	68,18%	81,82%	85,23%
2.	Asking in the comments column if students have difficulty in understanding	77,27%	80,68%	84,09%

	the learning video presented by the teacher.			
3.	Student activity in submitting assignments	47,73%	71,59%	76,14%
4.	Asking questions after watching the video	51,14%	69,32%	77,27%
5.	Answering friends' questions when the other asks	53,41%	72,73%	78,41%
6.	Expressing opinions after learning or watching videos	69,32%	81,82%	84,09%
7.	Writing learning outcomes	67,05%	76,14%	76,14%
	Average	62,01%	76,30%	80,19%

Based on the table above regarding the consequences of the actions of TKJ class XII students in cycles I, II and III, the chart can be described as follows:
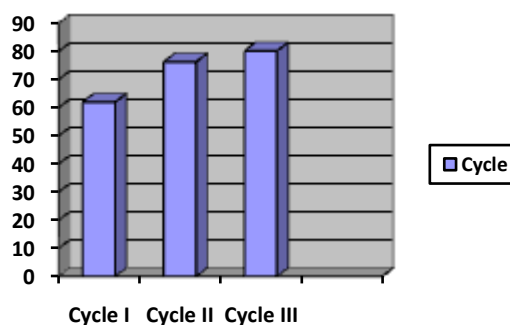

Figure 1
Results of TKJ Class XII Student Activity in Cycle I, II and Cycle III

Based on the table above, it is known that the main clue is the activeness of students when participating in web-based learning (on the web). In the implementation of the primary cycle, the main meeting of students who were effective in participating in internet learning was 68.18%. However, the activeness of students when following the next cycle increased to 81.82%, the increase from cycle I to cycle II was 13.64%. Furthermore, it developed again during the implementation of the third cycle by 85.23%, the increase from the second cycle to the next cycle was 3.41%.

The next is perspective that needs to be asked in the comments section if students have difficulty understanding the learning recording introduced by the teacher. In the main cycle, the figure was 77.27%. While in the next cycle there was an increase of 80.68% which was an increase from the main cycle to the second cycle was 3.41%. Meanwhile, during the implementation of the third cycle, it also increased by 84.09%, then there was an increase of 3.41%.

The third perspective is animation of students as they submit assignments. In the implementation of the main cycle, the number of students who were effective in participating in web-based learning is 47.79%. However, student animation when following the next cycle increased to 71.59%, the increase from cycle I to cycle II was 23.86%. Moreover, it grew again during the implementation of the third cycle by 76.14%, the expansion from the second cycle to the next cycle was 4.55%.

The fourth point of view is asking questions after watching the video. In the main cycle, the figure is 51.14%. While in the next cycle the figure was 69.32% which is an expansion from the main cycle to the second pattern of 18.18%. While the implementation of the third cycle also increased by 77.27%, resulting in an increase of 7.95%.

The fifth indicator is answering a friend's question when students asked question during online learning. In the implementation of the main cycle, percentage of students who were effectively interested in learning trough the internet or online was 53.41%. However, the activeness of students when following the next cycle increased to 72.73%, the increase from the main cycle to the next cycle was 19.31%. Furthermore, it increased again during the implementation of the third cycle by 78.41%, the increase from the second cycle to the next cycle was 5.68%.

The 6th angle expresses the point of view after studying or watching a recording. In the primary cycle, the figure was 69.32%. While in the next cycle the figure was 81.82%, increased from the main cycle to the second cycle by 12.5%. While the implementation of the third cycle also increased by 84.09%, resulting in an increase of 2.27%.

The seventh perspective is compiling learning outcomes. In the implementation of the main cycle of effective student associations participating in internet or online learning was 67.05%. However, the animation of students while following the next cycle increased to 76.14%, the increase from cycle I to cycle II was 9.09%. Furthermore, there was still no improvement in the implementation of the third cycle, especially 76.14%.

Looking from the graph of student actions in cycles I, II and III, it tended to be concluded that an increase occurred from cycles I, II and III. Itcan be said that the actions taken by each marker have made a normal standard of progress. Students in cycle II have begun to adjust to the learning model used. Students started to ask questions when there were obstacles they face. In addition, students were also used to checking and trading data with the teacher who collect them. In doing the assignments given by the teacher, every student in the class was enthusiastic about doing it. Thus, this PBL learning model can build student learning exercises.

Based on the results of research, the use of Problem Based Learning in class XII TKJ can further develop information on student learning outcomes in CPE subjects. This can be seen by the increase in student learning outcomes through pre-cycle learning outcomes tests, cycles I, II, and cycle III. The intricacies of information on student learning outcomes can be found below:

Table 9
Student Learning Result through Pre-Cycle Test, Cycle I, II, and Cycle III

Student Learning Result	Pre-Cycle	Cycle I	cycle II	Cycle III
Lowest Score	40	**67**	**74**	**77**
Highest Score	80	**83**	**86**	**90**
Number of Completed Students	7	**11**	**14**	**19**
Number of Incomplete Students	14	**11**	**7**	**3**
Average	67	**76**	**80**	**84**
Percentage of Completeness (%)	32%	**50%**	**64%**	**86%**

Based on the table above, in the pre-cycle before the post-test was carried out there were 14 students who had not completed, 7 students who finished with the best score of 80 and the lowest score was 40. In the first cycle there were 11 students who did not complete, 11 students who finished with a score of The largest score was 88 and the lowest score was 67. While the second meeting of student learning outcomes was better where there were 7 students who had not completed, 14 students who completed with the highest score of 86 and the lowest score of 74. Moreover, in the third cycle the learning outcomes the student information turned out to be getting better where there were 3 students who had not finished, 19 students had finished with the highest score of 90 and the lowest score of 77.

Based on the table above regarding the learning result of class XII TKJ students in the pre-cycle, cycle I, II and cycle III, it can be broadly described as follows:
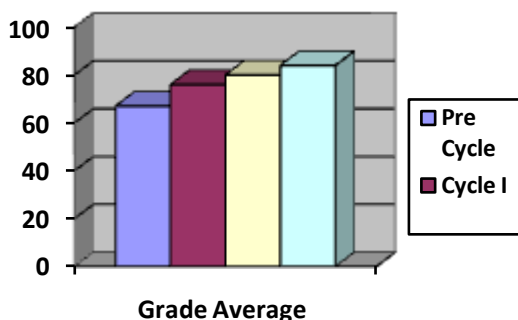

Figure 2

Learning Result of Class XII TKJ Students in Pre-Cycle, Cycle I, II and Cycle III

The picture above shows that the normal learning result of class XII TKJ students in the pre-cycle were 67 while in the PBL learning cycle it increased to 76 and in the second cycle it increased again to 80 and in the third cycle it increasedagain to 84. In the pre cycle to the primary cycle there was an increase to 9. While in the main cycle to the second cycle there was an increase 4 point. While in the second cycle to the third cycle there was an increase of 4.

For the time being, the increase in the level of student learning result of class XII TKJ in the pre-cycle, cycle I, II and cycle III can be illustrated by the following graph:
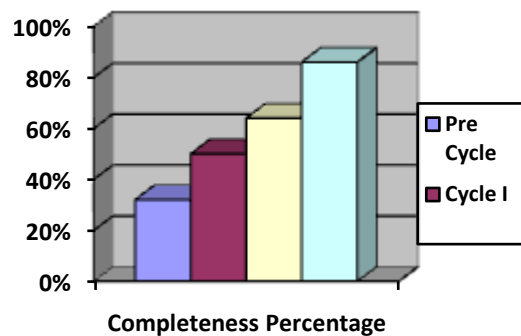

Figure 3
Increasing the Percentage of Complete Learning Outcomes of Class XII TKJ Students in Pre-Cycle, Cycle I, II and Cycle III

The level of fulfilment of student learning outcomes shown in the picture above was in the pre-cycle by 32%, then it increased in the first cycle to half and in the second cycle it increased again to 64% and in the third cycle it increased again to 86%. In the pre-cycle to the primary cycle, there was an increase of 18%. While in the primary cycle to the second cycle there was an increase of 14%. While in the second cycle to the third cycle there was an increase of 22%.

In addition to the level of student learning completeness which was quite ideal in cycles I, II and II, when compared with the basic values (pre-cycle), the culmination level in cycles I, II and II uses the PBL learning model in each group. Cycles showed the expansion of the results. Knowing student information and according to achievement markers in this study, exactly half in the main cycle, 64% in the next cycle and 86% in the third cycle. Thus, this PBL learning model can further develop student information learning result.

CONCLUSION
The application of the Problem Based Learning model can build learning activity for class XII TKJ students at the HidayatusSholihin Professional School on CPE subjects. This depends on the observation information of all the markers seen in the primary cycle with a student learning activity level of 62.01% and developing in the second pattern of 76.30% and growing again in the third cycle with a student action rate of 80.19%.

The application of the Problem Based Learning model can further develop the learning outcomes of class XII students of the HidayatusSholihin Vocational School in CPE subjects. This depends on normal student learning result in the pre-cycle of 67 with a fulfilment rate of 32%. In the main cycle, normal student learning result were 76. It was a half completeness level. Moreover, in the next cycle the normal student learning result was 80 with a 64% completeness rate. While in cycle III, normal student learning result was 84 with a completeness rate of 86%.

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