

Application Of Problem Based Learning (Pbl) Model To Increase Students ' Learning Motivation In The Material Of Life Diversity Class X Sma Muhammadiyah 1 Gresik.

Ainul Muttaqin, S.P., M.Pd¹

¹ Indonesia

INFORMASI ARTIKEL

Keywords:

problem-based learning;
learning motivation;
diversity of living beings.

ABSTRAK

The phenomenon of declining student motivation, especially after the Covid-19 pandemic, is a prominent problem. Students experience a transition from distance learning coupled with the absence of social interaction for a long time. The expected goal is to determine the increase in student learning motivation through problem based learning (PBL) learning models and high-level thinking skills of students. This research was carried out at SMA Muhammadiyah 1 Gresik in September 2022. The method used is to use the observation of learning activities. From the results of the study it can be concluded that (1) most students can understand the concept of diversity of living things by using PBL learning model. (2) The attitude shown by students as a whole has been in the form of critical reasoning, cooperation, and independence. (3) in the learning process, students are able to demonstrate skills in independently compiling tables on plant diversity at the level of genes and species in schools, planning actions and choosing the right plants. (4) PBL learning Model with TPACK approach is felt very happy by students because they can learn to use devices, can learn to solve problems, and have experience through observation activities.

Ainul Muttaqin, S.P., M.Pd

Indonesiaia ainul@smami1gresik.sch.id

INTRODUCTION

The phenomenon of declining student motivation, especially after the Covid-19 pandemic, is a prominent problem. Students experience a transition from distance learning coupled with the absence of social interaction for a long time. As a result, students take a long time to refocus on face-to-face learning and direct social interaction. This is as stated by Rosita, M. (2021) which states that the challenges of teachers in teaching in the post-covid-19 pandemic include (1) the decline in the positive traits of students, (2) the number of irrelevant concepts not mastered by students, and (3) students are lazy and their learning spirit decreases.

Factual conditions that arise certainly provide challenges for teachers to restore the spirit of student learning. Teachers must be able to determine the main problems to be solved through learning strategies that will be applied. Not to mention the demands of accelerating students' numeracy literacy skills which is also a homework that is certainly not light.

Strategies in order to increase student learning motivation must be mastered by teachers. Concerns about lost learning must be answered thoroughly by teachers through learning models that match the

characteristics of students. Teachers should no longer make themselves the sole source of learning. Laisa, I.S.A., et al (2022) stated that in reality the teacher teaches according to his desired learning style without caring about the student as a learning subject and indirectly dictating the student's learning style to match the teacher's learning style. This problem indirectly causes low student learning outcomes.

The problem of teachers' ability to manage learning is a very important study because the steps taken by teachers determine the success of learning. As stated by Nasution, H., Melvariani, S.B., and Muhammad, D. (2019) that the learning steps taken by teachers do not invite students to think creatively, so that student learning outcomes tend to decrease. according to Laspitorini, S. (2019) biology is still considered a science that only favors the memorization of latin terms that are difficult for students to understand, the material is only studied through theory, images and microscopic observations.

Learning model problem based learning (PBL) is one model that can be a solution in providing fun learning for students. Problem-Based Learning (PBL) can improve understanding, improve problem-solving skills, improve the ability to apply even biological concepts, can increase positive attitudes, and improve students' critical thinking skills towards students' biological concepts (Fitri, 2016). Even Noma, L.D. Baskoro, AP, and Suwarno. (2016) stated that the application of PBL model can improve high level thinking ability in biology class X students. Another opinion from Kunandar (2008) states that problem-based learning is a learning approach that uses real-world problems as a context for students to learn about critical thinking and problem-solving skills, as well as to acquire important knowledge and concepts from learning materials.

Selection of material diversity of living things is a material at stage E or Class X. In this material, students are invited to examine contextually the problems that exist in their immediate environment, namely the school environment. Students are invited to understand the concept of the level of diversity of living things and problems that have the potential to occur in the future. In addition, students are invited to provide the best solution in order to preserve the living creatures around them.

Based on the description above, it is necessary to convey the results of the application of the problem based learning (PBL) model in biology class X in SMA Muhammadiyah 1 Gresik material diversity of living things in increasing student learning motivation. The expected goal is to determine the increase in student learning motivation through problem based learning (PBL) learning models and high-level thinking skills of students.

METHODS

This research was carried out at SMA Muhammadiyah 1 Gresik in September 2022. The method used is to use the observation of learning activities with indicators of student learning outcomes, attitude assessment data, skills assessment data and reflection of learning outcomes.

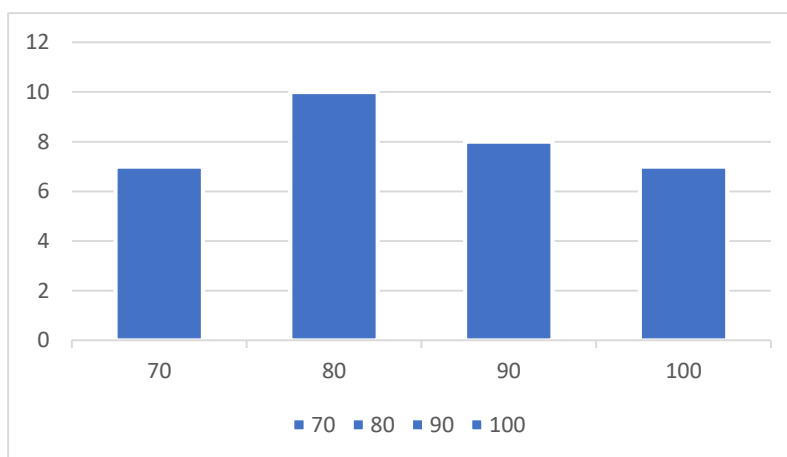
Attitude and skill assessment Data were collected during the learning process. While the results of student learning and reflection are taken from the results of the assessment of knowledge at the end of learning.

RESULTS AND DISCUSSION

The results of this study through the assessment of knowledge understanding, attitude assessment through Pancasila student profiles, and assessment of process skills, as well as post-learning reflection. The assessment of knowledge comprehension is shown in Table 1 and Graph 1 below.

Table 1. Distribution Of Knowledge Comprehension Test Scores

NO	VALUE DISTRIBUTION	QUANTITY
1	70	7
2	80	10
3	90	8
4	100	7
	QUANTITY	32

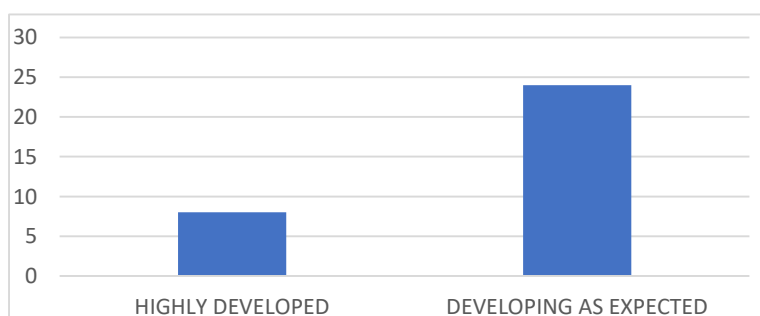


Graphic 1. Distribution of Knowledge Comprehension Test Scores

Looking at the data in Table 1 and graph 1, it can be seen that out of 32 students, there were 7 students who scored 70, then 10 students scored 80, 8 students scored 90, and 7 students scored 100. From this it can be seen that if the lower limit of the value is 75, then there are 78% who are above the lower limit of the value, and 22% who are below the lower limit of the value. It can be said that most learners understand the concept of diversity of living things.

Table 2. Distribution of Attitude Score (Pancasila Learner Profile) Critical Reasoning Element

NO	VALUE DISTRIBUTION	QUANTITY
1	HIGHLY DEVELOPED	8
2	DEVELOPING AS EXPECTED	24
	QUANTITY	32

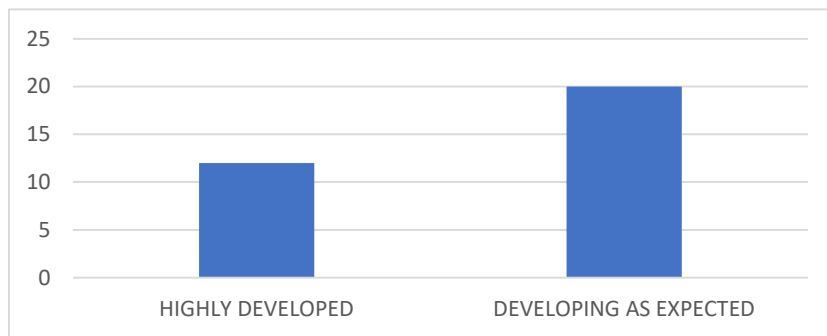


Graphic 2. Distribution of Attitude Score (Pancasila Learner Profile) Critical Reasoning Element

In addition to comprehension tests, student attitudes were also measured using a dimensional analysis of Pancasila learner profiles. This is because in this study the curriculum used is an independent curriculum. The results of the data are shown in Tables 2, 3, and 4 and graphs 2, 3, and 4. In the table and graph 2 elements measured are critical reasoning, where the highly developed category of 8 students and developed as expected amounted to 24 students. From these data, it can be concluded that students in general have developed an attitude of critical reasoning.

Table 3. Distribution of Attitude Score (Pancasila Learner Profile) Cooperation Element

NO	VALUE DISTRIBUTION	QUANTITY
1	HIGHLY DEVELOPED	12
2	DEVELOPING AS EXPECTED	20
	QUANTITY	32



Graphic 3. Figure Distribution of Attitude Score (Pancasila Learner Profile) Cooperation Element

In the table and graph 3 elements of the attitude assessed is cooperation. In the data there are 12 students who received the title of highly developed, and 20 students developed as expected. From this it can be concluded that in general, students are able to show a good attitude of cooperation.

Table 4. Distribution of Attitude Score (Pancasila Learner Profile) Independent Element

NO	VALUE DISTRIBUTION	QUANTITY
1	HIGHLY DEVELOPED	8
2	DEVELOPING AS EXPECTED	24
	QUANTITY	32

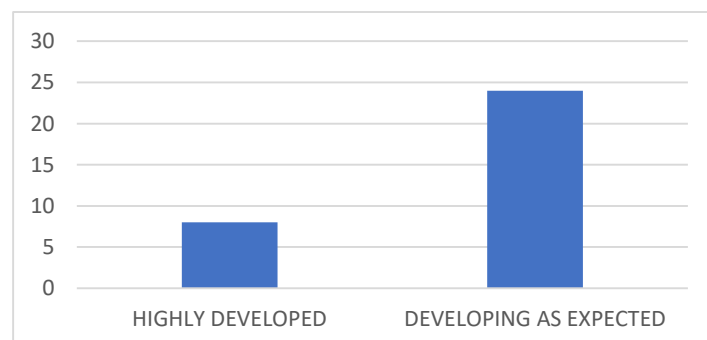


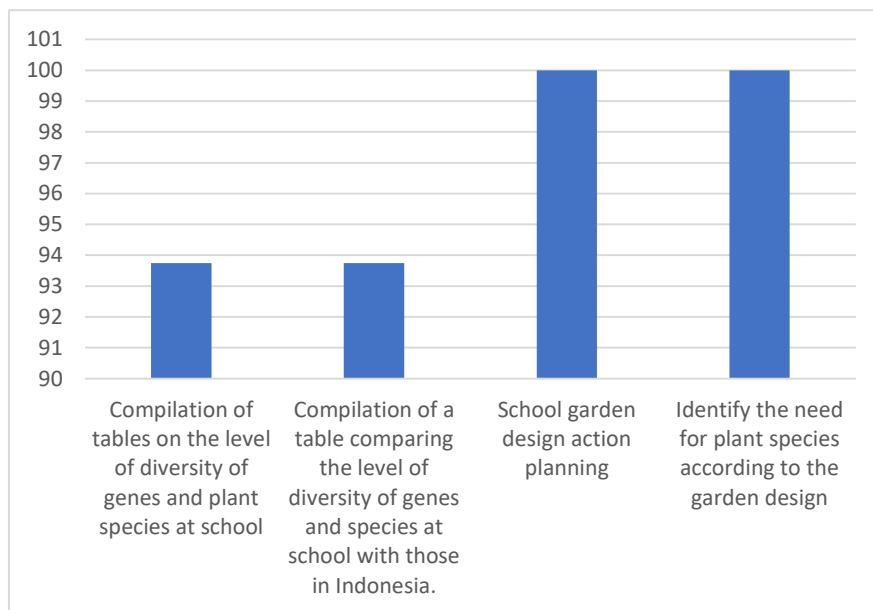
Figure 4. Figure Distribution of Attitude Score (Pancasila Learner Profile) Independent Element

In the third attitude data, the element of independence is shown in table and graph 4. From the table and graph 4 data generated 8 students with highly developed categories and 24 students developed as expected. This means that all students have shown an independent attitude.

After the assessment data understanding of knowledge and Attitudes, data on students ' skills in carrying out the process of activities consisting of process skills such as preparation of tables, action planning and selection of plant species are presented in tables and graphs 5. While presentation skills and mastery of technology are shown in tables and graphs 6.

Table 5. Skill Score Distribution

NO	VALUE DISTRIBUTION	PERCENTAGE (%)
1	Compilation of tables on the level of diversity of genes and plant species at school	93,75
2	Compilation of a table comparing the level of diversity of genes and species at school with those in Indonesia.	93,75
3	School garden design action planning	100
4	Identify the need for plant species according to the garden design	100

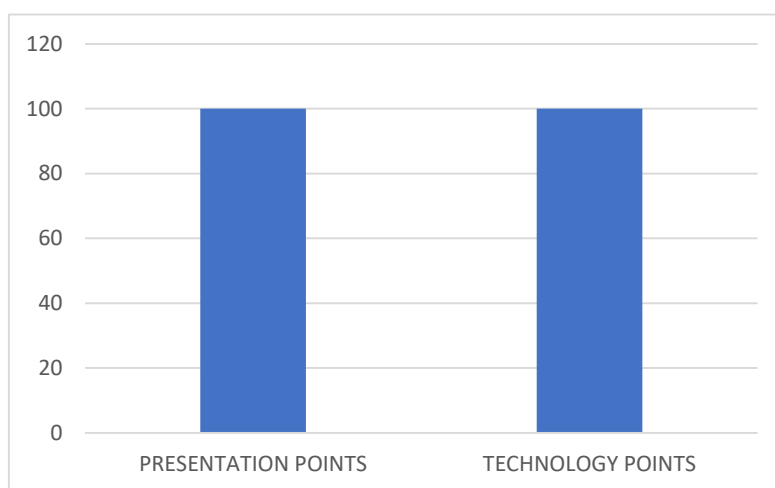


Graphic 5. Skill Score Distribution

In the observation of process skills shown in table and graph 5, the results showed that 93.75% were able to compile a table of the level of diversity of genes and plant species in schools, 93.75% of students were able to compile a comparison table of the level of diversity of genes and species in schools with those in Indonesia, while in action planning skills of school garden design and identification of plant type needs in accordance with garden design both obtained 100%. From the above data it can be concluded that all students have been able to demonstrate good process skills.

Table 6. Distribution of Presentation and Technology Mastery Scores

NO	VALUE DISTRIBUTION	PERCENTAGE (%)
1	Compilation of tables on the level of diversity of genes and plant species at school	100
2	Identify the need for plant species according to the garden design	100

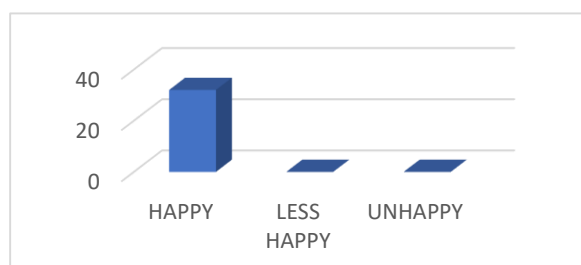


Graphic 6. Distribution of Presentation and Technology Mastery Scores

On presentation skills and mastery of technology seen in tables and graphs 6 it can be seen that all students have been able to make presentations and master technology.

Table 7. Learners' Feelings in Learning

NO	VALUE DISTRIBUTION	QUANTITY
1	HAPPY	32
2	LESS HAPPY	0
3	UNHAPPY	0



Graphic 7. Learners' Feelings in Learning

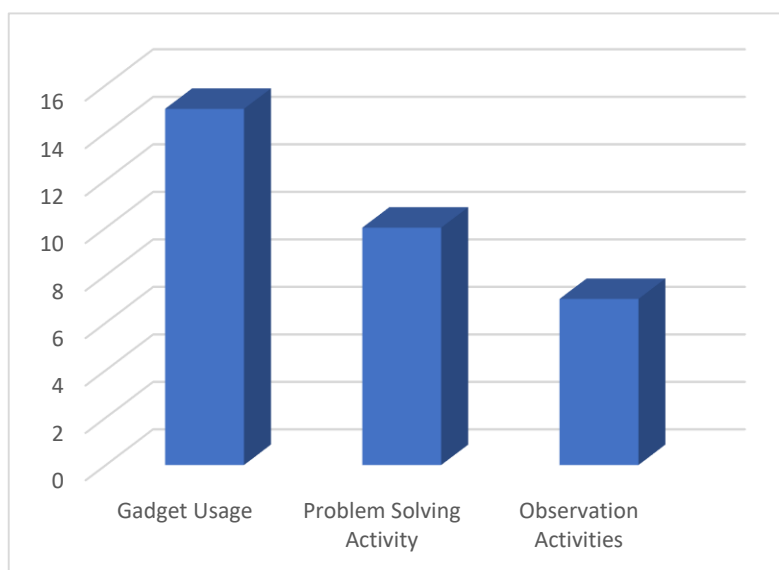
In tables and graphs 7 about the results of reflection that measures the feelings of students through questionnaires distributed showed the results of 100% of students expressed happy to follow the

learning by using the model of problem based learning (PBL) on the material of the diversity of living things.

In tables and graphs 8 mentioned 15 students happy because learning using gadgets, then 10 students happy because invited to solve problems, and 7 students happy because doing observation activities.

Table 8. Causes of Feeling Good During Learning

NO	VALUE DISTRIBUTION	QUANTITY
1	Gadget Usage	15
2	Problem Solving Activity	10
3	Observation Activities	7



Graphic 8. Causes of Feeling Good During Learning

CONCLUSION

From the results can be concluded that:

1. Most students can understand the concept of diversity of living things by using PBL learning model.
2. The attitude shown by students as a whole has been in the form of critical reasoning, cooperation, and independence.
3. In the process of learning, students are able to demonstrate skills in independently compiling tables on the diversity of plants of the gene and species level at school, planning actions and choosing the right plants.
4. PBL learning Model with TPACK approach is felt very happy by students because they can learn to use devices, can learn to solve problems, and have experience through observation activities.

ACKNOWLEDGEMENTS:

I would like to express my gratitude to the entire family of SMA Muhammaidyah 1 Gresik who have provided support until the completion of this research and Article. In addition, it is certainly a family

that continues to provide support. Of course, the University of Muhammadiyah Gresik also facilitated this article so that I could present it in the International Conference on Lesson Study.

CONFLICT OF INTEREST

In this research and article, the author states that there is no conflict of interest because the role of the author as the head of SMA Muhammadiyah 1 Gresik has an obligation to continue to conduct studies on the effectiveness of learning patterns in schools so that educational services at SMA Muhammadiyah 1 Gresik can be fulfilled properly, especially in meeting the interests of students.

REFERENCES

- Fitri. 2016. Penerapan Model Pbl Pada Pelajaran Biologi Untuk Meningkatkan Kompetensi Dan Kemampuan Berpikir Kritis Siswa Kelas X. BIOSFER, J.Bio. & Pend.Bio. Vol.1, No.1 : 34-42
- Laia, I,S,A, dkk. 2022. Pengaruh Strategi Pembelajaran Berdiferensiasi Terhadap Hasil Belajar Peserta Didik SMA Negeri 1 Lahusa. Jurnal Ilmiah Wahana Pendidikan, 8 (20): 314-321
- Laspitorini, S. 2019. Peningkatan kreativitas belajar biologi menggunakan model discovery learning pada siswa sekolah menengah atas. Tajdidukasi (Jurnal Penelitian & Kajian Pendidikan Islam). Vol. 9, No. 2 : 88-95
- Nasution,H., Melvariani, S.B., dan Muhammad, D. 2019. Upaya Meningkatkan Kreativitas Biologi Siswa Melalui Penerapan Model Problem Based Learning (Pbl) Di Sma Negeri 1 Sipirok. PeTeKa (Jurnal Penelitian Tindakan Kelas dan Pengembangan Pembelajaran). Volume 2 Nomor 1:30-38
- Noma, L.D. Baskoro, A.P., Dan Suwarno. 2016. PBL Untuk Meningkatkan Kemampuan Berpikir Tingkat Tinggi Siswa Kelas X SMA. BIOEDUKASI. Volume 9, Nomor 2 : 62-66
- Rosita, M., 2021. Tantangan Guru Mengajar Pasca Pandemi Covid-19. https://www.kompasiana.com/ruangkita2598/61715ded06310e2de74c0822/tantangan-guru-mengajar-pasca-pandemi-covid-19?page=4&page_images=2. Diakses 20 Januari 2023