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Analysis of the Implementation of Remedial Biology Learning in the Kurikulum Merdeka

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Abstrak: Keterlaksanaan pembelajaran remedial sering kali dilakukan tidak sesuai dengan tahapan-tahapan pembelajaran remedial yang sesungguhnya. Sering kali guru hanya memberikan soal yang sama untuk remedial sehingga peserta didik tidak sepenuhnya dapat memahami materi yang telah diajarkan, seharusnya guru memberikan pembelajaran remedial yang sesuai dengan kesulitan belajar peserta didik. Penelitian ini dilakukan untuk melihat keterlaksanaan pembelajaran remedial pada kurikulum merdeka pada 12 SMAN Kecamatan Kabupaten Lampung Tengah. Metode yang digunakan yaitu kualitatif deskriptif dengan teknik *purposive* sampling. Hasil penelitian Analisis Keterlaksanaan Pembelajaran Remedial Biologi Pada Kurikulum Merdeka di SMA Negeri Pada 12 Kecamatan Kabupaten Lampung Tengah sudah melaksanakan serta mengimplementasikan pembelajaran remedial dengan kategori baik. Analisis data yang sudah didapatkan pada bagian pembahasan bisa ditarik kesimpulan bahwa dari 4 indikator guru pada tahap pembelajaran remedial yaitu mengidentifikasi permasalahan pembelajaran remedial, membuat rancangan pembelajaran remedial, melaksanakan pembelajaran remedial, dan mengevaluasi proses dan hasil pembelajaran remedial menunjukkan kriteria baik. Sedangkan pada 15 pernyataan peserta didik pada pelaksanaan pembelajaran remedial Biologi menunjukkan skor rata-rata kategori baik
Kata kunci: Biologi; Kurikulum Merdeka; Pembelajaran Remedial.

Abstract: The implementation of remedial learning is often carried out not in accordance with the actual stages of remedial learning. Often teachers only give the same questions for remedial purposes so that students cannot fully understand the material that has been taught. Teachers should provide remedial learning that is appropriate to students' learning difficulties. This research was conducted to see the implementation of remedial learning in the kurikulum merdeka at 12 high schools in Central Lampung District. The method used is descriptive qualitative with purposive sampling technique. The results of the research analysis of the feasibility of remedial biology learning in the kurikulum merdeka in State High Schools in 12 sub-districts of Central Lampung Regency have carried out and implemented remedial learning in the good category. Analysis of the data obtained in the discussion section can be concluded that from the 4 indicators of teachers at the remedial learning stage, namely identifying remedial learning problems, creating remedial learning plans, implementing remedial learning, and evaluating the process and results of remedial learning, they show good criteria. Meanwhile, 15 student statements regarding the implementation of Biology remedial learning showed an average score in the good category.
Keyword: Biology; Kurikulum Merdeka; Remedial Learning.

1. Introduction

Education has a big influence on the life of a country, including the life of Indonesia [1]. The existence of adequate educational facilities with global educational demands will certainly produce quality individuals [2]. In education, of course there is a system that acts as a regulator for the implementation of education according to plan, this system is called the educational curriculum.

The educational curriculum is a dynamic system in accordance with global developments and is the philosophy of a nation [3]. Indonesia has implemented its educational curriculum since 1947 so that the implementation of the kurikulum merdeka has faced various changes and improvements [4]. The Independent Learning Curriculum is a new policy program from the Ministry of Education and Culture of the Republic of Indonesia which will be implemented in 2021 [5]. In the kurikulum merdeka the names of learning tools have changed. These changes include Core Competencies (KI) or Basic Competencies (KD) becoming Learning Outcomes (CP), Syllabus becoming Learning Objectives Flow (ATP), Learning Implementation Plans (RPP) becoming Teaching Modules [6]. The implementation of the kurikulum merdeka is now starting to be evenly distributed, especially for state schools in all provinces in Indonesia, including Lampung Province.

Lampung Province has implemented an kurikulum merdeka since the 2021 academic year [5]. Implementation of the kurikulum merdeka has not been carried out in every school in Lampung Province. Because the implementation of the kurikulum merdeka is carried out in stages looking at the readiness of schools, teachers and learning support facilities [7].

Learning is part of the interaction process between teachers and students which aims for students to gain knowledge [8]. Comfortable and enjoyable conditions in the learning process are something that must be created because they influence students' learning attractiveness [9]. To create enjoyable learning, teachers are required to be creative and innovative both in terms of delivery and

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in terms of providing learning media [10]. Students' success cannot be separated from the sciences that support education, one of which is Biology Science.

Biology is a science that studies organisms and life that play a role in everyday life. Biology has an important role in the curriculum at the Senior High School (SMA) level, however Biology science adapts to the development of scientific literacy so that if the material delivered is not appropriate then the material presented will not be optimal [11]. Carrying out evaluations at the end of learning is the teacher's obligation to determine students' understanding of the material presented [12]. If there are students who still have difficulty understanding the material, teachers are expected to implement a remedial learning program [13].

Remedial learning is an educational service provided to students to improve learning achievement to achieve the specified criteria for completion [14]. Implementing remedial learning does not involve repeating questions that have been worked on, but teachers analyze learning problems for students so they can find out material that has not been mastered [15]. Providing remedial learning can use media that combines teaching materials with technology to make it more interesting and reduce the level of learning incompleteness [16].

Based on the description and urgency of the problem above, research was conducted with the title "Analysis of the Implementation of Biology Remedial Learning in the kurikulum merdeka" with the aim of finding out how remedial learning is implemented for Biology subjects in the kurikulum merdeka at the high school level in 12 Districts of Central Lampung Regency. The reason for taking 12 schools from 24 schools in Central Lampung Regency is because this research is preliminary research regarding remedial learning of Biology subjects in the kurikulum merdeka at SMAN, and researchers hope that for further research they will conduct research at SMAN in unexplored subdistricts in Central Lampung Regency.

2. Research Methods

The research method uses descriptive qualitative. This research is preliminary or first research on the implementation of remedial learning in the independent curriculum. The total number of sub-districts in Central Lampung Regency is 28 sub-districts with 24 high schools. Of the 12 selected SMANs, SMANs have implemented the kurikulum merdeka. The 12 public schools include: SMAN 1 Seputih Agung, SMAN 1 Gunung Sugih, SMAN 1 Terbanggi Besar, SMAN 1 Punggur, SMAN 1 Seputih Mataram, SMAN 1 Seputih Raman, SMAN 1 Kotagajah, SMAN 1 Seputih Surabaya, SMAN 1 Way Pengubuan, SMAN 1 Terusan Nunyai, SMAN 1 Rumbia, and SMAN 1 Bandar Surabaya.

It is recommended for future researchers to research some of the high schools in Central Lampung Regency that have not yet been researched. Data collection was carried out using a closed-type questionnaire regarding the implementation of remedial learning given to teachers and students who carried out remedial learning. Students who are categorized as carrying out remedial learning are those who get a score below the Learning Goal Achievement Criteria (KKTP) with a score below 75.

The population of the 12 high schools in this study were Biology teachers who carried out remedial learning in the independent curriculum and students who carried out remedial learning. Using sampling technique purposive sampling with method not random, namely samples taken based on the objectives of the researcher, where students only carry out remedial learning. The data collection instrument is a closed type questionnaire. Questionnaire sheets were given to teachers and students, with 22 statements for teachers and 15 statements for students. The data was taken to determine the implementation of remedial learning at SMAN.

The data analysis technique uses percentage calculations from the scores obtained, with the following calculation formula:

Index formula % = $\frac{T\ x\ Pn}{Y}\ x\ 100$

Note: T: Total number of respondents who voted; Pn: Choice from likert score; and Y: Ideal Skor [17].

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The results of the above calculations will be interpreted as scores based on the following table.

Table 1. Interpretation of Likert Scale [17]

Scale Percentage (%)	Category
0 % - 19,99 %	Very less
20 % - 39,99 %	Not enough
40 % - 59,99 %	Enough
60 % - 79,99 %	Good
80 % - 100 %	Very Good

Table 2. Teacher Indicators at the Remedial Learning Stage[15]

No	Indicator
1	Identifying remedial learning problems
2	Make a remedial learning plan
3	Implement remedial learning
4	Evaluate the process and results of remedial learning

The indicators above are used to make statements about the remedial learning stages that will be used for Biology teachers at 12 high schools in Central Lampung District.

3. Results and Discussion

Based on the results of research carried out at 12 state high schools, it can be described as follows.

Table 3. Percentage of Implementation of Remedial Learning by Biology Teachers at SMAN in 12 Districts of Central Lampung Regency

No	Teacher	Percentage	Category
1	Teacher at SMAN 1 Seputih Agung	65 %	Good
2	Teacher at SMAN 1 Gunung Sugih	79 %	Good
3	Teacher at SMAN 1 Terbanggi Besar	77 %	Good
4	Teacher at SMAN 1 Punggur	72 %	Good
5	Teacher at SMAN 1 Seputih Mataram	66 %	Good
6	Teacher at SMAN 1 Seputih Raman	75 %	Good
7	Teacher at SMAN 1 Kotagajah	67 %	Good
8	Teacher at SMAN 1 Seputih Surabaya	75 %	Good
9	Teacher at SMAN 1 Way Pengubuan	65 %	Good
10	Teacher at SMAN 1 Terusan Nunyai	65 %	Good
11	Teacher at SMAN 1 Rumbia	75 %	Good
12	Teacher at SMAN 1 Bandar Surabaya	75 %	Good

Based on **Table 3**, the highest percentage of Biology teacher remedial learning implementation was obtained by SMAN 1 Gunung Sugih at 79% in the good category. This is motivated by the teacher's accuracy in carrying out

learning with the steps 1) identifying remedial learning problems, 2) creating a remedial learning plan, 3) implementing remedial learning, and 4) evaluating the process and results of remedial learning [14]. The lowest percentage in the implementation of remedial learning for Biology teachers was obtained by 3 schools, namely SMAN 1 Seputih Agung, SMAN 1 Way Pengubuan, and SMAN 1 Terusan Nunyai at 65% in the good category. This is motivated by the teacher's lack of accuracy in carrying out diagnoses according to existing steps and procedures so that there are things that must be improved in the future [18].

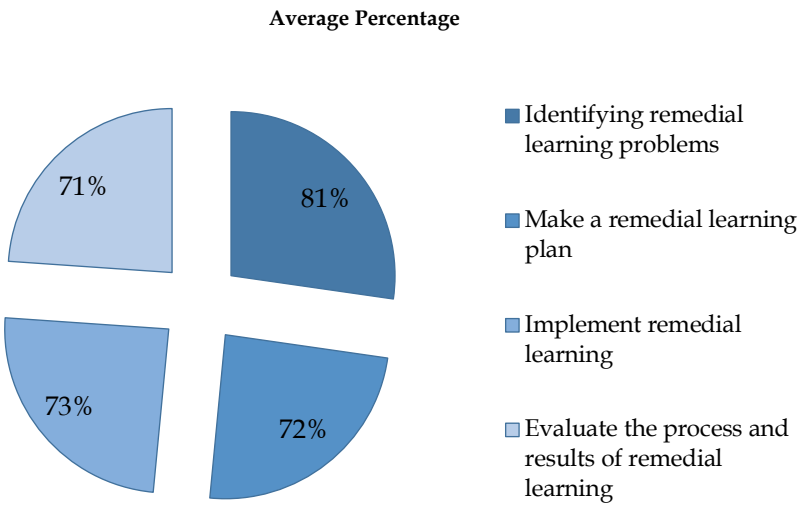

Figure 1. Biology teacher remedial learning implementation data

Based on **Figure 1**, data on the implementation of remedial learning for Biology teachers, the following results were obtained: the first indicator contains 5 aspects of identifying remedial learning problems, namely diagnosing learning difficulties, implementing remedial learning after evaluation, conducting daily test analysis, providing remedial learning to all students, and Carrying out remedial learning without the Biology learning evaluation process obtained a percentage score of 81% in the good category. Based on the results of the analysis from the teacher questionnaire, it is known that remedial learning is carried out based on the difficulties experienced by students. Teachers need to first analyze the difficulties experienced by students so that the handling is appropriate and appropriate based on the needs of the

students' difficulties [16]. The stage of identifying problems experienced by students can help teachers to design remedial learning according to students' needs [19].

The second indicator, creating a remedial learning plan with 5 aspects, namely creating a remedial learning plan based on students' learning difficulties, providing remedial learning with different evaluations on the same material, determining a schedule for implementing remedial learning, creating a remedial learning plan without looking at students' learning styles, and providing remedial learning with the same test questions got a percentage of 72% in the good category. Based on analysis of the questionnaire given by the teacher, it is known that the teacher designs and implements remedial learning appropriately. The provisions for implementing remedial learning are that it does not use mandatory lesson hours, in other words, outside of regular lesson hours, it is carried out separately from students who have completed it [20]. Before carrying out remedial work, teachers need to determine the time that will be used for remedial activities [21].

The third indicator, carrying out remedial learning with 6 aspects, namely determining the method used in remedial learning based on the results of problem identification, carrying out remedial learning according to the steps on the remedial learning plan sheet, providing remedial learning according to material that has not been completed, carrying out remedial learning in hours Biology lessons, carrying out remedial learning outside Biology subject hours, and providing remedial learning only with questions of getting a percentage of 73% in the good category. Based on the results of the teacher questionnaire analysis, it is known that the remedial learning process carried out at 12 Central Lampung High Schools was carried out well. Material given to students should not be the same questions but the questions are given based on the difficulties experienced by the students [22]. Not all material is given as remedial material, but the material is given based on the difficulties experienced by students [23].

The fourth indicator, evaluating the process and results of remedial learning with 6 aspects of remedial learning can help students to improve learning outcomes, remedial learning is beneficial for students, remedial

learning can overcome students' learning difficulties, the remedial learning provided has not improved student learning outcomes, Students who took Remedial did not reach the KKTP (Learning Goal Achievement Criteria), and remedial learning could not overcome students' learning difficulties, getting a percentage of 71% in the good category. Based on the results of the teacher questionnaire analysis, it is known that remedial learning can help with the difficulties experienced by students. Remedial learning, students succeed in getting better grades than before [24]. Remedial learning can overcome this problem in studying so that there is no difficulty in understanding the material [25].

Based on Figure 1, it is known that of the four indicators, the highest is the first indicator, namely identifying remedial learning problems at 81% in the very good category. This shows that before teachers carry out remedial learning, it is very important to diagnose learning difficulties. Before carrying out remedial learning teachers must understand the types and characteristics of learning difficulties experienced by students [26]. Efforts to study the background of students who experience learning difficulties can be seen from the diagnosis of learning difficulties [27]. The lowest indicator is the fourth indicator, namely evaluating the process and results of remedial learning at 71% in the good category. This shows that evaluation of remedial learning is very necessary to see success in remedial learning. After students carry out remedial learning at the final stage there is an assessment to see the results of the students' achievements [28]. To see the success of remedial learning evaluation, it can be done by looking at students' behavior and by looking at their thinking patterns [21]. If students experience changes in better behavior and more positive thinking patterns, then the remedial learning activities carried out are considered successful.

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Table 4. Responses from 12 Schools from Students to the Implementation of Remedial Biology Learning

No	School Name	Number of Respondents	Average Percentage	Category
1	SMAN 1 Gunung Sugih	140	81 %	Very good
2	SMAN 1 Punggur	66	74 %	Good
3	SMAN 1 Seputih Raman	29	73 %	Good
4	SMAN 1 Kotagajah	26	78 %	Good
5	SMAN 1 Terbanggi Besar	43	81 %	Very good
6	SMAN 1 Seputih Mataram	90	77 %	Good
7	SMAN 1 Terusan Nunyai	26	73 %	Good
8	SMAN 1 Way Pengubuan	26	76 %	Good
9	SMAN 1 Seputih Agung	50	74 %	Good
10	SMAN 1 Seputih Surabaya	121	76 %	Good
11	SMAN 1 Bandar Surabaya	20	81 %	Very good
12	SMAN 1 Rumbia	26	72 %	Good
	Average		**76 %**	**Good**

Based on Table 4, the results obtained from the highest percentage of responses from 12 schools regarding the implementation of Biology remedial learning for students were obtained by 3 schools, namely SMAN 1 Gunung Sugih, SMAN 1 Kotagajah, and SMAN 1 Bandar Surabaya at 81% in the very good category. This is because there are driving teachers who are able to reflect on learning well. Driving teachers are able to provide special treatment to students who are still experiencing difficulties in learning, driving teachers also identify the needs of each student and provide additional support, either by providing personal guidance, providing remedial learning, as well as enrichment [29]. Driving teachers are able to meet learning outcomes by providing remedial or repetition learning to students who have not achieved completeness in learning [30]. The lowest percentage of responses from 12 schools regarding the implementation of Biology remedial learning for students was obtained by 3 schools, namely SMAN 1 Seputih Raman, SMAN 1 Terusan Nunyai, and SMAN 1 Rumbia at 73% in the good category. This is because there

are driving teachers who are less able to reflect on learning well. Teachers influence school quality and must have good learning reflection [31].

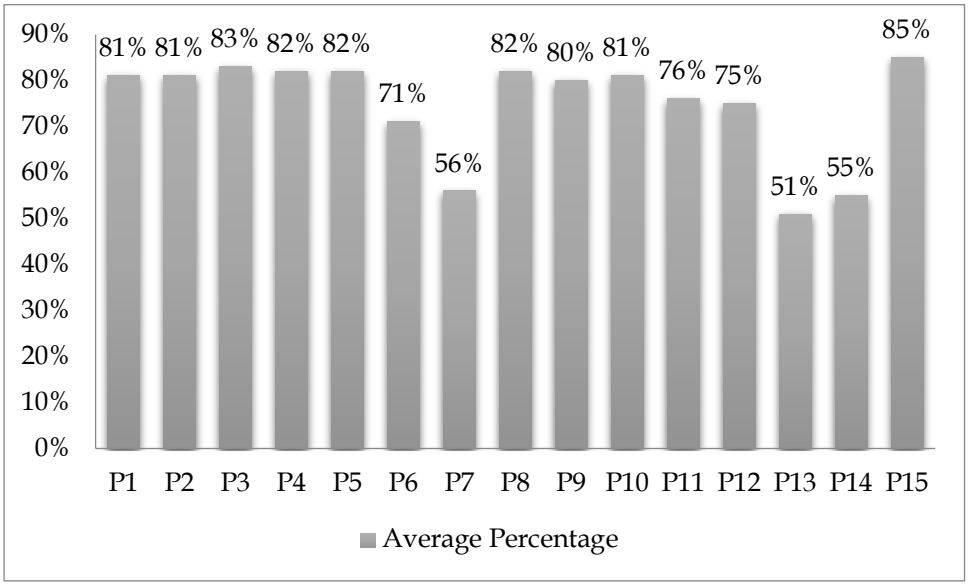

Figure 2. Data on the implementation of remedial learning by students

Based on **Figure 2**, data on the implementation of remedial learning by students shows that the statement that Biology remedial learning can help to improve learning outcomes (P1) with an average percentage of 81% which is in the very good category. This shows that students feel happy about remedial learning because students can improve their previous scores. With remedial learning students have the opportunity to improve their grades to be better than before. Teachers need to carry out remedial learning so that students have the opportunity to correct incomplete grades [32].

Figure 2 contains data on the implementation of remedial learning by students which contains remedial learning provided by Biology teachers improving learning outcomes (P2) with an average percentage of 81% in the very good category. This shows that remedial biology learning can improve students' grades. Students have the desire to obtain grades that have not been completed in the previous material [33]. Students who carry out remediation can improve grades that previously had not reached the target [34].

Figure 2 shows data on the implementation of remedial learning by students which contains Biology remedial learning aimed at improving grades that have not yet been completed (P3) with an average percentage of 83%, which is in the very good category. This shows that students feel changes in being able to overcome learning difficulties experienced by remedial learning. Remedial learning has the aim of helping students master the material they have studied [35].

Figure 2 contains data on the implementation of remedial learning by students which contains me trying to submit assignments to the Biology teacher on time in connection with the remedial learning being implemented (P4) with an average percentage of 82% in the very good category. This statement states that students have the responsibility to carry out the tasks given. Students are given assignments so they can understand material that they have not mastered before [36]. Giving assignments to students can help with assessment, therefore assignments contribute to the final assessment of student learning [37].

Figure 2 shows data on the implementation of remedial learning by students, which contains I understand Biology lessons after taking part in remedial learning (P5), getting an average percentage of 82% in the very good category. This shows that students after carrying out remedial learning are able to master the material well. Remedial learning helps students better understand previous material [38], [33].

Figure 2 is about data on the implementation of remedial learning by students which contains I asked if there was something unclear in the Biology lesson during the implementation of remedial learning (P6) with an average percentage of 71% in the good category. It can be seen that in remedial learning students want to ask questions about material that is not clear. Students are obliged to ask teachers about material they do not understand in remedial learning in order to achieve the specified criteria for completeness [39]. The learning process which involves conversations between students who ask the teacher questions about the obstacles they experience is able to lighten the burden on students in overcoming the obstacles and difficulties they experience [40].

Figure 2 regarding data on the implementation of remedial learning by students which contains remedial learning carried out outside Biology class hours (P7) gets an average percentage of 56% in the sufficient category. This statement states that students do not like remedial learning carried out outside class hours. There is an inhibiting factor in implementing remedial learning, namely limited time, if remedial is carried out outside of class hours, students will be less focused in participating in remedial learning so teachers have to make a predetermined remedial schedule [41], [33].

Figure 2 shows data on the implementation of remedial learning by students, which contains me taking remedial Biology learning when my grades were incomplete and had the opportunity to improve my grades and understand the subject matter better (P8) getting an average percentage of 82% in the very good category. This shows that students feel that remedial learning can improve learning outcomes so that it is easier to understand the material. Function of remedial teaching to provide an understanding of incomplete material to students [42]. Remedial is fixing problems in learning felt by students in subjects given by the teacher [43].

Figure 2 shows data on the implementation of remedial learning by students after taking remedial learning. I understand more about the previous Biology subject (P9) with an average percentage of 80% in the good category. This shows that students after carrying out remedial learning are more active in looking for information regarding Biology subject matter that they do not yet understand. The principles of remedial learning, one of which is the interactive principle of remedial learning, can enable students to be more active in learning and interact more often with teachers [21]. Remedial learning was initially set to correct the difficulties experienced by students so that after remedial learning was implemented, students would be more motivated in learning and more active and interactive in future learning [44] .

Figure 2 is about data on the implementation of remedial learning by students which contains me taking remedial Biology learning so as not to miss out on previous material (P10) with an average percentage of 81% getting the

very good category. This statement shows that students take part in remedial learning because they do not want to be left behind in their learning. Remedial learning is able to catch up with students in the learning process [45]. Remedial learning is an effort to improve grades in a short period of time to catch up with other students [43].

Figure 2 contains data on the implementation of remedial learning by students which contains the methods used in Biology remedial learning according to my learning style (P11), getting an average percentage of 76% in the good category. This shows that the remedial learning method used is in accordance with the needs of students. Teaching methods are provided according to problem faced by students, seen from the type, nature and background of their learning difficulties [43]. Before carrying out remedial teachers should have a method or strategy that is appropriate to identifying students' problems [46].

Figure 2 contains data on the implementation of remedial learning by students which contains remedial learning provided by teachers that can overcome learning difficulties (P12) with an average percentage of 75% getting a good category. This statement states that remedial learning gets a good response from students. Online remedial learning received a positive response even though it had its own challenges [47].

Figure 2 shows the data on the implementation of remedial learning by students which shows that I would be burdened if I was forced to take part in carrying out remedial learning in Biology (P13), getting an average percentage of 51% in the sufficient category. This shows that students do not like remedial learning because they feel burdened. Students take part in a tutoring program, one of which is to avoid remedial work so that they do not have the burden of taking part in remedial work [48]. The remedial learning carried out was not in accordance with the agreement, for example at the appointed time, students felt burdened to carry it out [41].

Figure 2 contains data on the implementation of remedial learning by students which contains the scores of students who achieved the KKTP (Learning Goal Achievement Criteria) which were higher than the scores of

students who took part in Biology remedial learning (P14) with an average percentage of 55% getting the sufficient category. This shows that there are more students who do not take part in remedial learning compared to students who take part in remedial learning. More students have completed the KKTP, compared to students who have taken remedial studies [49]. There are few students who have carried out remedial studies because only a few people have not completed their studies [20].

Figure 2, data on the implementation of remedial learning by students, shows that I tried to learn optimally so that I did not take part in Biology remedial learning (P15) getting a percentage of 85% in the very good category. This shows that remedial learning can increase students' learning motivation. Remedial learning using appropriate methods can increase students' learning motivation [50], [51].

Based on Figure 2, data on the implementation of remedial learning by students from 15 statements, the highest percentage results were found in the statement, namely, I try to study optimally so that I do not take part in Biology remedial learning (P15) at 85% in the very good category. It is known from the results of questionnaire data analysis that students study seriously so as not to take part in remedial learning. Students are expected to study seriously in understanding the material so that they do not need to carry out remedial learning [44]. Teachers are guided to be able to create good learning activities so that they can be a stimulus for students to be enthusiastic and serious in carrying out learning so that they can achieve maximum results [52]. Furthermore, the lowest percentage is in the statement that I would feel burdened if I was forced to take remedial Biology (P13) lessons with a percentage of 51% in the sufficient category. Based on the results of the questionnaire analysis, it can be seen that students feel burdened in participating in remedial learning because they have to prepare themselves to learn. This is not in line with research by Supkarwati remedial learning is a learning activity aimed at students to help them overcome the difficulties they experience in order to achieve the specified criteria for completion [53].

4. Conclusion

Based on the analysis of the data that has been obtained in the discussion section, it can be concluded that the implementation of Biology remedial learning in the kurikulum merdeka at SMAN 12, Central Lampung Regency has been carried out well and implementing Biology remedial learning in the Kurikulum Merdeka is in the good category. Of the 4 teacher indicators at the remedial learning stage, namely identifying remedial learning problems, creating remedial learning plans, implementing remedial learning, and evaluating the process and results of remedial learning, showing good criteria. Meanwhile, 15 student statements regarding the implementation of Biology remedial learning showed an average score in the good category. Researchers hope that for further research it is recommended to examine some of the unexplored high schools in Central Lampung Regency.

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