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## THE EFFECTIVENESS OF WORDWALL EDUCATIONAL GAME MEDIA TO IMPROVE STUDENT LEARNING OUTCOMES ON PLANT BODY PARTS

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### Abstract

One of the learning media that is interesting and easy to find and operate in science learning is the Wordwall educational game. Therefore, this research aims to improve student learning outcomes in science and science learning through the Wordwall educational game learning media in class IV at SDN Babat Jerawat II, especially regarding plant body parts. This research is Classroom Action Research (PTK) which uses a research design from Kemmis and Taggart, consisting of two cycles with each cycle consisting of one meeting. The subjects of this research were 27 grade IV students at SDN Babat Jerawat II, consisting of 13 male students and 14 female students. Data collection techniques used include observation, structured interviews, tests (pre-test and post-test), and documentation. The research results show an increase in student learning outcomes after using the Wordwall educational game media. In cycle I, the percentage of student learning completeness reached 37% with an average score of 61.85, while in cycle II, the percentage of student learning completeness increased to 78% with an average score of 80.74. Thus, the use of the educational game media Wordwall can improve student learning outcomes in material on plant body parts in class IV SDN Babat Jerawat II.

**Keywords:** *Educational Game, Wordwall, Learning Outcomes, IPAS, Plant Body Parts.*

### Abstrak

Salah satu media pembelajaran yang menarik dan mudah ditemukan serta dioperasikan dalam pembelajaran IPA adalah permainan edukatif Wordwall. Oleh karena itu, penelitian ini bertujuan untuk meningkatkan hasil belajar siswa dalam pembelajaran IPA dan IPA melalui media pembelajaran permainan edukatif Wordwall di kelas IV SDN Babat Jerawat II, khususnya pada materi bagian-bagian tubuh tumbuhan. Penelitian ini merupakan Penelitian Tindakan Kelas (PTK) yang menggunakan desain penelitian dari Kemmis dan Taggart, terdiri dari dua siklus dengan setiap siklus terdiri dari satu kali pertemuan. Subjek penelitian ini adalah siswa kelas IV SDN Babat Jerawat II yang berjumlah 27 siswa, yang terdiri dari 13 siswa laki-laki dan 14 siswa perempuan. Teknik pengumpulan data yang digunakan meliputi observasi, wawancara terstruktur, tes (pre-test dan post-test), dan dokumentasi. Hasil penelitian menunjukkan adanya peningkatan hasil belajar siswa setelah menggunakan media permainan edukatif Wordwall. Pada siklus I, persentase ketuntasan belajar siswa mencapai 37% dengan nilai rata-rata 61,85, sedangkan pada siklus II, persentase ketuntasan belajar siswa meningkat menjadi 78% dengan nilai rata-rata 80,74. Dengan demikian, penggunaan media permainan edukatif Wordwall dapat meningkatkan hasil belajar siswa pada materi bagian-bagian tubuh tumbuhan di kelas IV SDN Babat Jerawat II.

**Kata kunci:** *Permainan Edukatif, Wordwall, Hasil Belajar, IPAS, Bagian-Bagian Tubuh Tumbuhan.*

## INTRODUCTION

Education is an important means of improving the quality of a country's human resources through increasing intelligence and skills. Therefore, the quality of human resources in Indonesia is very dependent on the quality of education (Abidah, et al, 2022). To prepare quality human resources for the future, the quality of education must be taken seriously. One way that educators can improve the quality of education is to use learning strategies and media that are interesting and appropriate to the level of student development and the characteristics of the learning material (Murtado, et al, 2023).

Various things can be done to create interesting and easy to understand learning, one of which is by complementing learning with interesting and interactive media (Azizatunnisa, et al, 2022). One learning media that is interesting and easy to access and operate is educational games. Games are a form of entertainment that is often used to refresh the mind from feeling tired due to daily human activities. Educational games are learning media using a new style and can provide a learning experience that is not boring for students because educational games can train their concentration and memory (Pradana & Uthman, 2023). Wordwall is a digital platform that allows teachers to create various types of educational games that can help students understand material in a more interesting and fun way (Putri & Agustini, 2024).

Wordwall has advantages and disadvantages in its implementation, the advantage of wordwall is that it can play or view games made by other people on Wordwall, it is community based so that games can be created collaboratively with other members, it can be played offline, multiplayer and printable (Sufriani, et al, 2024).

Learning material that can be packaged attractively using the Wordwall educational game media is material about plant body parts in the Natural and Social Sciences (IPAS) content. Natural and Social Sciences (IPAS) is one of the subjects taught at elementary school level which has a close relationship with students' daily lives (Pratiwi, 2021). Therefore, science and science learning must be packaged in such a way that it is interesting and meaningful for students. One effort that teachers can make as facilitators is to provide reinforcement material that is packaged in an attractive way using educational game media (Zoebaidha, 2020). It is that the use of the Wordwall educational game media can help students focus more and understand the material on plant body parts better.

Based on the results of a preliminary study at SDN Babat Jerawat II, several problems were found related to low student learning outcomes in plant body parts. Based on the results of observations, this problem is caused by a lack of teacher creativity in using learning media when delivering material in class IV. Teachers tend to only use concrete media in explaining material, without utilizing online learning media that can attract students' interest. As a result, many students do not understand the material being taught, especially the material on plant body parts. This has an impact on the low student learning outcomes in science content in class IV.

According to Pauziah, et al (2023), classroom action research must start with action planning, action implementation, observation and evaluation of the process and results of the action, until the expected improvements are achieved (success criteria). Classroom Action Research (PTK) is nothing new, but in the world of education in Indonesia, PTK has only begun to receive serious attention from policy makers and educational practitioners in the last two decades. Great attention to PTK is based on the belief that efforts to improve the quality of learning must be carried out by the learning actors themselves, in this case the teachers (Fadillah, 2023). Based on the results of the literature review, it was found that the educational game media Wordwall has the potential to improve student learning outcomes.

The aim of this research is to determine the effectiveness of using the educational game media Wordwall in improving the learning outcomes of class IV students at SDN Babat Jerawat II on plant body parts. By implementing the Wordwall educational game media in science and science learning at SDN Babat Jerawat II, it is hoped that students can focus more on learning activities and understand the material better so that student learning outcomes will improve. It is also hoped that the Wordwall educational game media can have a positive influence on the quality of learning so that the learning outcomes obtained are more satisfying.

## METHODS

This research uses a type of classroom action research. Classroom action research is abbreviated as a form of research that occurs in the classroom in the form of certain actions taken to improve the teaching and learning process in order to improve learning outcomes that are better than before (Arikunto, 2021). The general aim of this classroom action research is to improve the quality of education through action (Farhana et al., 2019). This research was conducted at SDN Babat Jerawat II with research subjects consisting of 27 fourth grade students consisting of 13 male students and 14 female students. The data collection techniques used are observation, structured interviews, tests (*pre-test* and *post-test*), as well as documentation using data collection instruments in the form of interview guides, observation sheets and question sheets *pretest* and *posttest*. The data analysis technique in this research uses an interactive model, namely data reduction, data presentation, and drawing conclusions.

## FINDINGS AND DISCUSSION

### Findings

In this research, researchers carried out research at the pre-cycle, cycle I and cycle II stages. The pre-cycle stage was carried out to identify the initial conditions for learning in class IV of SDN Babat Jerawat II, especially regarding plant body parts in the Natural and Social Sciences (IPAS) subjects. Based on observations and interviews with class teachers, several problems were found that influenced low student

learning outcomes, namely lack of teacher creativity in using learning media, low student understanding of the material, and low level of student learning completeness.

In the pre-cycle stage, data collection is carried out by conducting observations and interviews. Based on the results of interviews with teachers, the number of fourth grade students is 27 students with 13 boys and 14 girls. Minimum Completion Criteria (KKM) is 75. The characteristics of fourth grade students are that they like playing activities, like to move around, sometimes get busy during learning, enjoy direct learning in the form of experiences and challenges such as games, and like to try things. new things and accept challenges.

In cycle I stage, data is obtained from the results *pretest* which was carried out to all class IV students at SDN Babat Jerawat II. Of the total score of 1670 obtained by all students, the average score achieved was 61.85. Of the 27 students who took part *pretest*, only 10 students managed to reach the Minimum Completion Criteria (KKM), while 17 other students did not reach the KKM. Thus, the percentage of student completion in cycle I only reached 37%. This shows that the majority of students do not understand the material well, which indicates the need for intervention to improve their learning outcomes.

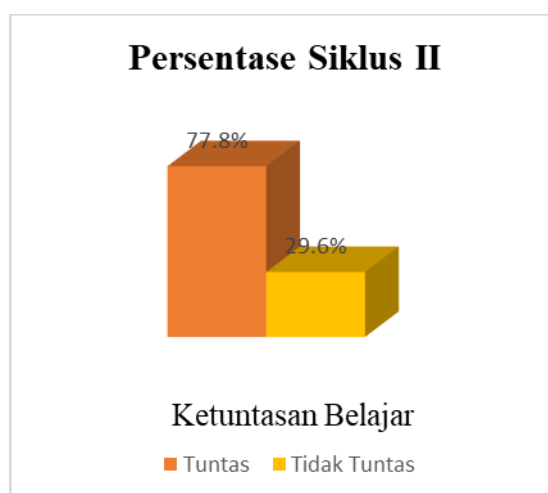
**Graph 1. Percentage of Cycle 1 Learning Completeness**



However, even though there has been an increase in learning outcomes, there are still some students who have not reached the KKM in cycle I. Therefore, cycle II is needed to optimize student learning outcomes. In cycle II, learning strategies were refined by focusing more on active interaction between students and learning media. Students are encouraged to participate more actively in learning activities and practice more using Wordwall media.

To overcome this problem, in cycle II action was taken in the form of using more interesting learning media, namely the educational game media Wordwall. Wordwall is a digital platform that allows the creation of various educational games that can help students understand lesson material more easily. In cycle II, this media is applied in learning activities in class IV, with a focus on plant body parts.

Results *posttest* in cycle II showed an increase in student learning outcomes compared to cycle I. The total score obtained increased to 2180 with an average score reaching 80.74. Of the 27 students, 21 students succeeded in reaching the KKM, while only 8 students did not reach the KKM. The percentage of student learning completion increased significantly to 78%. This increase shows that the use of the Wordwall educational game media is effective in helping students understand the lesson material, especially regarding plant body parts.

**Graph 2. Percentage of Cycle II Learning Completeness**

At the end of cycle II, results *posttest* showed a more significant improvement compared to cycle I. Most students were able to achieve the KKM with a higher total score and a better average score. Thus, it can be concluded that intervention using the educational game media Wordwall on an ongoing basis can improve overall student learning outcomes. This research also indicates that the use of interactive and interesting learning media can increase students' interest and motivation in learning, so that their learning outcomes increase.

**Table 1. Average student learning outcomes and completeness**

Criteria	Cycle I	Cycle 2	Improvement
Average student learning outcomes	61.85	80.74	18.89
Student learning completeness	37.04%	77.8%	40.76%

## Discussion

Natural and Social Sciences (IPAS) education at the basic level is often considered difficult by some students, especially in understanding abstract concepts such as plant body parts (Ulumiyah, et al, 2022). However, the results of this research show a significant increase in student learning outcomes after using the Wordwall educational game media in learning in class IV at SDN Babat Jerawat II. This increase can be seen from the learning outcomes data which shows an increase in the percentage of student learning completion from cycle I to cycle II.

This increase in learning outcomes can be explained through several main factors. First, the interactive nature of the Wordwall educational game media allows students to learn actively and independently. As stated by Munawir & Hasbi (2021), interactive learning media can increase student involvement in the learning process, so that the material presented is easier to understand and remember. Educational games such as Wordwall also provide a fun and challenging learning experience, thereby increasing students' learning motivation.

Second, Wordwall media allows for repetition of material visually and interactively, which is in line with the principles of effective learning. This repetition is important in strengthening students' memory regarding the material studied, especially in understanding and remembering the body parts of plants. Visual repetition carried out through Wordwall is able to provide more frequent exposure to the material, which has a positive impact on student learning outcomes. Third, Wordwall's ability to provide direct feedback to students after completing quizzes or practice questions also contributes to improving learning outcomes (Mayanda, et al, 2024). This immediate feedback helps students immediately identify gaps and errors in their

understanding, as well as providing opportunities to correct and repeat material that is not yet well understood.

Apart from increasing learning outcomes, this research also shows an increase in student learning activities. In cycle I, most of the students' learning activities were good, but there were still deficiencies in students' interactions with the media when completing independent learning assignments. This is caused by students' lack of understanding about how it works and the benefits of using Wordwall media. However, in cycle II, after the teacher provided a more comprehensive explanation and implemented a clear reward system, there was a significant increase in this indicator. As many as 76.32% of students successfully completed their independent assignments with good results.

Overall, the use of Wordwall educational game media is not only effective in improving student learning outcomes, but is also able to increase student independence and involvement in the learning process. This media can be an effective learning alternative, especially in facilitating students' understanding of material that is considered difficult. Based on the results of this research, it is recommended that teachers be more creative in selecting and using learning media that suit student characteristics and subject matter. The use of interactive media such as Wordwall can be an effective alternative in improving student learning outcomes, especially for material that is considered difficult for students to understand. Apart from that, teachers also need to carry out continuous evaluation of the learning strategies used so that they can continue to be refined according to student needs and development.

In conclusion, this research proves that the use of the educational game media Wordwall is effective in improving student learning outcomes in material on plant body parts in class IV SDN Babat Jerawat II. The significant increase in learning outcomes from pre-cycle to cycle II shows that this intervention was successful in increasing students' understanding of the lesson material. Therefore, it is hoped that teachers can consider using interactive learning media as part of learning strategies in the classroom to achieve better learning outcomes.

## CONCLUSION

In conclusion, in this research, the use of the educational game media Wordwall is able to improve student learning outcomes in Natural and Social Sciences (IPAS) subjects on plant body parts. This improvement can be seen from the results of the first and second cycle actions, in particular *pre-test* and *post-test* fourth grade students at SDN Babat Jerawat II. The results show that the percentage of student learning completeness in the first cycle is 37% with an average learning outcome of 61.85. In the second cycle, the percentage of student learning completion increased significantly to 78% with an average learning outcome of 80.74. Based on this data, it can be concluded that in the second cycle, students have reached the KKM, which indicates that no further action is needed. The use of the Wordwall educational game media in science learning, especially regarding plant body parts, has proven to be effective in improving the learning outcomes of class IV students at SDN Babat Jerawat II.

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