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#### **Abstract**

In today's digital era, the development of information and communication technology has brought changes in various aspects of life, including education. Technology is not only a tool, but also an inseparable part of the learning process. The problem that occurs in class X TKJ 1 SMKN 1 Kendit is the low learning motivation of students caused by the monotonous and uninteresting learning process. This is seen from the lack of student participation in asking and answering questions. In addition, the monotonous model of questions also triggers boredom in students and does not provide variety and appeal to students. One media that can be used is a Wordwall-based game-based learning media designed to increase student engagement and learning motivation. The purpose of this study is to implement Wordwall - based game-based learning media in the learning process and determine its effectiveness in increasing the learning motivation of class X TKJ 1 SMKN 1 Kendit students. The approach used in this study is a qualitative approach with an interactive qualitative research type. In this study, the type of interactive qualitative research used is a case study, with a purposive sampling technique. Data collection techniques used are observation, interviews, and documentation. The data analysis techniques used include data collection in the field, data reduction, data presentation, as well as drawing conclusions and verification. The results of the study indicate that students are more motivated and interested in learning with this Wordwall media. The implementation of Wordwall-based game-based learning creates a fun learning atmosphere, and adds new insights and experiences, so that students' learning motivation increases. So, it can be concluded that the implementation of Wordwall based game-based learning media is effective and appropriate to be implemented in the Basics of Computer Network Engineering and Telecommunications in class X TKJ 1 SMKN 1 Kendit.

**Keywords:** game based learning, learning motivation, media, wordwall.

### 1. Introduction

Education is a crucial aspect of national development because it contributes significantly to the character and quality of superior human resources. In today's digital era, the development of information and communication technology has brought changes to various aspects of life, including education. Technology is not just a tool, but also an integral part of the learning process. One innovation emerging from the use of technology in education is the use of game-based learning (GBL) media. This media integrates learning elements with game elements to create a more interactive and enjoyable learning experience. Game-based learning is designed to increase student engagement,

motivation, and understanding with a more creative approach that suits the learning styles of the digital generation. One interesting and useful learning media is *Wordwall*.

The learning process at SMKN 1 Kendit has implemented the independent curriculum. In this curriculum, educators have the flexibility to choose various appropriate learning media. This allows the teaching and learning process to be tailored to the needs, interests, and characteristics of students, thus aiming to foster learning motivation and create a pleasant learning atmosphere. The problem that occurs in the school, especially in class X TKJ 1, is low student learning motivation caused by a monotonous and uninteresting learning process. This is evident in the lack of student participation in asking and answering questions related to the subject matter presented by the educator. In addition, the monotonous model of questions also triggers boredom in students. Furthermore, the game media used is always the same, so it does not provide variety and appeal to students. As a result, students become passive, bored, and bored in class. One medium that is very suitable for this purpose is game-based learning based on Wordwall, which is designed to increase student engagement and motivation in learning through an interactive and fun approach. Based on the background above, researchers are interested in analyzing Wordwall -based game-based learning media because this media is considered capable of providing an interactive and enjoyable learning experience for students. The use of this media is expected to increase student motivation in the learning process. To examine more deeply the use of Wordwall in learning activities, researchers took the title "Analysis of the Implementation of Wordwall -Based Game-Based Learning Media on the Learning Motivation of Class X TKJ 1 Students of SMKN 1 Kendit".

The purpose of this study is to implement *Wordwall* -based *game-based learning media* in the learning process and to determine its effectiveness in increasing the learning motivation of class X TKJ 1 students of SMKN 1 Kendit . In addition, this study also aims to identify changes in learning behavior shown by students during the use of *Wordwall media* , as well as to determine the extent of student involvement and enthusiasm in participating in learning through this interactive media. Overall, this study not only highlights the technical aspects of using *Wordwall media* in learning, but also emphasizes the psychological and pedagogical effects it produces, such as increased enthusiasm for learning, emotional involvement, and students' willingness to continue learning actively and independently. Therefore, the findings of this study are expected to be a consideration in designing more interesting, effective, and student-centered learning.

## 2. Literature Review

Media plays an important role in the learning process, as its presence provides a significant contribution. Media is essentially a means of conveying messages in the communication process. Each medium has different characteristics, so it is important to choose it carefully and appropriately so that it can be utilized optimally. Learning media is an important tool that must be considered by educators, because it can help students understand the material better [1]. The function of learning media shows that its use must always be adjusted to the competencies and material to be delivered [2]. However, the function of learning media should not be misinterpreted as merely a means of entertainment. Learning media must be used to support the teaching and learning process with the aim of improving student understanding, not just providing pleasure alone. One alternative teaching material that can accommodate various student characteristics is educational game-based teaching materials. *Game-based learning* is a learning model designed to integrate subject matter with educational elements, which allows students to

be actively involved in the learning process [3]. Characteristics of *game-based learning* model learning innovation [4] namely interesting and exciting, challenging, interactive and feedback, social and collaborative.

There are several steps taken in implementing the use of the *game-based learning model*, including the following [5]: choosing *a game* according to the topic, explaining the concept, agreeing on the rules, playing the game, summarizing knowledge, and reflecting. One of the media that can be used is *Wordwall*. *Wordwall* is a platform that offers interactive games that can be filled with images, diagrams, or various other objects [6]. This platform allows the filling of learning materials or questions to be discussed, as well as providing easy access for students to use it. There are many free templates that can be used, both in the form of questions, image-based choices, and others. Choose according to your wishes and adjust them to the subjects that will be included in the game. In this process, it is important to consider various aspects, such as the needs of students, the targets to be achieved, and the learning objectives after using the game, until the final stage of learning. *Wordwall* has several features that can be used, including: *quizzes*, *open the box*, *match up*, and others.



Wordwall media compared to other learning media are the presence of game elements in answering questions, which makes students more interested and motivated during the learning process. In addition, the difficulty level of each question can be analyzed and compared by educators, and the ranking of the scores obtained by each student can be seen, starting from the first to the last rank [7]. Wordwall can be used to evaluate students, including in midterm exams (UTS) and final semester exams (UAS). In addition, Wordwall can be accessed online to support learning or search for materials in an easy way and has its own appeal. Wordwall has characteristics that support assessment activities, such as automatic correction, setting the time for working on questions, an attractive interface design, and paperless use [8].

Wordwall learning media has advantages and disadvantages, including the following [9]: (a) Wordwall is flexible so it can be used by students at various levels of education, (b) This game is not monotonous and is fun to play. (c) This media is creative. (d) It can increase students' interest in learning, which then encourages motivation and curiosity in

the learning process. (e) It can be used as a learning evaluation tool. (f) Quizzes created in *Wordwall* can be printed and distributed to students. Disadvantages of *Wordwall learning media*: (a) *Wordwall* is based on visual media because it can only be seen. (b) Creating *Wordwall* media takes quite a long time. Motivation is a response to behavior, so the emergence of motivation is triggered by the existence of goals. In the learning process, motivation is needed to help students prepare themselves and encourage the creation of a need to learn (Dwi et al., 2022). Learning is a process that involves changes in behavior through various activities, including cognitive, affective, and psychomotor aspects. The learning process is not just memorizing, but also involves experience, because true learning occurs when it is done continuously [10].

Learning motivation has an important factor that contributes to the success of the educational process. Educators need to understand whether students have motivation in learning, because existing motivation can make students more enthusiastic and actively involved during learning [11]. On the other hand, learning motivation is one of the psychological aspects that is non-academic [12]. Learning motivation has an important role in increasing students' enthusiasm to achieve optimal learning outcomes and support the development of character and individual skills in the educational environment. In the learning process, motivation is needed to help students prepare themselves and encourage the creation of the need to learn [13]. There are various ways and forms to increase students' learning motivation in the learning process, including [14]: giving marks, prizes, competitions, ego-involvement, giving tests, knowing results, praise, punishment, desire to learn, interest. There are several factors that influence students' learning motivation [15], namely: (a) Intrinsic motivation factors are drives that come from within (internal) and influence a person's desire to learn. (b) Extrinsic motivation is encouragement that comes from outside (external) and influences the desire to learn.

## 3. Method

The approach used in this study is a qualitative approach with an interactive qualitative research type. According to Prof. Dr. Sugiyono in his book Educational Research Methods, a qualitative research method is a research method based on the philosophy of postpositivism and is used to research objects in natural conditions (not experiments) [16]. In this study, the type of interactive qualitative research used is a case study. The researcher acts as a key instrument, with a purposive sampling technique. Data is collected through triangulation (a combination of various techniques), analyzed inductively or qualitatively, and the results of the study emphasize meaning rather than generalization. Purposive sampling is a non-random sampling method, in which researchers deliberately select subjects with certain characteristics that are in accordance with the research objectives. In this way, it is hoped that the selected sample can provide relevant answers to the research problems [17]. This research was conducted at SMKN 1 Kendit class X TKJ 1. This school is located at Jalan. Arjo Kusumo No. 02, Krajan Kendit, Kendit District. This research was conducted for approximately 1 month, starting from April to May 2025. The data collection techniques that will be carried out in this research are: Observation, interviews, documentation. This research uses structured interviews with interview instrument guidelines to obtain relevant and necessary information in the analysis research of the implementation of Wordwall -based gamebased learning on the learning motivation of class X TKJ 1 students. The resource persons involved were 8 respondents, including the subject teacher of Basics of Computer Network Engineering and Telecommunications, the homeroom teacher of class X TKJ 1,

and 6 students selected based on their level of academic achievement. Interviews were conducted directly at the school according to the specified time.

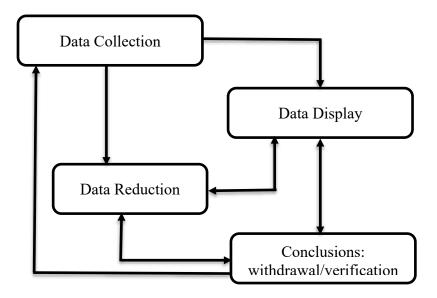


Figure 2. Steps for qualitative data analysis [19]

In descriptive qualitative research using Abraham H. Maslow's learning motivation theory approach, data analysis was conducted using an interactive approach. Miles and Huberman stated that the qualitative data analysis process is carried out interactively and continues continuously until completion, so that the resulting data reaches a point of saturation [18]. The data analysis process in this study was carried out before, during, and after the researcher was in the field using the Miles and Huberman model, which includes data collection in the field, data reduction, data display, as well as drawing conclusions and *verification*. The following are the steps in data analysis carried out:

Field data collection is conducted by selecting reliable sources to answer the research questions. Data is obtained using three main methods: observation, interviews, and documentation. Data obtained from the field tends to be large and complex, requiring data reduction to be analyzed. After data reduction, the next step is data presentation. Data in qualitative research can be presented through charts, descriptions, brief outlines, or relationships between categories. The final stage is drawing conclusions based on the results of the data reduction and more detailed presentation, focusing on the main findings. These conclusions aim to answer the research problem formulation.

In this study, data validity was obtained through information or data collected from observations, observation results, interviews with educators and students, as well as supporting documents such as student attendance lists, student grades, library materials, and other relevant references. This study used the source triangulation method. Data source triangulation is carried out by seeking the truth of certain information through various different methods and data sources. This can be done through the following steps: (a) Comparing data obtained from observations, documentation, and interviews, (b) Comparing data and archives collected in the field, (c) Comparing interview results with information contained in related documents.

### 4. Results and Discussion

#### Results

The research data was obtained through interviews with subject teachers, homeroom teachers, and 6 students of class X TKJ 1 to gather information related to the research problem. The interviews were conducted on May 14, 2025, at SMKN 1 Kendit. The criteria for selecting informants were based on the level of academic achievement. The 6 students consisted of 2 with superior achievement, 2 with average achievement, and 2 with low achievement. Furthermore, on May 15, 2025, the researcher conducted triangulation and interviewed other students, but with the same level of achievement. This method was carried out by the researcher to obtain structured information about the research problem. The following is a list of informants who have been interviewed during the data collection process, including:

No.	Source person	Position
1.	Iskap Riyadi, S.Pd	Homeroom Teacher of Class X TKJ 1
2.	Hevi Budi Lestari, S.Pd	Subject Teacher for Basic Computer Network
		Engineering and Telecommunications Class X TKJ
		1
3.	Ahmad Raditial Fatah	Learners
4.	Ahmad Arif Irwansyah	Learners
5.	Bayu Febriansya	Learners
6.	Diah Ayu Putri Nanda Dewi	Learners
7.	Alya Azizah Ramadhani	Learners
8.	Alfandi	Learners

Table 1. Source data

## Game-Based Learning Media Based on Wordwalls in the Student Learning Process

In the initial stage of the research plan, the researcher selected six students as interview subjects, selected based on their level of academic achievement. The initial selection was based on preliminary data obtained before data collection was implemented. However, in reality there were several adjustments to the names of the previously determined students. One of them was a change in the medium achievement category. Students included in the medium category were Fitri Dwi Cantika and Diah Ayu Putri Nanda Dewi, and also students included in the low category were Ahmad Suryadi and Alfandi. However, during the data collection, Fitri Dwi Cantika and Ahmad Survadi were not included so the researcher coordinated with the subject teachers to replace them with other students in the same academic category, namely Bayu Febriansya who was in the medium category, and Alya Azizah Ramadhani who was in the low category and was willing to be interviewed and had received approval from the subject teachers. As part of an effort to improve the student learning process. This implementation aims to compare between monotonous learning processes and learning using Wordwall media. Therefore, researchers can directly observe changes in students that can be seen from their activeness, involvement, and learning initiatives. With the implementation of Wordwall based game media in learning, students more easily understand and remember the

material presented because they are actively involved, so they feel happy and enthusiastic in learning. In teams, students discuss with all members how to create strategies and the best ways to solve challenges or problems in *Wordwall*, especially in the open the box feature that requires each group to work together to select randomly arranged boxes and choose one to open. Here is a display of one of the *Wordwall games* used:



In this case, stude collaborating to solve the wordwall game

media is implemented in individual learning, students still show high interest in learning, because the media is interesting, and also when faced with questions, they show high enthusiasm in working, because the Wordwall features that researchers use are different such as quizzes, flying fruit, open the box, and spin the wheel. Students are required to rely on their own abilities in understanding the material, completing the tasks given, thus making them motivated to build their self-confidence, focus, and be responsible for the process and results of their learning. Through the implementation of Wordwall students can feel the benefits of both approaches so that they do not get bored when learning with teams or individuals.

Before the implementation of *Wordwall* -based *game-based learning* in the classroom for the Basics of Computer Network Engineering and Telecommunications, it was generally carried out using conventional methods. "The methods I have used so far are lectures, discussions, questions and answers, and for practicals, I usually have demonstration methods and use modules." That is the statement of Mrs. Hevi Budi Lestari, S.Pd. as the subject teacher who is used when teaching in class. The statement above shows that learning is still centered on the educator, where students receive information passively which causes activity in the classroom to be less than optimal, even though there is the use of modules, student involvement in learning is still limited because the productive material covered is quite dense.

After the implementation of the *Wordwall media* was carried out, researchers began to see the active participation and enthusiasm of students in the learning process which made students more actively involved than usual. "The reaction of the children was *the Wordwall* yesterday at the end of the lesson, I saw the children were very enthusiastic, and very happy to follow the lesson, I saw during the observation in the class the children were very enthusiastic unlike usual, so if it was only for example, sorry to write on the board the children quickly get bored, but with *the Wordwall learning* at the end the

children seemed to be enthusiastic about learning." This statement was conveyed by Mr. Iskap Riyadi, S.Pd as the homeroom teacher of class X TKJ 1 as a form of response to the reactions of students from the use of *Wordwall* in the learning process. This shows that *Wordwall media* can increase emotional and cognitive involvement, as well as make students interested during the learning process.

The students' interest in *Wordwall* is certainly inseparable from its interesting features, because it is able to create a challenging learning atmosphere. One of the students, Ahmad Arif Irwansyah, said, "*Flying fruit*, because the answer is challenging, I have to think quickly to be able to answer the question correctly." Meanwhile, Bayu Febriansya stated, "The features I like are *quiz* and *open the box*, but the one I like most is *open the box* because the contents of the box cannot be guessed so it makes me more enthusiastic in learning." That's what students said when interviewed about their opinions about the features or types of games in *Wordwall* that are most in demand when used in classroom learning, through this media, the learning atmosphere becomes more exciting because students are directly involved in educational games that stimulate their memory.

Students feel that learning becomes more lively and not monotonous, they can choose a learning style that suits their comfort both individually and in groups. This is reflected in student responses when asked about learning with *Wordwall* compared to previous methods. Ahmad Arif Irwansyah stated, "Learning is more exciting when using *Wordwall*, while the more challenging is using the feature without groups because I prefer working individually." Meanwhile, Diah Ayu Putri Nanda Dewi said, "Learning without *Wordwall games* makes me bad mood, not fun, makes me sleepy, and easily forgets without games, with this *Wordwall* I become more motivated and more enthusiastic." This statement shows that students gain experience in the learning process that is not boring and is able to arouse enthusiasm for learning, which was previously monotonous to be more interesting.

This statement is in accordance with the statement of Mr. Iskap Riyadi, S.Pd as the homeroom teacher of class X TKJ 1 who revealed that students showed a positive response that reflects their active involvement in the learning process. "The response was very positive, very happy, in fact, he wanted to linger with this *Wordwall*, so because of the fun, the children who are usually inactive and always passive in class, with this learning, the children can almost be said to be all active because they are so busy following the learning using this *Wordwall*." This positive response can be interpreted that *game-based learning* based on *Wordwall* has succeeded in creating interactive learning so that they do not become passive in class, in addition, this approach provides variations that arouse their curiosity and enthusiasm for the material presented. This was also conveyed by Mr. Iskap Riyadi, S.Pd as the homeroom teacher of class X TKJ 1 who observed a significant change in the classroom atmosphere after the *Wordwall media* was implemented.

"The difference is very obvious with the usual learning conducted by the teachers, the children are more enthusiastic, more passionate, and children really need new things, so learning with varied methods is needed, if only the learning is monotonous, the children get bored, especially TKJ students who already have IT skills above average compared to other majors, so if the learning is still traditional, then lectures, eventually bored, and their demand is interactive learning that can stimulate their motivation to learn more deeply. So the difference is very positive, the children are more enthusiastic about learning with *Wordwall* compared to traditional learning conducted by the teachers. Plus yesterday there were also rewards for the children, I saw them very happy, maybe this is

the first experience, it is rare for the teachers to give awards/rewards like that, so the children are motivated, their enthusiasm and motivation are maintained, so they can continue to follow the learning optimally from start to finish." The statement from Mr. Iskap Riyadi, S.Pd as the homeroom teacher of class X TKJ 1 shows the difference between the use of *Wordwall media* and traditional learning methods, by using media like this, the learning process becomes more memorable with the needs and characteristics of students, so that they can learn optimally.

In the process of using learning media such as *Wordwall*, it is certainly not without a number of challenges or difficulties experienced by some students. According to student opinions, there are challenges or difficulties experienced. Alya Azizah Ramadhani said, "The difficulty is in the *flying fruit game feature*, because the answers move too fast, making it difficult to read." This indicates a technical problem that can interfere with understanding the questions. *Games* that require quick reactions can be a challenge for students who are not used to interactive learning methods like this. However, these difficulties are part of the learning process that trains students' agility, focus, and speed of thinking. These challenges actually encourage students to be more concentrated and sensitive in answering each question given.

Meanwhile, Diah Ayu Putri Nanda Dewi revealed, "Yes, there are challenges I experience when using the *Wordwall game*, because some questions look almost similar to other questions, so I have to be careful when answering the questions, sis." This statement reflects a cognitive challenge, where students need to pay close attention to the differences between questions. This situation requires focus and critical thinking skills in dealing with similar but not identical questions. Although it feels difficult, this situation actually encourages students to be more careful, hone their analytical skills, and improve retention of the material. These are the words of students when interviewed about the difficulties or challenges they experience.

Thus, the implementation of Wordwall not only provides entertainment in learning, but also creates constructive challenges for students, so that further steps are needed to optimize the use of Wordwall media. "This can be used as a reference material for learning for other teachers, so not only in TKJ, maybe I personally as a homeroom teacher, also as a mathematics teacher, am very interested in using this, because so far what I feel when teaching mathematics is that many are less interested in the lesson because it is considered difficult, maybe with this Wordwall learning, children will be more happy with mathematics so it is not only identical with counting but there are also games too, children become happier, more motivated to learn mathematics, for the next recommendation, the Wordwall can be inserted in the middle of learning because it is included in the hours prone to boredom, maybe at the beginning of the apperception about the previous material it is also applied there or in the middle of learning too, so children to maintain their learning motivation from the beginning to the end remain enthusiastic and enthusiastic in learning, my suggestion is not only at the end, sometimes in this learning it is also done at the beginning about, for example, apperception for the previous material or in the middle it is packaged in a game what can be motivating because this productive hour is very long. Hopefully later with this learning, children can maintain their motivation during learning in class, so that learning become more optimal".

This statement was made by Mr. Iskap Riyadi, S.Pd., the homeroom teacher of Class X TKJ 1, when asked about recommendations for further implementation. This demonstrates that *Wordwall* is not only effective in improving material comprehension but also in overcoming learning boredom, especially during critical hours. It is hoped that

this recommendation can be implemented by other teachers, both in productive and general lessons, so that learning activities become more effective.

## Game-Based Learning Media Based on Wordwalls on Student Learning Motivation

To find out the efforts in increasing students' learning motivation after the implementation of *Wordwall*, it is necessary to first identify the level of students' learning motivation before the media is used in the learning process. Based on the findings in the field, before the use of *Wordwall*, students were less enthusiastic and bored in class. This was reinforced by the results of the interview which stated that, "After I observed yesterday, I also observed a friend of the teacher, Mrs. Hevi, who teaches the Basics of Computer Network Engineering and Telecommunications, the children usually only focus at the beginning, focus at the beginning means that during learning only focus at the beginning because this productive material is 3 hours long, usually the children get bored in the middle until the end, they are usually bored, so only at the beginning they are interested for one to two hours after that their motivation to learn decreases. " This statement was made by Mr. Iskap Riyadi, S.Pd as the homeroom teacher of class X TKJ 1 when asked about students' learning motivation before the use of *Wordwall* in learning.

This shows that students only focus at the beginning of the lesson, while at the end of the session, students have started to get bored so that their learning motivation decreases. Ahmad Arif Irwansyah said, "It's a headache, because I feel the lesson is boring and not interesting, so my motivation to learn decreases." This is in accordance with the statements of students who indicate low learning motivation due to monotonous learning so that the classroom atmosphere becomes unpleasant. With this condition, a variation in learning strategies is needed that is not only able to attract attention at the beginning but also able to maintain engagement until the end of the lesson. One innovation that can be applied is by using *game-based learning* based on *Wordwall*, because it can create learning that is more fun, challenging, and encourages activeness in the classroom.

To determine the extent of the implementation of the *Wordwall media*, an evaluation is needed that aims to compare the level of learning motivation before and after the use of *Wordwall* in the subject of Basics of Computer Network Engineering and Telecommunications. With this evaluation, educators know the level of learning motivation towards the material being taught. "So before and after the implementation of *Wordwall*, an evaluation was carried out in the form of giving multiple choice questions to determine the level of student learning motivation towards the material being taught, in addition, observations were also made on student attitudes during the learning process, such as student activeness in answering questions and interest in the material being presented." This statement was conveyed by Mrs. Hevi Budi Lestari, S.Pd as a subject teacher who showed that the learning evaluation process was carried out comprehensively, starting from providing test instruments and observing students' attitudes, activeness, and interest during class. Through this approach, it is hoped that educators can understand the potential needs of students, so that they can support their character and academic development, in order to achieve common goals.

Based on the results of implementation in learning activities, the use of *Wordwall* - based *game-based learning* on learning motivation has been proven to have a positive impact that can be seen from the participation and enthusiasm for learning. According to Mrs. Hevi Budi Lestari, S.Pd as a subject teacher, learning by using *Wordwall media* feels addictive in learning activities. "Yes, it is very influential because with this *Wordwall*, children feel challenged to compete with other groups by collecting as many points as

possible, besides that, children also become addicted to carrying out learning activities using this *Wordwall*." In this case, students give enthusiastic reactions to the learning process, the classroom atmosphere becomes more fun, all students are actively involved and show a higher enthusiasm for learning than usual.

This is in line with the students' opinions that *Wordwall* is able to increase enthusiasm in learning. Ahmad Arif Irwansyah said, "Yes, I feel more motivated to learn, I want to master everything about computer network materials, and *Wordwall* really makes the learning atmosphere less rigid than usual." Meanwhile, Alfandi stated, "Yes, it makes me more motivated to learn, because I feel challenged to think quickly and accurately." That is the response of students regarding the implementation of *Wordwall* in the classroom. This statement shows that *Wordwall media* not only functions as a teaching aid, but can also create a sense of curiosity in students to master the material, in addition to making students think critically, and compete healthily with their friends.

This was reinforced by Mrs. Hevi Budi Lestari, S.Pd as a subject teacher who said that *Wordwall* gave positive results in increasing students' learning motivation. "This use can increase students' learning motivation in the subject of Basics of Computer Network Engineering and Telecommunications. Learning activities that are sometimes boring become more interesting and fun, in addition, students also become more active in participating in learning because students feel challenged to answer questions in the form of *game* competitions played together with their friends." This proves that learning with *Wordwall* is able to create a more interesting and interactive learning atmosphere. Students are not only more focused but show high enthusiasm and actively participate in learning activities.

With the presence of interactive media, students are also encouraged to follow the next lesson. Alya Azizah Ramadhani said, "After using *Wordwall* I feel happy and always want to linger in class, my motivation to follow the next lesson also increases." Meanwhile, Diah Ayu Putri Nanda Dewi stated, "It's fun, challenging because the questions are difficult and also competing with other smarter groups, so it makes me more motivated to excel than other groups, sis." These statements were expressed by students when asked about their feelings and motivation after the teacher used *Wordwall* in learning. Both students showed an increase in learning motivation but with different experiences, the first statement focused more on comfort and enjoyment, while the second statement emphasized challenges and competition.

In the process of completing the assigned tasks, students demonstrate better behavior. They are quicker to complete assignments, strive to answer correctly, and are more focused on following the directions given. "Yes, after carrying out learning activities with this *Wordwall*, the children are more motivated to complete assignments, because the fun learning atmosphere can motivate students to complete assignments and improve their ability to understand the material." This statement was conveyed by Mrs. Hevi Budi Lestari, S.Pd as a subject teacher. This shows that the learning process leaves a unique impression on students. Learning activities that are usually monotonous become interesting and interactive.

In addition to providing convenience, *Wordwall* is able to build good collaboration between groups. Alya Azizah Ramadhani stated, "Yes, *Wordwall* increases my confidence, because it is easier to answer. In addition, the activities are carried out in groups so they can be done together." That is the statement of the student when asked about their confidence in answering questions or doing exercises in class using *Wordwall*. *Wordwall* media has been proven to have a positive impact on individual confidence, so

that students feel challenged and interested in solving problems, working together in expressing opinions and answering questions. Documentation of activities using *Wordwall* in learning can be seen in Figure 4.2 below:



Figure 4. Activities using wordwalls in learning

When students feel challenged and interested, they are more focused and concentrated in learning, in addition, the variety in *Wordwall* helps reduce boredom. Diah Ayu Putri Nanda Dewi stated, "Yes, it makes me focus in learning there are scores or points, so I am more serious in answering each question because I am afraid that my points will be taken by other friends." This statement was made by students when asked about the use of *Wordwall* which can increase focus and concentration in learning, with the presence of points or scores making students more serious in paying attention to the questions so that a desire arises to get a high score and excel over other friends.

With this positive experience, students also feel more enthusiastic in participating in learning. Diah Ayu Putri Nanda Dewi said, "Very interested, because learning becomes more exciting and challenging, especially because my competitors in class are also smart, so it makes me more focused and motivated to study so I can compete to get a high score." Meanwhile, Alya Azizah Ramadhani stated, "Yes, I am more interested, besides the material is easier to understand in class, so there is not much homework at home, and also not much note-taking, sis." That's what students said when interviewed about their interest in participating in lessons if they often use *Wordwall*. This statement shows that the drive from within students to achieve the best results, but not solely because of external demands, but purely from their own desire to excel.

In its use, *Wordwall* has advantages and disadvantages, like other media. Ahmad Raditial Fatah said, "The advantage is that it makes me more enthusiastic to learn and also motivated to learn the material, always wanting to answer the questions. The disadvantage is that the *flying fruit feature* crashed at the beginning."

The statement above shows that the use of *Wordwall* received a positive response from students. They were more motivated to participate in learning activities, although there were a few technical obstacles, this did not reduce students' interest and enthusiasm to learn the next material. Meanwhile, Ahmad Arif Irwansyah stated, "The advantage is that it can make me study harder, more interested in learning the next material. The disadvantage is that the questions are not enough for me, up to 30 is enough." This statement shows that, although there were complaints about the number of questions that were felt to be insufficient, it actually reflects students' desire for more challenges and is able to create a learning atmosphere that is uplifting.

In addition, *Wordwall* also has attractive features and displays that can foster motivation and enthusiasm for learning. Alfandi said, "The advantage is that it is challenging, the display is good and interesting, so it motivates me to learn. The

disadvantage is that it requires an internet connection." This statement shows that Wordwall has visual appeal and the challenges it provides can make the learning process more lively, even though there are obstacles on the internet, this is not a major obstacle. Students remain enthusiastic and happy in the learning process. That's what students said when interviewed about their opinions on the advantages and disadvantages of using Wordwall. The difficulties they faced were easily resolved, especially because of high learning motivation and togetherness to help each other make the learning process run smoothly.

The researcher concluded that the students' learning motivation had increased, which was shown through various observed behaviors, such as increased active participation in learning, an exciting and enjoyable learning atmosphere, perseverance in completing assignments, students' curiosity about the next material, in addition, this increase was also reinforced by consistent statements from various sources, both students, subject teachers, and homeroom teachers of class X TKJ 1, who stated that there was a positive development in attitudes and enthusiasm for learning after the implementation of *the Wordwall* and was proven by findings in the field, in the form of interviews.

### Discussion

## Wordwall -Based Game-Based Learning Media in the Learning Process

Game-based learning media is a solution to problems in the classroom that are often faced by students, such as difficulty in understanding the material, and low active participation in class, by integrating game elements into learning, students can experience a more interactive learning experience, that the implementation of game-based learning media in student teaching materials can be a creative solution to overcome various problems in the learning process [19]. Based on the results of interviews and observations, the use of game media implementation has a positive impact on the student learning process. Game media not only makes learning more interesting, but also increases student participation in class, so that the classroom atmosphere is more lively and not passive. The use of game-based learning methods allows students to be actively involved in the learning process [20]. This approach can increase their interest in learning, create a pleasant atmosphere, encourage enthusiasm, provide challenges, and strengthen cooperation between friends. One of the media that supports this approach is Wordwall, namely, an interactive game that is easy to use by teachers and students. The implementation of Wordwall in the learning process makes students more actively involved because this media encourages students' curiosity about the next material. With an interactive game-like display, this platform is able to increase students' enthusiasm for learning [21]. There are 18 features that can be used in Wordwall and can be adjusted to suit learning objectives.

The implementation of *Wordwall* in the learning process creates a dynamic form of interaction between teachers and students, as well as between students themselves. Based on research conducted in class X TKJ 1, students are directly involved in learning activities through games, they are enthusiastic about participating in each session, so that the classroom atmosphere becomes more lively and enjoyable. Students are more enthusiastic and involved in the learning process [22]. Their involvement with the material using *Wordwall* stimulates higher interest compared to conventional or monotonous methods. This can be seen from student participation in answering questions

and engaging in discussions. Therefore, *Wordwall* has proven effective in creating an interactive and enjoyable learning atmosphere. This causes students' self-confidence to increase and their communication skills also develop, thus, the implementation of *Wordwall* has proven to be able to enrich learning methods and improve the quality of interactions in the classroom, as well as the learning process becoming more dynamic and interactive.

## Wordwall -Based Game-Based Learning Media on Student Learning Motivation

The use of interactive and fun media is one strategy to increase student learning motivation. Based on the results of observations and interviews, one of the media that has been proven effective in encouraging learning motivation is *Wordwall*, which presents various types of educational games that can change the classroom atmosphere to be active, while providing challenges that trigger learning enthusiasm, and make students more focused and challenged in understanding the material in a fun and not boring way. Learning motivation has an important role in increasing student enthusiasm to achieve optimal learning outcomes and supports the development of character and individual skills in the educational environment [12].

Wordwall media has an advantage over monotonous learning media because it presents an interactive game element. This element can attract students' attention and increase their motivation to participate in learning. The characteristic of Wordwall media compared to other learning media is the game element in answering questions, which makes students more interested and motivated during the learning process. Furthermore, the difficulty level of each question can be analyzed and compared by educators, and the ranking of each student's scores can be seen, from first to last.

Based on research in class X TKJ 1, it was found that students' learning motivation increased when teachers used a fun and interactive learning approach. Students were enthusiastic and participated in showing high interest when teachers provided game elements, they were motivated to follow each stage of implementation. This condition shows that the use of appropriate strategies greatly influences their learning motivation. There are many ways to increase students' learning motivation in the learning process, including giving numbers, prizes, competitions, Ego-Involvement, and a desire to learn [14]. This is proven in the field, especially in class X TKJ 1, where the implementation of *Wordwall media* created healthy competition between students, they felt challenged to get the highest points and enter the best ranking, in addition, simple forms of appreciation in the form of praise or giving gifts in the form of food also provide a positive psychological effect for students. Thus, strategies such as competition, scoring, and learning atmosphere have proven effective in increasing learning motivation.

Based on the results of the *Wordwall implementation* in class X TKJ 1, researchers found several obstacles in its implementation in the classroom. The main difficulty faced was the internet network problem, namely an unstable connection. This condition caused some students to experience obstacles in accessing learning materials. To overcome this problem, researchers chose *Wordwall features* such as *open the box* which were displayed through a projector screen. In this way, researchers could guide the learning process directly in front of the class, while students took turns answering questions that arose without having to access media through personal devices, and researchers also found that students' digital literacy still varied.

Furthermore, some students were unfamiliar with *game -based learning media*, requiring the researcher to provide a technical explanation before beginning the activity.

Educator guidance in providing contextual understanding significantly assisted students in gaining a deeper understanding of the learning experience. Finally, the researcher also encountered limitations in the free version of *the Wordwall feature*. The free version only provides a limited selection of templates. Utilizing the free version requires educator creativity in maximizing the available features and combining them with other learning strategies to create engaging yet meaningful learning activities.

Overall, the implementation of *Wordwall* -based game -based learning media on the learning motivation of class X TKJ 1 students at SMKN 1 Kendit showed a positive response, but it was not free from various technical and non-technical obstacles. Therefore, efforts are needed both from student adjustments in terms of infrastructure and increasing digital literacy, so that the use of learning media can run more optimally. Through a fun and interactive learning approach, students are not only enthusiastic, but also more motivated to develop creativity in understanding the learning material.

#### 5. Conclusion

From the results of the research that has been conducted, it can be concluded that the implementation of Wordwall -based game-based learning media is effective and appropriate to be implemented in the Basics of Computer Network Engineering and Telecommunications. This can be seen from the results of interviews, observations, and documentation conducted by researchers to students, including: (1) Learning with Wordwall -based game-based learning on the learning process shows that students are more active and involved in learning activities. This is proven that students show high enthusiasm and gain different learning process experiences that they have never experienced before, so that they are able to arouse the passion for learning which was previously monotonous to become more interesting and the learning process becomes more dynamic and interactive. (2) The implementation of Wordwall on students' learning motivation has a positive impact, because this media is able to increase the enthusiasm for learning, and makes students more focused and challenged in understanding the material in a fun way. They are more motivated to understand the material independently because learning feels like playing but still educational. The learning atmosphere is exciting and fun, perseverance in completing tasks, and students' curiosity about the next material.

## 6. Suggestion

To broaden insight and improve the quality of research results, it is recommended for further research to conduct research on other subjects or in other schools to determine the extent to which the implementation of *Wordwall* in the learning process can foster student learning motivation. In addition, the use of *Wordwall* should not only be used at the end of learning, but can also be applied at the beginning or middle of learning to achieve the expected goals.

#### Reference

- [1] S. Seituni, AA Suparto, D. Yuliana, AM Alawi, and IDH Hasanah, "Developing Student Creativity in Islamic Religious Education Subjects Through Word Wall Educational Games," JOEAI, vol. 7, no. 2, pp. 606–616, 2024, doi: https://doi.org/10.31539/joeai.v7i2.11607 DEVELOP.
- [2] PS Rosmana et al., "The Importance of Learning Media in Elementary School

- Teachers' Learning Planning," J. Educator. Tambusai, vol. 8, no. 1, pp. 3048–3054, 2024, [Online]. Available: https://jptam.org/index.php/jptam/article/view/12840/9856
- [3] R. Pratiwi, Y. Yuhanna, S. Sopiah, N. Habadi, R. Harahap, and R. Aminah, "Improving Students' Learning Creativity through Game Based Learning Methods," J. Pengabdi. Sos., vol. 1, no. 7, pp. 592–596, 2024, doi: 10.59837/7hza6b55.
- [4] ACP Wibawa, HQ Mumtaziah, LA Sholaihah, and R. Hikmawan, "Game-based learning (GBL) as an innovation and solution to accelerate learning adaptation in the new normal era," Integr. (Journal Inf. Technol. Vocat. Educ., vol. 2, no. 1, pp. 49–54, 2020, doi: 10.17509/integrated.v3i1.32729.
- [5] F. Carli Wiseza, Ibermarza, and N. Friska Andini, "The Use of Game Based Learning Models on Social Studies Learning Outcomes," NUR EL-ISLAM J. Educators. and Soc. Religious Studies, vol. 10, no. 1, pp. 124–138, 2023, doi: 10.51311/nuris.v10i1.516.
- [6] AP Lubis and I. Nuriadin, "The Effectiveness of Wordwall Applications to Improve Student Learning Outcomes in Elementary School Mathematics Learning," J. Basicedu, vol. 6, no. 4, pp. 6884–6892, 2022, doi: 10.31004/basicedu.v6i4.3400.
- [7] LD Putra, ND Arlinsyah, FR Ridho, AN Syafiqa, and K. Annisa, "Utilization of Wordwall in Game Based Learning Model for the Digitalization of Elementary School Education," J. Dimens. Pendidik. dan Belajar, vol. 12, no. 1, pp. 81–95, 2024, doi: 10.24269/dpp.v12i1.8749.
- [8] SP Permana and K. Kasriman, "The Effect of Wordwall Learning Media on Fourth Grade Social Studies Learning Motivation," J. Basicedu, vol. 6, no. 5, pp. 7831–7839, 2022, doi: 10.31004/basicedu.v6i5.3616.
- [9] N. Nurfauziyah, S. Sjaifuddin, and AN Taufik, "Development of High-Order Thinking Ability Test Instrument for High School Students on Rotational Dynamics Material," EKSAKTA J. Research. and Learning of Mathematics and Natural Sciences, vol. 8, no. 1, pp. 15–23, 2023, doi: 10.31604/eksakta.v8i1.15-23.
- [10] RK Nafian, UA Widayanti, and I. Rahmawati, "Use of Wordwall Media as an Evaluation of Science Learning for Grade IV of SD Negeri 1 Gumul, Journal of Educational Technology and Learning (JTPP)," J. Teknol. Pendidik. Dan Pembelajaran, vol. 01, no. 04, pp. 747–750, 2024.
- [11] Mona Nopitasari and Qolbi Khoiri, "Managing Teaching-Learning Interactions," J. Educator. Islam Al-Affan , vol. 4, no. 2, pp. 80–86, 2024, doi: 10.69775/jpia.v4i2.193.
- [12] MA Nisa and R. Susanto, "The Effect of Using Wordwall-Based Educational Games in Mathematics Learning on Learning Motivation," JPGI (Jurnal Penelit. Guru Indonesia., vol. 7, no. 1, p. 140, 2022, doi: 10.29210/022035jpgi0005.
- [13] E. Maryati et al., "Analysis of Teacher Strategies in Improving Student Learning Motivation in Class," J. Innovation, Eval. and Development of Learning, vol. 4, no. 2, pp. 165–170, 2024, doi: 10.54371/jiepp.v4i2.408.
- [14] Dwi, Khusnul, and Danik, "Abraham Maslow's Thoughts on Motivation in Learning," Tajdid J. Thinker. Islam. and Humanity., vol. 6, no. 1, pp. 37–48, 2022.

- [15] Yogi Fernando, Popi Andriani, and Hidayani Syam, "The Importance of Learning Motivation in Improving Student Learning Outcomes," ALFIHRIS J. Educator Inspiration., vol. 2, no. 3, pp. 61–68, 2024, doi: 10.59246/alfihris.v2i3.843.
- [16] C. Qotimah and DT Haryati, "Improving Student Learning Motivation Through the Application of TGT in PPKn Learning for Class VIII at SMPN 2 Plantungan, Kendal Regency," J. Spirit Edukasia, vol. 03, no. 01, pp. 1–7, 2023.
- [17] S. Dharma, "Journal of Research and Reasoning," J. Research. and Penal., vol. 6, no. 1, pp. 86–96, 2019.
- [18] I. Lenaini, "Purposive Sampling Techniques and Snowball Sampling," Hist. J. Studi, Penelain. Pengemb. Pendidik. Sej., vol. 6, no. 1, pp. 33–39, 2021, [Online]. Available: http://journal.ummat.ac.id/index.php/historis
- [19] I. Al Faris, H. Munandar, RH Nugroho, and Y. Suryadarma, "ARABIYAH IN IMPROVING THE MAHARAH OF ARABIC KALAM IN STUDENTS OF MADRASAH TSANAWIYAH 1," vol. 3, 2025.
- [20] R. Karlina, Taena La, "Online Journal of Economic Education Study Program," vol. 8, no. 1, pp. 181–189, 2023.
- [21] IF Wati, YY Yuniawatika, and S. Murdiyah, "Needs Analysis for Integrated Game-Based Learning Materials with Creative Characters," J. Educator. Character, vol. 10, no. 2, 2020, doi: 10.21831/jpk.v10i2.31880.
- [22] N. Aoliyah, "The Use of Game-Based Learning Techniques in History Learning and Its Impact on Students' Learning Interest," Kala Manca J. Educator. Sej., vol. 11, no. 1, pp. 31–36, 2023, doi: 10.69744/kamaca.v11i1.205.
- [23] MI Arrosyad, D. Antika, ET Dzulqa, M. Balqis, U. Muhammadiyah, and B. Belitung, "Analysis of the Use of Wordwall as an Integrated Learning Media to Increase Student Learning Attractiveness in Elementary Schools," IJM Indones. J. Multidiscip., vol. 1, pp. 414–423, 2023, [Online]. Available: https://journal.csspublishing/index.php/ijm
- [24] Melvi, Kustati, RM, Amelia, and Gusmirawati, "Implementation of wordwall learning media in increasing student learning motivation in Islamic religious education subjects at SD Islam Al Muttaqin Sawahlunto. At-Tarbiyah: Journal of Islamic Religious Research and Education, 2(1), 428-433.," https://journal.staittd.ac.id/index.php/at/article/view/162, vol. 2, pp. 428-433, 2024.