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Self-Confidence through Canva Aplication, Wordwall and *Ular Tangga* in Solving Algebra Problems

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ABSTRACT

Self-confidence is a positive attitude that is the most important basic capital in a person to be able to develop his abilities to achieve whatever he wants and can do, both towards himself and the environment or situations he faces, including in learning. However, the Trends in International Mathematics and Science Study (TIMSS) data indicates that Indonesian students' self-confidence still needs to improve by at least 30%. This study assesses junior high school students' confidence in solving algebraic problems. This study employs a qualitative, descriptive research methodology. To analyse the data, conclusions were drawn, and the percentage of students who used the Canva app, Wordwall, and the Ular tangga game to gain confidence in their ability to solve algebraic problems was described. Thirty-six junior high school students in class VII served as the research subjects. Cognitive test sheets and observations were the study tools used. This study looked at four characteristics of self-confidence: 1) Act independently in making decisions; 2) Have a positive self-concept; and 3) Dare to voice thoughts. When choosing the learning models and media to employ in teaching and learning activities, teachers can benefit from the findings of this research. Thus, the Canva application and Wordwall media are able to increase self-confidence in class VII junior high school students.

Keywords: aplication of canva; self-confidence; wordwall; ular tangga

INTRODUCTION

Self-confidence is a person's belief and attitude towards his own abilities by accepting the various things he has, both positive and negative. When someone experiences shortcomings but rises above those shortcomings so they can overcome adversity by having the self-confidence and motivation to continue to grow. Thus, self-confidence is very important to be trained and developed by everyone, including students, in participating in the learning process. Because students' self-confidence has a big influence on learning achievement, especially in learning mathematics. Career planning will be more significant if self-confidence and learning accomplishment are higher, and vice versa. If these two factors are lower, career planning will be lower. Any adjustments to learning outcomes and self-assurance will impact students' career plans (Komara, 2016).

The importance of the self-confidence aspect is not yet in line with the reality of students in the classroom. This is shown by the TIMSS findings, which indicate that Indonesian pupils' self-confidence is still low below 30% (Fardani, Z., Surya, E., & Mulyono, 2021). According to TIMMS, self-confidence is shown by proficiency in mathematics, the ability to pick things up quickly and persevere, think practically, and have solid mathematical skills. Likewise, students' self-confidence in learning mathematics is still low. This is based on preliminary research that has been carried out by researchers showing

that the results of the initial test on students' classical knowledge in the material of linear equations in one variable reached 40.75% with an average score of 50.7. This shows that students' knowledge of basic mathematical concepts is still relatively low. Similar research results show that less than 50% of students still lack self-confidence with symptoms such as feeling embarrassed when asked to go to the front of the class, feelings of tension and fear that suddenly come during the test, students are not confident in their abilities so they cheat even though basically the students have study the material being tested, and are not enthusiastic when following lessons in class and do not like doing homework (Fardani, Z., Surya, E., & Mulyono, 2021).

Based on observations made by researchers, one of the factors in students' low self-confidence in learning is influenced by the learning models and media used by teachers. Apart from that, the results of researchers' interviews with mathematics teachers at SMPN 3 Tarogong Kidul Garut show that teachers still use conventional learning models when teaching, so that learning is not meaningful. This means that students do not understand the importance of their mathematics learning process. Teachers still use the transfer of knowledge paradigm in learning, which means they only transfer information and do not give students the opportunity to explore their mathematical abilities. As a result, students sometimes do not have the opportunity to improve their abilities. This kind of learning process makes students less active during the learning process. This is because students only receive knowledge from the teacher without experiencing the process themselves. The learning methods used in learning are one of the causes of low aspects of student learning achievement and self-confidence (Azizah, I. N., & Widjajanti, 2019; Martyanti, 2016). Using inappropriate learning methods can hinder the development of aspects of students' knowledge and attitudes (Apino, E., & Retnawati, 2018).

One solution to solve this problem is to apply learning by applying learning media, namely the Canva and Wordwall applications and the *ular tangga* game. This other method is being considered in light of various prior study findings that demonstrated the benefits of gaming, including the fact that games are enjoyable and instructive and an excellent way to practice reasoning and problem-solving skills (Mulyati, S., & Evendi, 2020). Using audiovisual learning materials based on the Canva application with excellent criteria makes it simpler for students to understand employment. Consequently, online and offline learners may use the produced material (Rahmatullah, & Inanna, 2020). The online Canva tool can help students in the English for Information Communication and Technology course become more creative. This is demonstrated by an increase in the percentage of learning outcomes, learning motivation scores, and student creativity in each cycle (S. Junaedi, 2021). These games are still rare, but they are only used as learning media. If games are used as a learning medium along with evaluation materials or questions, learning is expected to be more interesting and enjoyable.

RESEARCH METHODS

The method used in this research is qualitative descriptive research. The research subjects for class VII students at SMPN 3 Tarogong Kidul for the 2023-2024 academic year were 36 students. The research instruments used were cognitive tests in the material Systems of Linear Equations in One Variable, observation sheets, questionnaires and interview

sheets. Data collection techniques used observation, questionnaire and interview methods. The observations in this research were to determine the benefits of the Canva and Wordwall applications in learning mathematics. Then the researchers gave questionnaires to students and teachers, and conducted interviews with students and teachers to explain the use of the canva, wordwall application, and ular tangga game in mathematics learning**.** As for the research flow diagram using qualitative descriptive method.

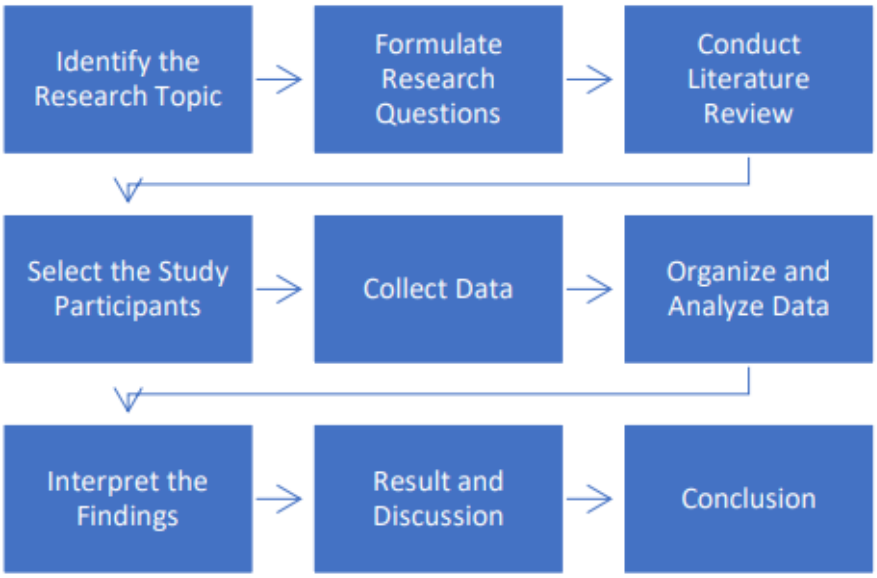

Figure 1. Research Flow Using Qualitative Descriptive Method

RESULT AND DISCUSSION

Researchers carry out assessment activities with cognitive diagnostic assessments, then with summative and formative assessments. This was done to determine the student's level of self-confidence as shown by the results of the cognitive test sheet in the material Systems of Linear Equations in One Variable. As a result of the assessment's presumption that self-confidence has quantifiable, comprehensive components, summative and formative assessments are also possible. Evaluations conducted before and throughout the learning process might be considered formative assessments. Learning that is differentiated based on student requirements is made possible by assessment at the outset of the curriculum (Safarati, N., & Zuhra, 2023).

However, formative assessment during instruction can serve as a springboard for reflection on the entire process. This reflection can then guide learning objectives and, if needed, be revised before moving on to the next learning goal and having students feel that they have met them. But before anything else, the instructor must ensure that the learning goals are met. Additionally, teachers must complete summative assessments to ensure that overall learning objectives are met (Hidayat, Y. W., & Maharani, 2023).

This research began with observations and interviews with mathematics teachers and other subject teachers as well as school principals and experts. From the observation results, it can be seen that students generally lack attention in the learning process. While the learning process is taking place, the classroom situation is still not conducive, so it requires teachers

to be able to improve the classroom atmosphere, implementing a cooperative learning model that can grow students' self-confidence in learning, especially in mathematics subjects. From the results of the researcher's interviews with teachers in the field of mathematics, it shows that students' mathematics learning outcomes are still relatively low. In this research, through the application of the Teams-Games-Tournament (TGT) type cooperative learning model in teaching mathematics on the subject of linear equations in one variable with the help of the Canva and Wordwall application salso ular tangga game.

Next, the researcher used technological pedagogigal and content knowledge-based learning media, namely the canva, wordwall applications and ular tangga game. It is hoped that the use of this media can become an alternative learning media by presenting additional objects in the form of text, sound, images, videos, 2-dimensional and 3-dimensional objects. This media will also make it easier for students to understand the concept of linear equations in one variable and one-variable linear inequality material. The use of this learning media uses students' smart devices (smartphones) which will later be used to answer assessment questions and take part in the games provided. Snakes and ladders media is an alternative learning media for mathematics learning because ular tangga is a traditional game that is still played by children to this day. Ular tangga media can be changed to be used in a learning environment.

Using a state-of-the-art cooperative learning approach that is tailored to the requirements of the students, such as the TGT-type model. Learning with this model can train students to think critically to solve the problems they face, so that the teacher no longer dominates learning. The syntax contained in this learning model is Syntax 1, Class presentation (class presentation). The teacher displays learning videos and fleepbooks that have been created using the Canva application with the titles linear equations in one variable and one-variable linear inequality with the link address: *https://anyflip.com/wsble/bbjo/*

Figure 2. Learning Video Display

This link is given to students via the WhatsApp group and students can access it. Students must really understand the material to help them in group work and games. At this stage, it is hoped that students will be motivated to like or increase their interest in learning mathematics.

Syntax 2, Form a team and study in a group (team). Students form several groups consisting of 5-6 people with heterogeneous members, based on the results of the diagnostic assessment that was carried out previously and based on the grouping of learning styles. Each group is led by a group leader. Groups that have been formed are given a worksheet.

After that, the group discusses problems, compares answers, checks and corrects mistakes in their friends' concepts if a group friend makes a mistake. In this stage, it is hoped that students will be trained to be confident in solving mathematical literacy problems.

Figure 3. Study Group

Syntax 3, Students play a game given by the teacher. The game is created by entering the names of students to be played so that one student's name is obtained who will be in the future to solve the questions on the question card obtained. The questions on the question cards are done in front of the class by selected students (Wordwall Application). Link: https://wordwall.net/id/resource/63216016.

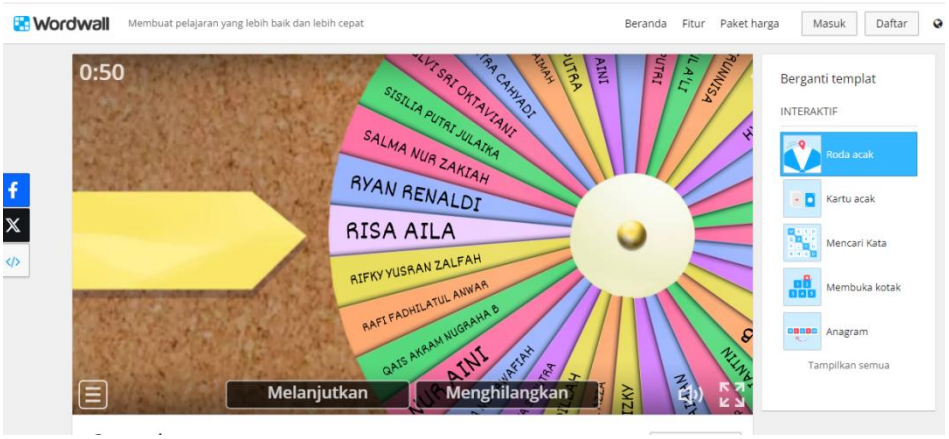

Figure 4. Wordwall Appearance

In this activity, students are expected to gain an understanding of mathematical literacy. Also, students' self-confidence in solving questions in front of the class is built. The questions given are questions based on mathematical literacy. At this stage it is also hoped that students can develop their understanding in solving the problems they face.

Syntax 4, Competition (tournament) The teacher creates mathematical literacy questions on a question card with a predetermined weight of questions/points in it. The questions are arranged from low level to high level questions. Each group has prepared with all its members to take part in the tournament. The teacher prepares learning media in the form of a snakes and ladders board, dice and question cards.

Next, the teacher reads the rules of the game that will be carried out, namely the teacher divides the students into 6 groups (5 to 6 students per group). Each group takes turns being the dice thrower and one person is in charge of moving the pawns on the *ular tangga* board. Other group members sit in groups on the edge of the snake and ladder board arena and prepare to help solve the questions on the question cards, the results of the dice rolls and the moves on the pawn board. Each group has their own turn according to the order from group 1 to group 6. There are several boxes, one of which has a '?' sign, which means the group must take the question card next to the *ular tangga* game, then write it on the paper. Has been prepared. If the pawn stops on a box with a picture of a snake (*ular*) then they will go down to a predetermined number, where as if the pawn stops on a box with a ladder (*tangga*), they can go up to the next box. The group that is the first to reach the finish box is the winner. Each group must present the questions they have received from the game. The teacher assesses the points on the questions that have been answered by each group according to the agreed points.

Figure 5. Assessment Activities

The evaluation results showed that using the Team-Game-Tournament cooperative learning paradigm improved student learning outcomes in mathematics. The results obtained from learning objective 1, namely creating mathematical models of everyday problems related to one variable linear equation correctly, resulted in 32 students getting a score more than the Learning Goal Achievement Criteria or *Kriteria Ketercapaian Tujuan Pembelajaran* (KKTP) and 4 students getting a score less than the KKTP. Meanwhile, for learning objective 2, namely solving daily problems related to one variable linear equation correctly, 34 students got more than the KKTP and 2 students got less than the KKTP and in the final formative score 33 students got more than the KKTP. and 3 students got a score less than the KKTP.

Table 1. Number of Students with More than KKTP scores

Indicator	Number of Students
Create mathematical models of everyday problems related to Linear Equations in One Variable correctly	32

Indicator	Number of Students
Solve daily problems related to Linear Equations in One Variable correctly	33

After the lesson, 92% of students received higher grades than the KKTP, according to the findings of observations and assessments of the Formative Assessment activities. These results showed how well the TGT-style cooperative learning model performed regarding teaching-learning objectives. 8% of students obtained grades during this time. The Teams-Games-Tournament (TGT) Cooperative Learning Model would improve students' understanding of mathematics.

As a result of this learning exercise, observations of students' levels of confidence were made. The results showed that 88% of students showed confidence in their abilities, 89% showed independence in making decisions, 78% showed a positive self-concept, and 78% showed courage in voicing their opinions. 54%. As shown in the accompanying graphic illustration.

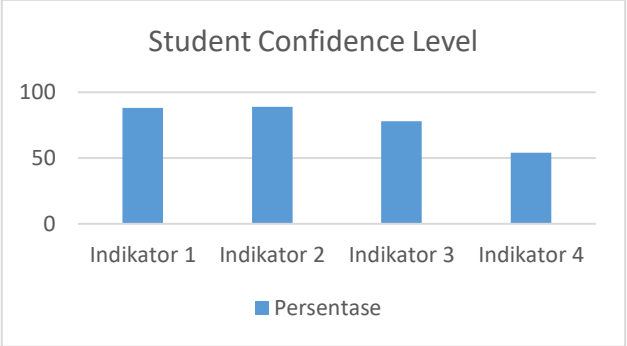

Figure 6. Percentage of Students' Confidence Level

The observations that have been made have shown that the students has a 77% degree of self-confidence. Thus, using the Teams-Games-Tournament Type Cooperative Learning Model with the Canva software would boost students' self-confidence.

Meanwhile, for the group scores of the 6 groups that collaborated, only 3 groups were able to carry out the task even though it was unclear and unmeasurable (Good), while the other 3 groups were able to complete the task, the results were clear, systematic and structured (very good). Based on the results of observations that have been carried out, it appears that 55% of students in the group are capable, the results are clear, systematic and structured in their groups to complete the tasks given. Thus, it can be concluded that group collaboration that reflects an independent curriculum can be seen through the implementation of the Teams-Games-Tournament (TGT) Cooperative Learning Model.

The observations also show that students have shown the project's goal of strengthening the profile of Pancasila pupils, who obtained a perfect score of 57%, promising 47%, and a fair 3%. The Teams-Games-Tournament (TGT) Cooperative Learning Model can help promote and highlight the qualities required in the autonomous curriculum, or *kurikulum Merdeka.*

Choosing a learning model can be the best alternative in increasing students' interest in mathematics, because there are variations in learning in the classroom that make students active so that it can increase students' self-confidence. The use of variation in learning can overcome students' boredom and monotony of learning, (Diah & Siregar, 2023; Rahman, 2021)Based on the results of observations, students' self-confidence in solving problems in one-variable linear equations related to everyday problems increases, because using the media applications Canva, Wordwall, and *Ular tangga* can motivate students' learning. This is in line with research which shows that diverse learning media can motivate student learning (Aulia, N., & Handayani, 2018 ; Dhiyazzahra, Ubaidah, & Maharani, 2023; Wahyu et al., 2024).

The application of this learning model, apart from increasing students' self-confidence, based on researchers' observations, can also improve students' character in terms of activeness in learning, mutual cooperation and critical thinking. The use of the TGT model has a positive impact on students. These impacts include: 1) learning is more varied and enjoyable so that it has an impact on improving student learning outcomes. 2). Learning prioritizes cooperation between groups, this has an impact on improving student character such as responsibility, cooperation and empathy. 3) challenging learning, meaning that students are required to be more active in answering questions in games or tournaments. This has a positive impact on students to study diligently in order to increase students' interest in learning. The use of the TGT model has a positive impact on students. These impacts include: 1) learning is more varied and enjoyable so that it has an impact on improving student learning outcomes. 2). Learning prioritizes cooperation between groups, this has an impact on improving student character such as responsibility, cooperation and empathy. 3) challenging learning, meaning that students are required to be more active in answering questions in games or tournaments. This has a positive impact on students to study diligently in order to increase students' interest in learning.(Bayu, 2023; Rif'an, 2023; Nisa & Susanto, 2022; Khamidah, 2018).

In the learning process using the TGT (Teams Games Tournament) learning model, students become active in the learning process, this is because there are games and tournaments in the learning process because elementary school students like games. Students become enthusiastic about learning, students are enthusiastic in the learning process due to games and tournaments, so that students' enthusiasm for winning games and tournaments makes students enthusiastic about learning. Knowledge is obtained not only from teacher, students' understanding is not only obtained from teachers but from fellow group members when students take part in games and tournaments because each group must compete to understand each other's subject matter so that their group can answer questions in games and competitions. Difficulties in learning mathematics can be reduced by teachers with various alternatives, such as using and combining learning methods or approaches. One of them is the game method and open-ended approach. It is important for teachers to increase students' interest in learning mathematics, because mathematics is an important lesson for real life (Nabilla, H., & Fitriyana, 2022; Fakhri Auliya, Fakhriyana, Roza, & Syawala, 2022).

Learning carried out in schools must be able to develop positive attitudes and increase students' religious beliefs. This must also happen in mathematics learning. Mathematics learning is learning with mathematics as learning material. Mathematics is a

science that is conditioned on concepts, where one concept is very closely related to other concepts. In relation to the application of mathematical concepts in everyday life, the learning that is applied must integrate with the character values contained in the students' religious teachings. In mathematics learning, teachers are not only required to be able to instill knowledge of basic mathematical concepts in students. The main task of mathematics teachers apart from providing knowledge of scientific material for students is to instill positive values (Islamic values), as well as instilling positive values (Islamic values). so that students have noble morals and have a religious nature (Imamuddin, 2023).

CONCLUSION

According to the study findings, the use of the Cooperative Learning Model - TGT has considerably raised the self-confidence of class VII students at SMP Negeri 3 Tarogong Kidul. Apart from improving student learning outcomes, the average student activity in teaching and learning activities is in the effective category. Overall, student activities can be categorized as effective because active students achieve the expected goals. Student responses to the Teams Games Tournament (TGT) type cooperative learning model show student enthusiasm and can be seen from the implementation of conducive learning activities. Moreover, it is supported by learning media in the form of wordwall applications and snakes and ladders educational games which are basically very popular with students. In fact, students seem so engrossed in learning that they don't feel that they are learning. So, time feels like it's running out quickly.

As a suggestion for future researchers in improving students' skills and increasing their confidence in solving mathematics problems, mathematics teachers are expected to provide more practice, both in class and at home. During the learning process, teachers must be able to understand the characteristics of students in the process of delivering material. One way to overcome students' mathematical difficulties is that there are many cooperative learning models, including the Teams-Games-Tournament (TGT) type. Researchers who wish to continue this research must pay attention to the shortcomings and limitations of this research**.**

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