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EXTENDED ABSTRACT

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International Jasin Multimedia & Computer Science Invention and Innovation Exhibition
i-JaMCSIIX 2023
Universiti Teknologi MARA Cawangan Melaka
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Checkers Match Game

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***Abstract*—This innovation is a combination of learning while playing for the subject 'Reka Bentuk Teknologi' (RBT). This game is a planned and structured approach to provide opportunities for all groups whether children or adults, to learn in an informal fun and free atmosphere. People who go through the process of learning while playing will get a direct experience that will give a solid and effective learning effect. Therefore, the best technique that can attract someone's interest in learning is the technique of learning while playing. Checkers Match Game (CMG) was introduced to the students to improve their skills in recognizing and remembering the terms and functions of the hardware for the programming software that has been learned. This innovation study was conducted on 5 Year 5 students. Data was collected using observation, pre-test and post-test methods to see the effectiveness of using CMG among students who have problems recognizing and remembering terms. The results of this study found that 100% of the students were able to master the learning for this topic. The activities that have been planned have helped the learning in class so that the presentation of the lesson content is stimulating to the students.**

Keywords*— *Checkers Match Game, Reka Bentuk Teknologi

I. INTRODUCTION

Pupils often confuse the names of components and rarely remember their functions in the RBT subject. We think such an issue should not continue because it will affect the level of mastery and academic performance of an individual. Therefore, we decided to take action and help them to create a game called Checkers Match Game and make this issue as a study to identify whether this matching checker game is suitable to help pupils master the skill of remembering the components and their functions, thereby increasing their level of mastery in school. In addition, it is hoped that this game can motivate each student to focus more on each subject. It is for this reason that we produce the RBT Checkers Match Game.

II. MATERIALS

Fig.1: Checkers Match Game

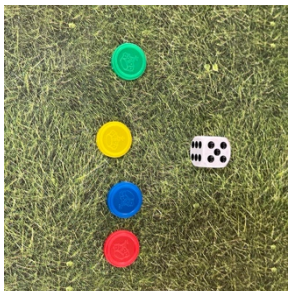

Fig. 2 : Dice and Pieces

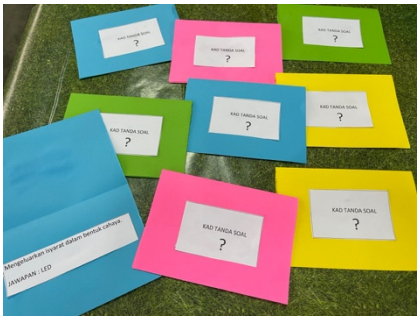

Fig. 3 : Question Cards

III. PROCESS

How to Play Match Checkers Game:

Fig. 4 : Step 1

1. Pupils are asked to throw dice first to determine their turn. The player who gets the most numbers will play first and the other players will follow.

Fig. 5 : Step 2

2. Each player places a piece on the 'START' site.

3. The player will move according to the ascending number on the checkerboard base depending on the number of the dice obtained.

4. If the player stops at the word site, the player is asked to find a picture that matches the word. And vice versa, if the player stops at the picture site, then the player is asked to find a word match for the picture.

5. If the player gets a question mark (?), then the player is asked to draw a card and answer the question presented. If the answer is correct, then the reward is 1 step forward. If the answer is wrong, then the penalty is 1 step back.

Fig. 6 : Step 6

6. The winner is determined when the player can throw the dice and get the correct number to stop at the 'END' site.

IV. METHODS

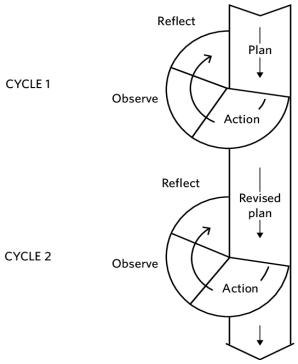

Fig. 7: Kemmis and McTaggart (1988) model

The implementation of this game uses the Kemmis and McTaggart (1988) model. According to KPM (2008), there are various action research models built by researchers. Among them are Kemmis and McTaggart (1988) model. There are four stages in this model, namely the reflecting, planning, acting, and observing phases.

The early stages of this game were deliberately built with only 2 question cards but have been improvised later by adding more question cards. This serves as a purpose to better expand the outcome from the game. Therefore, the model is implemented through the 2 cycles stated.

Fig 8: Before

Fig 9: After

V. RESULTS AND FINDINGS

The test was conducted to 10 pupils as respondents to evaluate the Checkers Match game. The findings of the research shown is in the pre-test and post-test result. The pre-test conducted showed an average score for pupils below 50%. The highest score in the pre-test was 40%, and the lowest score was 20%. The minimum score for the pre-test was 20. Conversely, in the post-test, there was improvement among all respondents. The highest score was 80%, and the lowest score was 50%. The minimum score for the post-test was 50. The difference between the minimum score in the pre-test and the post-test is -30.

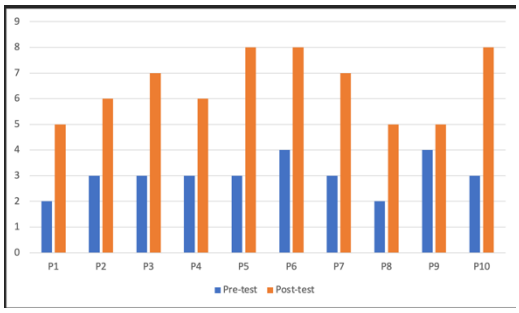

Fig 10: Pre-test and post-test result

The initial findings of the game show that pupils who have problems identifying the functions do not express any interest and feedback towards the learning process. Only pupils who know how to read show interest in this game.

Then, we ask the pupilss who have mastered the name and the functions of the components to help their friends during their free time, especially during breaks and when the teacher is away. A more significant change is that these students can finally recognize and say some name of components in this game. This proves that the game method that I introduced through the Checkers Match game has an impact and attracts students' attention and interest in the learning being conducted and is ready to give feedback.

Based on the activities carried out, it is proven that the method of playing the Checkers Match game is effective in improving the knowledge of the name and functions of the components in Year 5. Therefore, we will use this method of playing the game for out teaching in the future. The use of this kind of method gives pupils a new experience apart from teacher-centered teaching based on traditional methods.

In order to strengthen the use of this method in learning RBT, we intend to create a distinct game module containing various types of words for primary school students. The production of this module serves as a guide for myself and other teachers to be able to teach RBT in a more stimulating and effective way.

VI. CONCLUSIONS

Based on the game carried out, we have the opportunity to earn new knowledge and experience. Studying the effectiveness of teaching at school can be used as a study later. We saw for ourselves the effect of playing this game, pupils can understand and able to remember and master its components and functions quickly. Through this matching game, the pupils' learning session is more fun and interesting.

VII. ACKNOWLEDGEMENT

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VIII. REFERENCES

[1] Ahmad Mohd. Salleh (2004). *Pendidikan Islam Falsafah, Sejarah dan Kaedah PengajaranPembelajaran*. Selangor : Penerbit Fajar Bakti Sdn. Bhd.

[2] Ahmad Mohd. Salleh (2006). *Ilmu Pendidikan Untuk KPLI (Kursus Perguruan Lepasan Ijazah).* Subang Jaya : Kumpulan Budiman Sdn. Bhd.

[3] Choong Lean Keow. (2008). *Murid dan Alam Belajar untuk Program Perguruan Pendidikan Rendah Pengajian Empat Tahun*. Selangor Darul Ehsan. Kumpulan Budiman Sdn. Bhd.

[4] Shahabuddin Hashim, Dr. Rohizani Yaakub dan Mohd. Zohir Ahmad (2007). *Pedagogi Stategi Dan Teknik Mengajar Dengan Berkesan.* Kuala Lumpur : PTS Professional Publishing Sdn. Bhd.

[5] Akram Kamarudin. (2010). *Kaedah Permainan dalam Pengajaran Subjek Perdagangan dan Sains.* [Atas Talian] :http://akramkamarudin.blogspot.com/. (2011, 4 April).

[6] Linah bte Summasi.(2009). *Belajar Sambil Bermain*. [AtasTalian]:http://www.ipbl.edu.my/bm/penyelidikan/seminarpapers/2009/10%20Linah.pdf. (2011, 5 April).

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