Students' perception toward Interactive Game to Facilitate Student's Achievement

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Abstract. This research was conducted to find out the students' perception toward game interactive to facilitate student's achievement. The approach used in this research is a qualitative approach in a descriptive research. The design of this study is qualitative research. The participant in this research is eight undergraduate students' at Ahmad Dahlan University. It was used purposive sampling technique. The data collections were open ended interview as the instrument. Qualitative approaches use more open-ended approaches that ask general-level questions, and the participants can shape the possibilities responses. Open-ended interview with these key aim: to know how student's perception toward interactive game "Kahoot' and how is the students' perception toward their achievement in learning process. The result of this research showed that All participants agreed that using Kahoot! triggers positive attention and increases focus in class. That students easily focus and unconsciously concentrate fully on the material while using Kahoot, students find it easier to collaborate and interact with friends and also the teacher for problem solving development, on the other hand the intellectual intelligence of students on the content of Kahoot can be made to encourage students to explore every material taught and finally students are not bored and very enjoy learning through interactive games, this indirectly makes students more intense in receiving material. Therefore, it can be concluded that the interactive game Kahoot! has a good impact to student`s achievement.

1. Introduction

In the industrial era 4.0 the development of technology is needed for the advancement of quality and the quality of one of them in the field of education. In Technology Enhancement Learning (TEL) has the potential to improve student experience by facilitating learning independently, which can reduce the barriers experienced and is very easy to access anywhere and anytime, of the various technologies available, most have been used for teaching and learning in class as a medium to facilitate students, for example, such as interactive games online. Game based Learning is one way to provide learning experiences that can increase the participation of students' collaborative abilities in learning. The Kahoot application as a learning technology platform combines learning evaluation experiences and material understanding by combining through interactive games and equipped with a system of monitoring the activities of students (Marissa Correia and Raquel Santos, 2017). In this game design system, it can also be used as learning through learning patterns and playing online with their smartphones. Through this method students are stimulated by three things at once namely emotional intelligence, emotional intelligence, and psychomotor.

Kahoot can be used as an interesting and fun media to understand the material presented, because the game has a unique design with additional features of color, sound, and visual images. It applied in educational institutions are a technology-based method to increase student involvement and motivation for learning (Simoes, Redondo, and Vilas 2003; Whitton 2007, 2011). In educational settings, game in educational is mainly used to promote reflective learning in formative assessment tasks. It has been proven to promote effective learning environment by improving problem solving (Kristi et al, 2019), and improve critical thinking and competence in the classroom (Bicen dan Kocakoyun 2017; Dellos 2015; Karaaslan and Slaves 2012).The student opinions about the learning media it can be conclude that the success of the process in the learning can be measured by the achievement of students who can understand the material as a whole. The success can be seen from the

level of concept understanding, mastery of the material, and learning achievement. Student with a high level of understanding of concept and mastery of the material will have higher learning achievement.Having reviewed on some relevant literature which conducted this research, (Sherlock. et al, 2018) the results of their research show that the use of educational games in Kahoot-based classes is likely to minimize distractions, thereby increasing the quality of teaching and learning beyond what is provided in conventional classrooms. Other contributing factors are improved student learning including timely feedback, and games strategy. But the limitations in this study that this research focused on student's Achievement.The research problem of this study is "how the students' perception toward implementation Kahoot and how Kahoot as facilitated students' achievement?" The purpose of this study is to determine student perceptions in the use of interactive games in the classroom and to find out how interactive games can affect student learning outcomes in mastering a material.

2. Literature Review
2.1 Interactive Game
One of the determining factors for the success of learning process is the selection and the use of learning models and media. A teacher or A lecturer must master the learning models to be applied in the learning process. In implementing the learning process, a lecturer requires an innovation not only in learning media but evaluation models also need to be done innovations. With evaluation, the lecturer could measure the achievement of the success of a learning.According to Suprijono (2011: 46) learning models can help students gain an information, ideas, skills, ways of thinking and expressing ideas.

Concerning to the internet user in Indonesia is increasingly growing. With the creativity of a teacher / lecturer in utilizing internet media will give positive impact to the students in improving their understanding and learning outcomes. Learning in the classroom with technological innovation is what teachers / teachers must use. Learning by technology can be through phone cells or laptops. there are many interactive games that teachers and lecturers can adopt. Dani Wardani (2009) defines that the game is an activity that is fun and carried out of one's own will, without coercion and aims to get pleasure when doing these activities. Some literature findings explain that using interactive games in the learning process can increase the interest, level, competitiveness, motivation, teamwork, achievement, and student learning (Evans, Pruett, Chang, & Nino, 2013-2014; Lim, Nonis, & Hedberg, 2006; Herrington, Oliver, & Reeves, 2003; Prensky & Thiarajan, 2007; Ketelhut, Dede, Clarke, & Nelson, 2006; Azriel, Erthal, & Starr, 2005). Prensky and Thiarajan (2007), argue that games not only make learning styles different, unique and fun, but also support instructional training that supports the learning process.

There are many interactive online game models that teachers or lecturers can adopt. One of the interactive game models that is often used is Kahoot. Kahoot is an online game that is supported by image features, various types of questions, and of course also interesting. Kahoot game is quite simple in its use. with the support of the internet network, this game can already be used. Kahoot is a platform as combining result of a joint project collaboration between the Norwegian University of Technology and Science with Johan Brand and Jamie Brooker as the initiator (Putri & Muzakki, 2019). Quoting Kahoot's Official Websiet (2017), "Kahoot would be better played in groups, for example, classrooms. Players answer questions that have been prepared on their own gadgets or computers, while the game teacher or lecturer is displayed on the LCD screen to unite the lesson. This creates a 'campfire moment' that will encourage players to see and celebrate together. In addition to designing your own kahoot, you can search among millions of existing games". Through this Kahoot media, it will be very helpful for the teacher or lecturer and students themselves. For students, especially in improving their learning outcomes and students achievement.

2.2 Student`s Achievement

According to Phye, Gary D (1997) Academic achievement is skills or knowledge that develop in the school subjects, usually done by test or marks assigned by the teachers. In learning process, good teacher or lecturer need to assess how is the student`s progress. This can be done by measuring student`s homework. One of the main objectives of learning is so that students get what they need. By using fun learning media, it is hoped that it can improve students' understanding of the material provided, can also improve their learning outcomes and ofcourse students achievement . So the learning objectives will reach the target. Student achievement is a illustrations of the level of student achievement in terms of skills, knowledge and learning experience that is composed of learning objectives for school curriculum needs (Levpuscek & Zupancic, 2008; Nemeth & Long, 2012).

Thus, student achievement in a formal education institution can be observed from the actualization of ranking in student learning activities (Joy, Hamilton, & Ekeke, 2013; Levpuscek & Zupancic, 2008). Indicators of learning achievement can be seen from the standard values set by each educational institution and changes in the level of achievement of each student from year to year in all academic subjects in tests and assessments (Firmender, Gavin, & McCoach, 2014; Lee, Liu, Amo, & Wang, 2013; Shatzer, Caldarella, Hallam, & Brown, 2013; Swanson, Valiente, Lemery-Chalfant, & Caitlin O'Brien, 2011). In improving student achievement, it is not only the role of the teacher or lecturer that is needed. However, the role of the state or government is also very important. The most significant of the government's role in improving student achievement is to facilitate the educational institution with the various facilities needed and in this technology-filled millennial era, many educational institutions have used internet-based computer technology.

3. Methodology

The objectives of this research is to know how student's perception toward interactive game "Kahoot' and how is the students' perception toward their achievement in learning process. This study used descriptive qualitative approach. This study describes a data, facts, and conditions as they are. While the qualitative approach according to Creswell (2013) can be used to analyze and predict what needs to be done in the future and also help to overcome current problems. The content analysis method as a qualitative research method in this study. There are some steps which implemented in this study, namely (1) formulating questions, (2) sampling the selected data sources, (3) making categories that will be used in the analysis, (4) identifying sample documents that have been selected and coded, (5) designing scale and items based on specific criteria for data collection, and (6) interpret a data. The researcher also do the direct observation in the teaching and learning process in classroom activities and give interview as supporting the data. While the data that has been used in this study is in the form of words and sentences related to the data source under study, namely the interactive game "Kahoot" and some relevant documents. The participant in this research is eight undergraduate students' at Universitas Ahmad Dahlan where they are English of Education Department in the third semester.

4. Findings and Discussion

4.1 Attention and Focus

All 8 participants agreed that using Kahoot! triggers positive attention and increases focus in class. Some suggest using Kahoot to improve concentration and maintain their concentration, and allow them to take breaks in lectures, and provide a point of difference. Attention: While using Kahoot! itself is a fun activity, students say that Kahoot motivates them to pay attention during college. Kahoot placement! also motivates students to examine course material carefully to prepare Kahoot! and answer the question correctly.

> *"I guess it keeps you more aware in a way but you've got to listen throughout the lecture to know what the answer is in Kahoot! which isalso a good thing. So you're always focused if you want to do well in Kahoot!"*
>
> (Eva)

> *"with compared to using the hand out learning method, I am more able to focus through this game, because it is online based and I have to really understand the contents of the material because in working on the material there is a limited time setting, so I have to concentrate to think fast and accurately"*

<div align="right">(Sari)</div>

In this game also has a positive impact that is full attention and focus in understanding or working on a problem from the Kahoot game inside class. The results of this study are also supported by previous research which states that Kahoot can provide full experience, because of the concentration points experienced by students (Licorish, et.al , 2017). The benefit in increasing high concentration is very influential in the delivery of knowledge from a media into the brain's work system, so that students more easily remember to repeat or express the contents of the material that is in Kahoot.

4.2 Interaction and Engagement

Our analysis shows that Kahoot! gives students more opportunities to interact and engage with lecturers, colleagues, and with course material that provides an interesting and fun platform to be involved in it. All participants stated that Kahoot! positively influenced classroom involvement, and 7 out of 8 participants said that Kahoot! increase their interaction and involvement in lectures.

Use of Kahoot! it also fosters interactivity and involvement during lectures for example, by answering questions, participating in quizzes, and discussions that are triggered by Kahoot! Use Kahoot! Encouraging wider participation in the classroom compared to conventional classrooms where discussion is often dominated by a few additional students. Wider student participation in classrooms also encourages deeper involvement in the learning environment.

> *'Kahoot! A platform that gives me motivation to express the answers to what I think ... even though it's still ... I still give an idea"*

<div align="right">(Delva)</div>

Kahoot! also encourages broader and active student participation, Participants report that when involved with Kahoot! they interact more with peers around them and with lecturers during and after college than they normally do in other lectures. Participants show that with Kahoot! in class, they can decide on the level of interaction they feel comfortable with, either participating openly with friends, other classmates, lecturers or with the whole class to solve a problem about the material the lecturer has previously given.

> *"Yes, this game makes me more interactive with friends to discuss the right answers"*

<div align="right">(Meli)</div>

Garzotto (2007) revealed that Multi-player online games provide the benefits of learning at the affective level as well as the knowledge domain cooperatively. Student found to enjoy the game, always involved, motivated, and excited during the game session. For example, complementing various activities that can support playing, learning and collaborating, it can be considered as the scope of scientific disciplines. Displaying media containing audio, images and colors also shows the effectiveness of the game as an educational learning facility. (Siegle, 2015). According to them, the game motivates learning, offers directly feedback, supporting skills, and the effect of changes in motivation and attitude. Thus, motivation is given by the game. It should be taken as an opportunity to be discussed further about its use in education with a variety of topics that are more varied.

4.3 Challenge or Competition

Some 'challenges' are related to achieving goals that have uncertain results, such as the multiple choice ends of traditional games (Malone, 1980). The 'KAHOOT!' Challenge is to answer questions with several opposing answers while competing with other students to get the highest score (Wang, Zhu, and Saetre 2016) by answering correctly and in a fast time (Fotaris et al. 2016). To ensure the 'challenge' of the game motivates students, assignments or requirements must be considered

achievable by students, by requiring careful administration of the lecturer and also a different design for each material.

Six participants discussed the competitive element of Kahoot! in relation to their interactions and involvement. Many respondents liked the competitive aspect of Kahoot! It can be seen as a motivating factor for participation, encouraging them to think critically, increasing the energy level of their participation and creating lively class dynamics. Competition is seen as a powerful motivator, with one respondent describing how students like to 'do' and the other expressing their motivation to reach the top of the scoreboard and be the best in class. Having the desire to win encourages many students to prepare in advance and engage with the material

> *"... In this game, I am very challenged to defeat opponents in the class by trying to answer with the right answer, because I am ambitious to get the highest score"*
>
> (Eva)
>
> *"I really enjoyed the questions that Kahoot played, but because the other friends were absorbed in their competitive spirit, they forgot that our goal was to understand the material given"*
>
> (Dilla)

Despite positive experiences related to the competitive nature of the Kahoot! Game, two participants felt that the use of Kahoot! has a negative competitive effect on their learning experience. They mentioned that negative aspects of competition come into play when students focus more on competition and having fun rather than studying. In their desire to compete, some students rush to answer questions, not taking time to understand questions or answers.

Students' motivated to be the center of attention on screen when they work on Kahoot! This makes students fully want to attract the attention of their teacher where students are encouraged to see their names at the top of the leader board, and it directly gives the impression that students can find out about their abilities among other friends that can lead to healthy competition, and is supported by the results of previous research by Wang (2015) which states that the effect the effects of this online game competition increase attention and good competition in the classroom.

4.4 Fun and Enjoyment

As a good system and is a quick result of student responses based on games, fun and entertainment are also found in Kahoot! Data shows that respondents enjoyed Kahoot! Eight participants specifically pointed out that Kahoot! A lot of fun, the element of pleasure and pleasure underlies the positive aspects of the three themes.

> *"I don't feel bored when learning to use kahoot, because it's quite fun with good material design, color features, sound, images and video"*
>
> (Vita)

Participants said they really enjoyed the game, they liked using it in class, and they enjoyed learning because of Kahoot! From some of the participants' answers, it is supported by the statement that some respondents describe funny names in Kahoot! Addpositive for elements of fun and social learning in a game-based environment (Squire, 2011). Furthermore, aspects of pleasure and enjoyment seem to have helped a number of students overcome the barriers of interaction they face in a typical lecture environment. Kahoot! as an energetic, fun activity, the activities in the whole class function as ice breakers for many respondents.

> *"with this game, in addition to learning with fun can also improve the ability to remember the material easily compared to reading on the slide presentation and I really enjoyed it"*
>
> (Aulia)

Kahoot gives students more opportunities to engage with learning material, collaboration and also pleasure. It also helps create interesting learning experiences that are described as "fun", which contribute to the dynamics of useful and influential classroom involvement. This is a learning experience that is very different from the traditional method "conventional method" that students have been exposed to other courses (Graham 2015; Roehl et al. 2013). This finding strengthens previous research in support of the use of Kahoot! in fostering our understanding of classroom dynamics, increased involvement in the mastery of material designed by the student-teacher, and more constructive discussions with peers in the class (Plump and LaRosa 2017; Wang 2015).

5. Conclusion

Kahoot as an interactive online game-based learning media in learning can be optimized to increase motivation, independence of students, used to facilitate the process of learning evaluation and also as a student facility in achieving learning outcomes. In this study, several students' perceptions were found that could affect their learning achievement using this game, the first is that students easily focus and unconsciously concentrate fully on the material while using Kahoot. Secondly, students find it easier to collaborate and interact with friends and also the teacher for problem solving development. Thirdly, students are more eager to compete with their friends in finding the right answers by using this game, on the other hand the intellectual intelligence of students on the content of Kahoot can be made to encourage students to explore every material taught and finally students are not bored and very enjoy learning through interactive games, this indirectly makes students more intense in receiving material.

In addition, Kahoot can be used not only for learning in the classroom, but can be used as a learning task that is done outside the classroom. While, there were some participants who mentioned that there were negative impacts and also shortcomings in implementing Kahoot. The first is in this game sometimes only focused on the level of competition without realizing that the main goal was understand the material and finally the limitations of the internet network that could influence students in doing their assignments to completing the material in the Game Kahoot.

Acknowledgment

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