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Utilization of Zoom Cloud in M3D (Maze 3D) Game-Based Learning to Develop Early Childhood Social-Emotional Skills

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Abstract. The diversity of educational game tools has unique and interesting functions in learning in Early Childhood Education. Learning media integrated with information and communication technology have been developed so that they are widely available and easily accessible. E-learning applications that are commonly used today use the Zoom application. Socio-emotional development of early childhood is the level of interaction of children with other people ranging from parents, teachers, friends and the wider community. This research approach uses a qualitative approach. While this type of research is a case study. Primary data includes data obtained through interviews with teachers, parents and students. Secondary data is data obtained in the form of documents and archives from related institutions and from other written sources. Data collection techniques include; observation, interview and documentation. Data analysis uses three channels, namely data reduction, data presentation, drawing conclusions/verification. Checking the validity of the data using the techniques of credibility test, transferability test, dependability test, and confirmability test. Games-Based Learning through Zoom Cloud is learning that should be appreciated and needs to be developed. Games-Based Learning through Zoom Cloud has a large enough influence to improve the emotional development of early childhood.

Keywords: Zoom cloud, M3D, game-based learning, social-emotional skills.

1. Introduction

Educational games and animation media are now seen as effective learning tools [1][2]. The use of educational games as a tool to provide material concepts to students with play and education aspects is widespread. The diversity of educational game tools has unique and interesting functions in learning in Early Childhood Education. Educational game design is a complex endeavour because educational games are expected to be as interesting as commercial games that are designed only for entertainment. Educational game design must provide players with learning experiences related to the educational domain outside the game itself [3].

One such educational game tool is the Maze. Maze game is an attempt to make new discoveries in the world of children's play and can be used as learning media and a means to attract students' attention. Educational games are believed to be effective alternative media to support teaching approaches in

terms of educator responsibilities, such as inspiring students to learn, teaching them to love learning, and making learning fun [4].

This game aims to determine the right path to achieve the specified goals. Cultural games over the long term help to consolidate concepts taught in school [5]. Educators can use games for various purposes such as reinforcing previously learned topics, teaching new concepts and motivating students to participate [6].

In addition, the Maze game can stimulate all aspects of the development of children, one of which is the social-emotional aspects of early childhood. Children build their mental abilities while playing games. Children will be very critical, very logical about various things. In addition, early childhood can argue about things for themselves and find things for themselves and this can be linked to the outside world not only in the classroom [5]. The game implemented is a game that serves a major purpose that goes beyond the pure entertainment aspect. Most common in this field is digital educational/learning games, which represent e-learning technology that is increasingly being used [7].

The development of technology which is rapidly increasing now has a significant impact on the world of education, especially in the scope of the sustainability of the learning process for young children. 21st Century students are considered digital natives and computers are a part of their daily lives. Students start using computers before they even attend formal education. In addition, students are significantly accustomed to many computer functions because they are accustomed to playing computer games from a very early age [8].

Learning media integrated with information and communication technology have been developed so that they are widely available and easily accessible. The development of the information and communication technology sector as one of the products that change according to the present age to offer new things for education [9]. One of the advantages of modern information technology is that it can carry out teaching and learning activities without the presence of learners. That is, students can learn in different periods and locations, as well as long-distance interactions with learners [10].

A key aspect of online teaching is the sense of community and how this community develops within the boundaries of online instruction [11]. The e-learning media that can be developed for pre-school age is e-learning. The website can contain learning pictures, audio and videos. In addition, the website also has interactive applications, educational games, and simulations.

E-learning applications that are commonly used today use the Zoom application. Zoom application can be used as a communication medium that is very supportive for distance learning. Academic achievement and cognitive, emotional and social aspects of perceived learning are influenced by moderate levels of naturalness (face-to-face, one-way and two-way video conferencing) and by students' personality traits (extroversion-introversion and emotional stability-neuroticism) [12].

Socio-emotional development of early childhood is the level of interaction of children with other people ranging from parents, teachers, friends and the wider community. Early childhood environment is an environment where young children interact and form relationships with peers and adults through play and learning activities [13]. In general, early childhood social-emotional development varies.

The development of strong social-emotional competencies in preschool is needed for successful interactions with peers and adults, and these interactions can lead to better school adjustment and academic success. In contrast, deficiencies in early social-emotional skills are associated with behavioural problems such as aggressive tendencies, intimidation, and poor problem solving [14].

Some children can easily explore their abilities when dealing with others, can interact easily with their friends and teachers. However, it is not uncommon for children who are still unable to be confident in their abilities (shy) [15]. In this case, the teacher still takes a special approach so that his abilities can be explored.

Social-emotional learning skills can be improved through teaching desirable behaviour patterns, and also through preventing unwanted behaviour patterns [16]. To explore the ability and confidence of children can be done through the use of educational play tools. Educational game tools are believed to be able to develop social-emotional abilities of early childhood.

2. Literature Review

2.1. Zoom Cloud

The increasing bureaucratization of pedagogic institutions and the technological effects of educational research and forms of knowledge tend to erode the understanding and praxis of pedagogical competence in everyday life [17]. To overcome problems caused by distance to carry out daily learning activities for students, office workers, even students can use the Zoom application. The Zoom application complements classroom teaching and facilitates a blended-learning approach that combines online digital media with traditional classroom methods [18].

Zoom Cloud is an application that supports the communication needs wherever and whenever with many people without having to meet physically in person. Zoom Cloud is an application that facilitates the learning process of distance communication. Zoom is a communication application using video. The application can be used on a variety of mobile devices, desktops, to telephones and space systems. More details, this application is used for video conferencing which is easily installed on PC devices (personal computers), laptops with webcams, and android smartphones. The Zoom application has many features that can be utilized. Among them are better screen quality, high video quality and can be done on Android devices by sharing screens directly and quickly. This application allows sharing site addresses, Google Drive, Photos, Dropbox, document files and much more [19].

This application can show participants who are webinars or interactive. No less interesting, the application can easily be connected to any device. For example, Android, iOS, Windows, Mac, telephone, H.323/SIP space system and Zoom Presence. The electronic learning conditions carried out through Zoom video conferencing enable natural and spontaneous communication [12].

How to use the Zoom application is fairly easy. Ease can be obtained by the features that can be used for telephone, sending messages, invitations, emails and company contacts. In addition, it can also send a text to groups, images and audio from the cellphone to the desired computing device. Another plus is there is a driving mode, the existence of Wifi, 3G and 4G LTE networks. Contact status can be seen availability and not [20].

That's how the zoom application can bring together many people in one application space simplifies and shortens the time and can communicate even over long distances. The practice of e-Learning requires the teacher to consider the following aspects: (a) the teacher enters into a collaborative agreement on the goals, routines and activities with students; (b) the facilitator personally models critical thinking; (c) the facilitator develops/identifies and teaches students critical thinking, and (d) students form communicative interactions to encourage thinking [21] [22]. Despite the challenges, the integration of the distance teaching approach has enhanced the learning experience among students.

2.2. M3D (Maze 3D) Game-Based Learning

Playing is very important for children to develop physical and spiritual children. Games generally add knowledge to children. Games help in concept formation [5]. So, games are usually important for

every learning situation. From this epistemological perspective, games are often claimed to have high educational potential, and studies tend to show a positive correlation between game activities and learning [23].

Play is an immediate spontaneous activity where a child interacts with other people and/or objects around him. Educative games are interactive approaches to enhance learning and active motivation and encourage teamwork [24] [4] .

Play activities are carried out happily, on their own initiative, using imaginary (imaginative) powers, using as many senses as possible and all members of their bodies [25]. With the application of educational games for teaching and learning, the need for accounting for game learning experiences also arises in the context of educational assessment [7].

Educational games can be categorized as serious games, referring to the terminology of serious games, namely computer games and simulation approaches and/or technology, which covers almost all non-game industries. Serious games cover all aspects of education, which teach, train, and provide information, at all ages [26]. The benefits of a serious game in education include; (a) allows students to experience situations like the real world; (b) involve the user in a pedagogical journey; and (c) enables increased self-monitoring, problem recognition and problem-solving [23].

One and the main benefits of play is to develop children's social and emotional abilities. Playing not only makes learning more entertaining but also encourages student participation in class and fosters their attitude towards learning [27]. Game-based learning is an innovative educational paradigm that utilizes games as a model for transferring learning. Educational games are considered to have the potential to attract students to any topic, allowing active participation in the learning process [28].

Classification of game-based features includes: (a) Feedback that is to give students specific, intelligent, and motivating feedback; (b) Incentives aimed at promoting aspects of bonuses and rewards that have a direct effect on students' self-efficacy, involvement and interests; (c) The difficulty of the task is the variation in the level of difficulty of the task and adjust it to the skills of students; (d) Controls to monitor and manage the environment, and (e) Environment that focuses on the design and type of environment [29].

Some pedagogical advantages of educational games include: (a) Encouragement of students to take a problem-solving and constructivist approach to learning; (b) Instant feedback to correct misunderstandings and promote the formation of concepts so as to increase students' understanding of a field of study; (c) Increased information retention through learning by playing games; (d) Assistance in the acquisition and development of cognitive abilities not formally taught in education; (e) Fostering collaborative learning among peers; (f) Encourage deep learning by arousing student curiosity about certain subjects; and (g) Turning entertaining games into productive games and expanding learning into games [30].

2.3. Social-Emotional Early Childhood

Development of social-emotional skills begins in infancy and continues in childhood when children begin to develop relationships with peers and adults in various environments [14]. Social ability is the ability of children to manage their emotions with others so that children can interact well with peers or with adults in the surrounding environment.

Social and emotional competence is needed to successfully navigate the present environment and the environment in the future [31]. Social competence includes a combination of skills that support effective social interaction between a person and his environment. Emotional competence involves

understanding emotions in oneself and others and being able to control and express emotions that are appropriate to the situation in a socially acceptable way [13].

When the child is 3 years old, the child's social-emotional development has begun to be complex. This can be seen from their ability to carry out group activities such as playing with their peers [32]. Teachers and families support children to develop social and emotional competence through interactions that support and nurture, stimulate the environment and learning opportunities, and promote interaction with peers and siblings [13].

The importance of social-emotional development in early childhood in education is very influential in the child's golden age. The more often the child's social behaviour is trained, the better the problem solving will be [33]. There are five sets of social and emotional competencies that are interrelated, each consisting of various skills, abilities, and knowledge including; self-awareness, self-management, social-awareness, relationship skills, and responsible decision making [34].

Inefficiencies in these skills affect the acquisition of new skills, learning, and quality of life. Social-emotional learning skills are skills that are needed in various fields ranging from social life to academic life [16]. This social development includes two important aspects, namely social competence (children's ability to adapt to their environment effectively) and social responsibility (children's commitment to their tasks, respecting individual differences and paying attention to their environment).

Building a strong social-emotional foundation in an early childhood environment is not an easy task. The implementation of the social-emotional philosophy of a program takes place differently in each classroom [35]. Of course, it is necessary to have positive interactions and relationships between teachers, parents and children. Educators are increasingly encouraged to implement evidence-based interventions and practices to address children's social, emotional, and behavioural needs that exhibit problematic behaviour in early childhood environments [36]. Given the nature of social-emotional learning during the early childhood years and the lack of a set of core evidence-based practices in the early childhood literature, the selection of teaching practices that foster positive social, emotional, and behavioural outcomes for children in early childhood settings can difficult.

Childhood experiences have long-term effects on brain development and hence cognitive and social-emotional skills that promote children's school success. School readiness includes children's physical well-being and motor development, social-emotional development, learning approaches, language development, and general cognition and knowledge [37]. Three structured program improvements focus on different strategies including training teachers in delivering classroom management procedures, improving children's skills to understand and respond to emotions, and a series of game-based activities designed to support self-regulation [38].

Various positive effects obtained from learning by playing include feelings of happiness, interest, creative, even having a direct experience that can be applied in the environment of everyday life. The level of intelligence of a person depends on a particular place and culture, thus, resulting in various ways of thinking and individual intelligence. Emotional intelligence will have an impact on forming more realistic thinking in supporting the future [39] [40].

Social-emotional development for young children including development capacity in terms of; (a) forming close and safe adult and peer relationships; (b) experiencing, managing and expressing various emotions; and (c) exploring the environment and learning—all in the context of family, community and culture [41]. Social-emotional development is also clearly related to the concerns and traits identified by his colleagues such as empathy, respect, and respect for diversity.

3. Research Method

This research approach uses a qualitative approach. While this type of research is a case study. Primary data includes data obtained directly from observations at the research site and through interviews with teachers, parents and students. Secondary data is data obtained by researchers from research subjects in the form of documents and archives from related institutions and from other written sources.

Data collection techniques include; observation, interview and documentation. Data analysis uses three channels, namely data reduction, data presentation, drawing conclusions/verification. Checking the validity of the data using the techniques of credibility test, transferability test, dependability test, and confirmability test.

4. Result and Discussion

4.1. M3D Game-Based Learning through Zoom Cloud

Games-Based Learning is a form of learning that utilizes electronic media, information, and communication technology (ICT) that enables learning material to be delivered to students without the limited learning process in space. Games-Based Learning through Zoom Cloud is developing so rapidly that making distance learning activities will be easier, more effective and efficient. This program is supported by a number of concepts including adequate information technology, planning, administration, management and economic tools. Games-Based Learning through Zoom Cloud is a type of educational game learning process so that the material is delivered to students using internet media or other computer network media through the Zoom application.

Games-Based Learning through Zoom Cloud is packaged in a dynamic and attractive multimedia format. The development of these devices is supported by the development of a number of supporting hardware. One of the products that have an influence in the presentation of digital presentation materials today is the development of monitors, video cards, audio cards and the development of digital projectors that enable presentation materials to be presented digitally for various interests in a variety of conditions and situations, as well as room sizes and various audience characteristics. Of course, this has led to major changes in the current trend of presentation methods and can be utilized to teach information and communication technology through the use of the Zoom application.

Games-Based Learning through Zoom Cloud is used as a medium in learning that has a function as a tool to clarify the message conveyed by educators. The media also functions for individual learning where the position of the media fully serves the learning needs of students (media pattern). The e-learning method can be applied to any school, not only in high schools such as universities but starting from elementary schools can also use this learning system. Because the benefits are clearly felt by the existence of Games-Based Learning through Zoom Cloud for the advancement of education in Indonesia.

There are various educational game tools, one of them is maze 3D game. Maze 3D is a simple game that aims to determine the right path to achieve the goals set. In the educational maze 3D game children must find several paths in the parts of the maze in the form of boxes that are passed for each row or each column. There are several forms of mazes for children such as the shape of a circle, searching for traces of the house, finding a way out for school and others. Maze educational toys are an attempt to make new discoveries in the world of children's play. At first, for the game in practising strategy or training to find a way out a lot of its application in the world of education is also used as a learning tool for children. And for this game includes classic items that become mandatory to be prepared in each school. Besides that, the advantages of this item are 1 form so the possibility of

losing the toy components is low. The maze 3D is a toy that teaches to find solutions, equate and practice patience.

Research supports the findings: communication is very important in online classes; building a community of learners providing support to all involved; and students must be responsible to themselves, the class and to the teacher.

4.2. Utilization of Zoom Cloud in M3D (Maze 3D) Game-Based Learning to Develop Early Childhood Social-Emotional Skills

Presentations that use computers are not only to be presented using digital presentation tools in the form of multimedia projectors (such as LCDs, infocus and the like) but can also be presented through other projection equipment such as overhead so that institutions or agencies that do not yet have digital presentation equipment but already have both of these tools, can utilize the presentation material through the computer to the fullest. In the point of view of the learning process, presentation is one of the learning methods. Its use occupies the highest frequency compared to other methods. Various tools developed have had an enormous influence, not only on the development of practical activities in learning presentation activities but also on the underlying theories of the latest developments in the field of presentation with computer aids have caused a complete change in the implementation of learning. Among the demands for increasing the ability and skills of teachers in processing learning materials into computer-based presentation media.

The teacher participating in the Games-Based Learning through Zoom Cloud learning found that students had produced high-quality work and systematically met the given deadlines. Students spontaneously make their work creating a shared document system (using Dropbox or Google Drive) to allow easy peer-to-peer correction. Furthermore, after correcting student assignments, the number of corrections for teachers is greatly reduced. Therefore, teacher motivation is similar to the motivation of students themselves who are equally proud of creating durable products that aim to promote the work that has been achieved.

3D maze game is useful for developing all aspects of child development. When playing with this maze game, the child will be trained in his emotional social development, the child is able to help his friend find a way to go somewhere, patiently waiting for his turn to play.

This 3D maze game can be played for all ages. But this game we made from children aged 3 years to 6 years. In this 3D maze game, we introduce the concept of knowing place names. The names of places that children must know their functions and uses. The concept that we make it simple and interesting can make children quickly memorize the names of places and also make children know the purpose of coming to the place.

Maze 3D games are very useful for teaching place names and their functions and uses. As for some of the benefits of this game, namely; (a) Makes it easier for teachers to deliver lessons to students about place names; (b) Making students happy and not easily bored in following and receiving lessons, and (c) Strengthen students' memory of place names and their functions and uses.

Some factors demand to adjust the approach to each child and various classroom situations, questions or doubts from some parents, lack of response and incomplete communication from the program administrator, differences between the administrator's and teacher's views on the implementation and efficacy of Conscious Discipline, and mutual demands contrary to achieving academic and social-emotional results.

Emotional Social Development of Early Childhood can be applied with various forms of efforts, one of them by using Games-Based Learning through Zoom Cloud. Games-Based Learning through Zoom Cloud is useful for developing all aspects of child development, one of which is on the child's emotional social development. When children play while learning with Games-Based Learning through Zoom Cloud, children can practice their patience in finding their destination. In addition, through Games-Based Learning through Zoom Cloud, children will be encouraged to help their friends find solutions to the learning goals, so that unwittingly can slowly lead to children's ability to socialize.

Games using Games-Based Learning through Zoom Cloud actually have a lot and are often done by teachers. But in general, this game uses only plain sheets of paper so it is less attractive to children. Games-Based Learning through Zoom Cloud can be applied with various forms can use the Zoom application.

Games-Based Learning through Zoom Cloud has a positive impact on the learning process of Early Childhood, the ability to use technology and communication and collaboration between children and parents can be established properly. Success in an effort to improve emotional social development through Games-Based Learning through Zoom Cloud can be viewed from children's activities. Children will be more confident and able to control their emotions and be able to socialize with their peers. Through Games-Based Learning through Zoom Cloud socially children are more active, more creative, richer in vocabulary, smoother in speaking, and happier in carrying out their duties. In addition, Games-Based Learning through Zoom Cloud can improve cooperative behaviour and help children not to behave aggressively. Of course, all this is determined by the quality of collaboration between parents, teachers, and the environment.

5. Conclusion

Games-Based Learning through Zoom Cloud is learning that should be appreciated and needs to be developed. This Games-Based Learning through Zoom Cloud has benefits both from the teacher and from the students. Maze 3D educative game is an attempt to practice strategy or train to find a way out. In the world of learning, maze games are used as learning aids for children. Maze games can stimulate all aspects of development. One of them is the aspect of emotional social development. It takes many educational experts to develop this learning system so that later it will be an appropriate alternative in the ICT era. At this time, Games-Based Learning through Zoom Cloud in schools is still limited to additions and supports conventional learning. As for substituting the learning model, it requires certain conditions and conditions.

Games-Based Learning through Zoom Cloud has a large enough influence to improve the emotional development of early childhood. Through Games-Based Learning through Zoom Cloud, children's social abilities are more explored. Early Childhood Emotional Intelligence is not owned naturally by children but must be grown and developed by parents and early childhood educators.

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