CHAPTER I

INTRODUCTION

1.1   Background of the Study

Teaching has given many experiences for the teachers since each of the students has different characteristics and pace in learning. According to Sulaiman (2019), teacher has to prepare different media and strategies to make the students interest and enthusiast during the teaching and learning process. Furthermore, teachers skill would be more challenging in teaching the students with special needs since it is obviously need different treatment and different problem solving(Rao,2006). Moreover, Murray (2015) also stated that teaching students with special needs makes the teacher work as the core of the education for the students. Students with the special needs which later dicsussed in this paper is the students who have autism. Students with austism are students with learning dissabilities who have trouble in learning and using information. Kemp (2019) mentioned that they understand things differently. Rao (2006) stated that autism spectrum disorder (ASD) is distinguished by enduring difficulties in social communication and interactions across many settings, accompanied by the manifestation of limited and repetitive behavioral patterns, interests, and activities in afflicted children. Teacher cannot directly explain the same material both for the normal students and students with ASD, because their brain is working differently. Moreover, they require special education packages from professional teacher and environment to meet theor needs. Furthermore, education is the right for every human that transmitting values and knowledge of society. As the part of the society, every students has the right to recieve education regardless of their condition.

Teaching students with autism tend to give some challenges for the teacher to facilitate and prepare the media during the teaching and learning. According to Sommerton (2022), children with autism faced several problems, including impairment of social skills, difficulty processing information, sensory processing difficulties, communication difficulties, and anxiety. Specificaly, Boyle (2022) argued that autism spectrum disorder is not a kind of disorder but

considered as a lifelong and neurodevelopmental disability as it is called as Intellectual Disabilities (ID). Autism children find it difficult in responding and understanding the social cues during the social interaction. This is also supported by American Psyhiatric Association (2013) which stated that they are highly individualised and heterogeneous with the present sympthoms. In line with Boyle (2022), some children with ASD may performed in above-average cognitive or even showing better verbal abilities. In contrast, some others may found a low performance on their behavior, cognitive and language skills affacted by their psychiatric and medical comorbidities. This makes them hard in maintaining the relationship. Matson (2009) in his research stated that around 50-70% ASD kids have the intellectual dissabilities, social, communication, adaptive skills, and cognitive problems. Furthermore, these problem create the frustration for the students that lead to decrease students academic performance.

As stated by Arciuli (2021), autism kids have the difficulty in processing information. This leads to issues with organizing thoughts, planning tasks and strategies. Carlsson (2019) mentioned that the brain has work differently since the it is hard for the sensory to do the processing stage. According to Rasyid Mahayuddin (2019), special education and problematic children including autism kids are difficult in focusing on the lesson since their imagination is limited. This leads to a difficulties in reading and writing because they found it is challenging for the autism kids.

Fossett (2004) stated that autism kids are individuals with high visual abilities so this can support the students learning style. It is also aggred by a research from Rao & Gagie (2006) that children with autism spectrum disorder are more into pictorial, touch, movement, and sounds methods. Edelson (2019) stated that they enjoy watching television or video, looking for books, and observing objects. Further, it makes the autistic students rely on non-verbal communication, including gestures, movements, and facial expression. That is why they are hard to get understood by the others. In the other sides, children with autism also have a difficulty in concentrating, trouble with problem solving skills, difficult in organizing task and transititions between activities. To sum up, those problems faced by the autism kids are the things that need to be concerned

by the teacher but in short, even though they face those problems in communication also struggling with the behaviors, they were able to receive information visually.

Despite the potential challenges they may experience, individuals diagnosed with autism have the right to participate fully in all aspects of their lives, including the process of acquiring proficiency in the English language (Yousif, 2021). The widespread usage of English as a global language may be attributed to notable technological breakthroughs and the onset of the Fourth Industrial Revolution. Furthermore, it is expected that the implementation of inclusive education would have a significant impact on the development of essential abilities in children with autism, enabling them to succeed in their future endeavours. The process of language acquisition is a continuous and sequential undertaking that begins with the initial stage of acquiring vocabulary (Rakhmanita, 2020). Based on scholarly literature, a comprehensive mastery of vocabulary, sometimes referred to as word knowledge, plays a crucial role in several aspects of language competency and achievement in academic settings (Puspitarini & Budiyanto, 2010). The process of language acquisition is considered to be of great significance in terms of vocabulary building, according to scholarly viewpoints. Meanwhile, based on the preliminary observation at October 18th 2023, in the process of acquiring the languge they were not facilitated with a proper media but using only text book which is hard for the autism kids to deal with it.

Above many challenges and problems faced by the autism students, it is still the responsibiliy of the teacher to facilitate and find a way to provide a proper education for all students no matter how are the conditions. This is called as the inclusive education. According to Ayu (2019), inclusive education aims to address these challenges by providing opportunities for students with autism spectrum disorder to learn and participate in mainstream educational settings. The process of education possesses the capacity to transform a child's perspective on the world, thereby influencing the world at large. The term "inclusion" is employed to encompass all students, since an inclusive education fosters a secure and supportive environment wherein every kid may engage in

learning. Inclusive education also the practice of providing more opporunities for students with special educational needs to participate in regular classroom settings, while keeping special education options open for those who require them. The most significant misunderstanding is the relationship between social inclusion and inclusive education for children with special needs. Commonly, when people talk about "social inclusion," they mean working towards a more equitable and welcoming society in which everyone contributes meaningfully. To educate students with a wide range of differences, challenges, and needs is what is meant by "social inclusion" in education. Furthermore, many inclusionists see inclusion as an ongoing endeavour. In order to create schools that welcome all students, it is necessary to restructure the institution as a whole. However, the ultimate objective of complete inclusion is implicit throughout this procedure since the wide variety of contexts in which the word "inclusion" is employed, it is crucial that its meaning be consistently communicated.

To support the inclusivity in education, media plays an essential role in helping the teacher. Since we are facing the 21st century learning which is the era of the technology, educators are tend to insert this to the teaching and learning process and make the students get used to it. It is not an exception for the autism kids to be apart from the use of the technology when it is proven that it is beneficial in helping students acquiring new vocabularies. According to Abduljabar (2021), Vasyl (2022), and Maulana (2020), autistic kids need a software/application to help them in acquiring the vocabulary within the aims to communicate and improve their foreign language mastery. Further, Maulana also stated that autistic kids tend to focus on their world and has their own ways to communicate using unique meaning which in this case most people would not understand the meaning of those words they were producing. In line with the condition, Vasyl stated that in order to help the kids with autism we need better learning media but nowadays we still limit by the learning media developed to help the autistis children to learn and improve their language mastery. Somerton (2022) reached a conlusion that most media developed are focusing on facilitating the public schools. As those reasons are coming up, the writer decided to conduct this research to help the autistic students to gain more

exposure in English vocabulary and help the teacher who teach the autism kids facilitate the students.

Teaching vocabulary has to be fun. In inclusive education, the teacher used several media related to technology combined with the conventional media, namely visual media, audio media, and audio visual media. Those types of media used as an instructional media to direct the students in comprehending the lesson. Teachers and researchers has been inventing more and more media to make the lesson even more fun and interactive especially when it comes to the special needs students. To facilitate both special needs and other students a proper media, the aspect of technology should be inserted. A research by Odunukwe (2019) stated that the students with ASD learn better with the visual media since pictures worked as their first language and words are their second language. They may also showed a better response from the information that presented visually (McCorkle, 2012; Padmadewi & Artini, 2017). In addition, Odunukwe also mentioned that the use of the technology may support this autistic students in improving their play skills, decreasing the challenging behaviors, providing the video models, and helping them to overcome the speech prolem. In fact, the visual abillities is only one factor in the decision to insert media based technology, meanwhile the accessibility and entertainment value also factored heavily. Both kind of the students has to deal with the use of technology in their learning process, because at the end of the day both students has to survive side to side with the technology in their life. Those strengthen the idea of creating various media to enhance the learning process among the students with ASD, such as using interactive whiteboards, text-to-speech software, smartphones, tablets, and digital editing tools. Those media used to give instructions to the students also presenting information in an interesting way so that the teacher may catch their attention.

Since the technology inserted to the learning process, other challenges comes up to the surface on how to pack this new variable into the education system and attract the students to enjoy and eager to learn not because of the teachers' order but as this learning media drag them to do the action. According to the challenge, gaming element could act as the solution for the students in

learning English vocabulary. There also some dilemmas that appears during the process in which considering the elements and to make sure those elements are supporting the learning process, thus it would require better collaboration between the educator and the developer. Azawi (2016) defined educational game as a game which developed and designed for the teaching and learning process. Combining the educational and fun elements in this term showed affecting students' engagement and motivation. Research has indicated that children diagnosed with Autism Spectrum Disorder (ASD) exhibit a higher propensity to direct their attention towards instructional content that is provided in a multimedia style. This format often encompasses various elements such as digital sound, visually vibrant graphics, and accompanying animations(Khowaja & Salim, 2019). Therefore there were less media developed for the autism students. Adolescents with autism may find relief from their social and behavioural difficulties by using technology-based assistance aids designed for fun. Besides, Lucas (2019) stated that it is essential to pay more attention to the user's limitation and the accessibility in building the game so that it can work as the aim of the game. When technology is well-designed, it provides consistently defined tasks and visually cued instructions, which can decrease misconceptions caused by many spoken instructions and increase independent functioning.

The relevance of vocabulary acquisition is highly crucial in the field of language learning, specifically in the domain of acquiring the English language (Hashim et al., 2021). The instruction of language is introduced to pupils inside educational institutions, commencing from the initial levels of education, such as kindergarten, and continuing throughout their academic progression in university. This is strengthen the urgency of the game based elements to be inserted in the teaching and learning process to help the students in learning the English vocabulary. Several research has been conducted about the use of game based learning in teaching English vocabulary. Fracisco (2019) in his research has mentioned that the autism kids showed a positive attitude towards the use of mobile device in supporting their language learning process. Supported by the Geoffrey (2019), the use of game in teaching autistic children help them to develop skills and assist simple development.

According to the preliminary observation and interview done by the researcher in SLB N 1 Denpasar, it is found that they were lack of media and the students are learning through the conventional media such as book or worksheets. They had introduced them how to use handphone and computer, so it would be easier for them to use the media which would be developed by the researcher. In fact, it is showed that autism kids needs more media in learning especially when they have to learn English vocabulary.

The development of English language proficiency can yield enduring advantages for both typically developing children and those diagnosed with autism spectrum disorder, particularly regarding their educational achievements and future professional opportunities. However, Whalon (2018) stated that attaining a thorough understanding of the English language would prove to be rather difficult without a strong command of its lexical component. Furthermore, Carlsson (2019) hypothesized that a thorough examination is necessary to investigate and evaluate the challenges faced by children diagnosed with autism spectrum disorder in their development of English vocabulary. Further, this is become the reason for the researcher to come with an idea to develop an educational game in teaching English vocabulary for autism spectrum disorder students, named AUTOKIDS which is stands for Audio Visual Media for Teaching English Vocabulary for Kids with Autism. Besides from the answer of proposing this media which is in term of game for the limited English teaching resources and media for the teachers, this AUTOKIDS utilize the process of learning English for the autism kids to help the teacher find out so that they may stimulate the autism kids to learn English vocabulary more optimally. Further, the would have more time to learn English in a fun and interesting way with more chances to develop their knowledge and understanding. Thus, learning English vocabulary from games would make the students more engage to the learning rather than only listening to the teacher's explanation.

According to the background described previously, Autokids that can be use as a media in teaching English vocabulary is essential. These work as the reason of why this research is conducted in order to develop a media in the form of Autokids for teaching English vocabulary dor the autistic students. It would

be developed for the elementary students of SLB N 1 Denpasar in the academic year 2023/2024. The development of that media was designed based on the preliminary observation in the school and with the teacher, also considering the syllabus analysis, SLB N 1 Denpasar has 104 students with autism, some others are also special needs students. This school have been trying to use the inclusive education system by providing media but somehow they were still facing several problems, namely education, students' interest, and students focus. In term of education, the students are not learning English in the elementary level but suddenly has to learn this in junior high school which is hard for them to catch up the materials. The students were also less interesting during the process since the media used were only focusing on the books, worksheets and power point provides by the school. They also mentioned that it worked somehow but the students were easily lost their focus during the lessons.

Since the use of the technology during the teaching and learning process are nowadays necessary for both students and the teacher also the role plays in 21st century learning, society, prioritizing technology based interventions, and support for autism agenda, this research aimed to help both teacher and students to be facilitated by the new media developed. To fill this gap, the goal of this study is to provide a support for the students with ASD, insight for the researchers, families, and practitioners. Besides, the students extend the literature by collecting the information about ASD and media that would help the students in learning English vocabulary. Additionally, this examination aims to identify the necessary support systems needed to enhance their progress in this specific area. Lucas (2019) stated that game-based approach has to designed the game based on the needs of the students to support their objectivity, visual appeal, memorization, and their communication. These supporting research proof that the use of this website based vocabulary game which later also called as media since this is worked as the media in teaching and learning process would help the students in enhance the engagement and also help the students with ASD in acquiring the English vocabulary. It can be seen also that the handling students with autism is not easy, the teacher need to be extra patience, creative, and use a suitable method and media in learning. As a note,

achievement is not the goal of this research, yet to help both teacher and students to learn English vocabulary earlier. Thus, the goal of this study is to provide a support for the students with ASD, insight for the researchers, families, and practitioners. Besides, this study extends the literature by collecting the information about ASD and media that would help the students in learning English vocabulary. Additional, this research aims to identify the necessary support systems needed to enhance their progress in the specific area.

1.2 Problem Identification

Individuals diagnosed with autism spectrum disorder (ASD) often encounter challenges pertaining to social interaction and communication. These issues may manifest in several ways, including lack of vocabulary, language and hearing impairments, struggles in comprehending spoken language, and the tendency to repeat others' speech. In contemporary education, there is an increasing expectation for teachers to possess the ability to effectively cater to the needs of students who fall within the autistic spectrum. Despite the optimistic outlook, it is important to note that there is a limited range of instructional strategies and methodologies available to facilitate the academic success of children with autism spectrum disorder (ASD) in mainstream educational environments. Based on the preliminary observation and interview, the principal said that the teacher only used power point as the media in teaching the students. They stated that it is hard for the teacher to develop a certain media everytime they went to the class. From the result of the preliminary observation, it is found that the students are tend to not focus and busy with their imagination. In fact, various medium is needed to teach students with autism. In addition, it was not easy to find the approriate media for students with autism since the media is different with the reguler students. Besides, the students also stated that the teaching process is not fun because the teachers are mostly explaining the material while the students answering the questions. Focusing on those problem, it is necessary to insert the elements of technology in the teaching and learning process especially in the process of acquiring English vocabulary by the autistic students. Aside, the autistic students able to learn visually since they are a visual learners. They also have a learning strengths, namely visual

thinking. Since they face the problem in communication or in other words speech problem but able to process information visually, the researcher intended to invent a digital multimedia called as an educational web-game in teaching English vocabulary which later called as Autokids.

1.3 Limitation of the Study

SLB N 1 DENPASAR is one of the few educational institutions that provide inclusive education for children with special needs, the researchers have chosen this school due to the problems that occur in this school. It is about the lack of media and the condition of the students which did not get English in elementary level but expected to be able to understand and joined the English class in junior high school level. This research would be limited to the students with autism spectrum disorder from the age 6 to 12 years old who are still in elementary school and categorize as young learners with autism spectrum disorder in level 2 which having some difficulties in terms of interpersonal interaction. There is a marked lack of both verbal and nonverbal social skills, as well as an obvious lack of social awareness. Damage even when help is present; difficulty striking up conversations and low or abnormal receptivity to social cues from others; rigidity of behaviour; confined, repeated actions or resistance to change appear frequently enough for the observer to notice; adversity; the challenge of making a change attention or conduct. "Demanding very substantial support".

The media would be focusing on the English vocabulary for the autism kids. The objective of this study is to provide a comprehensive account of the use of a digital web-based educational vocabulary game or later in this paper would be known as Autokids for the purpose of instructing autistic youngsters in the English language. Additionally, this research seeks to identify the key factors that contribute to the effectiveness of this approach. This game would be designed as a prototype media which needs to be tried out in the future.

1.4 Research Questions

There are three research questions developed in this study. Those

three research questions are as follows.

1. What are the needs of students in using AUTOKIDS as web-based educational vocabulary game in teaching English vocabulary for students with autism spectrum disorder?

2. How are AUTOKIDS as web-based educational vocabulary games developed?

3. What is the quality of the developed product after conducting the expert judgement?

1.5 The Objective of the Study

There are three objectives of this study based on the research background. Those objectives are mentioned as follows.

1. To analyze the need of the students in using AUTOKIDS as web-based educational vocabulary game in teaching English vocabulary for students with autism spectrum disorder.

2. To describe the process of developing AUTOKIDS as web-based educational vocabulary game for autism spectrum disorder students in SLB N 1 DENPASAR.

3. To analyze the quality of Autokids as the web-based educational vocabulary game for autism spectrum disorder students in SLB N 1 DENPASAR.

1.6 Significance of the Study

It is expected that this research could give benefits theoretically and practically. The significance of the research could be seen as follows.

1.6.1 Theoretical Significance

Ideally, this research would inform English instructors about a web-based educational vocabulary game that may be used to effectively educate children with special needs in general education settings. The research also improves methods for teaching English as a foreign language and the use of realistic evaluations. The created

instrument can be used as a guide for TEFL instructors teaching English as a foreign language.

1.6.2 **Practical Significance**

1.6.2.1 For Students

This research outcome is expected to be able to assist students with autism spectrum disorder in learning English vocabulary through the implementation of AUTOKIDS as web-based educational vocabulary game.

1.6.2.2 For Teachers

This research is expected to be able to provide knowledge for teachers about the appropriate of AUTOKIDS as web-based educational vocabulary game for students with autism spectrum disorder and then implement it in their classroom.

1.6.2.3 For Other Researchers

The primary objective of this study is to establish a foundation for future research, namely in the domains of inclusive education and English language teaching for children with diverse special needs. The anticipation is that the outcomes of this investigation would serve as a catalyst for further scholarly inquiry about the efficacy of employing AUTOKIDS as web-based educational vocabulary games as a pedagogical tool for college students with impairments.

1.7 Definition of Variables

1.7.1 Conceptual Definition

a. Autism Spectrum Disorder

Autism kids have difficulty in processing information. This leads to issues with organizing thoughts, planning tasks and strategies. The brain has work differently since the it is hard for the sensory to do the processing stage (Widagdo et al., 2022). Further, it makes the autistic students rely on non-verbal communication, including gestures, movements, and facial expression. That is why

they are hard to get understood by others. In the other sides, children with autism also have a difficulty in concentrating, trouble with problem solving skills, difficult in organizing task and transitions between activities (Kljajevic, 2023). Individuals who have characteristics associated with autism may also receive a diagnosis of autism spectrum disorder (ASD). Ali (2019) and Diah (2022), stated that particular neurodevelopmental disorder can have an adverse effect on an individual's speech or new knowledge. There are several characteristics of students with autism, including communication problems, less interactive, senses abnormality, hyper/not active, and hard to play using their own imagination. Autism is classified as a spectrum disorder due to its extensive array of symptoms and the different levels of severity in which they present.

b. Educational Game

Educational game is the digital experience which the participants (a) have to accomplish the fictive goals which is restrained by some rules which is performed by the software, (b) get the feedback such as score, progress, advancement, win condition, narrative resolution after achieving the goals, (c) are hoped to find the competitive value on the game (Clark, 2016). Zimmerman (2004) asserts that educational games can and do make good use of data: they are often filled to burst with text, images, video, audio, animations, 3D content, and other forms of stored data.

c. Vocabulary Mastery

Vocabulary mastery is the proficiency in vocabulary is a crucial aspect in achieving mastery of the English language as a foreign speaker (Fatmawaty et al., 2021). It signifies that the students possess the capacity to comprehend and employ the phrase and its significance. The students' language performance improves as they grasp a broader vocabulary (Romadlon, 2017). Acquiring a strong command of vocabulary is crucial for pupils (Rahmah et al.,

2023). The development of language in students is greatly influenced by the experiences they have and the vocabulary they acquire during their early years (Maulana, 2020). Numerous interpretations of the term "vocabulary" have been identified by linguists. According to Alqahtani (2015), language functions as a vehicle for the transmission of concepts and the expression of significance. An individual's lexicon refers to the entirety of linguistic units that they are familiar with or tend to use when creating new terms. As stated by (McKeon, 2007) the concept of vocabulary pertains to the cognitive ability to understand the semantic meaning of words. Wattanakornpisarn (2020) argues that the existing definitions are inadequate in comprehensively expressing the complexity of language.

d. Young Learners

According to Copland (2014) young learners are children between the ages of about 5 years old to 12 years old. Harmer (2007) states that younger learners are not necessarily better learners compared to older learners. Younger children are indeed more likely to develop native-like English proficiency than adult learners, as suggested by Cameron (2003) that children "reproduce the accent of their teacher with deadly accuracy".

1.7.2   **Operational Definition**

a.   Autism Spectrum Disorder

Children with autism face several problems, including impairment of social skills, difficulty processing information, sensory processing difficulties, communication difficulties, and anxiety. The autism kids referred to in this research are those kids who suffer from level 2 Autism Spectrum Disorder. Autism is characterized by a range of symptoms, including impairments in speech, social interaction, behavior, emotion, and tactile perception. The autism kids which acted as the subject in this research is in the level 2 which suffers in

the interpersonal interaction, lack of both verbal and nonverbal social skills, and lack of social awareness.

b. Educational Game

In this research, educational game would be called AUTOKIDS which is in the form or prototype which can be access through website both in mobile phone and desktop. This application have a visual strength sue to the target user of this application. In this case, there would be three sections, including learning, quiz, and game. There would be scramble words and memory game in the game part. Then, there would be eight topics on the learning section, which based on the topics required by the syllabus, and each topic consists of six to fourteen vocabularies. The used could also listen to the voice over to know how to pronounce the words. Besides, the user could also test their understanding through the quiz part.

c. Vocabulary Mastery

The vocabulary mastery in the research is the students' understanding of English vocabulary through finishing certain activity of the game.

d.   Young Learners

In this study, young learners refer to the students of SLB N 1 DENPASAR around age 6-12 years old which in the elementary level.