CHAPTER II

LITERATURE REVIEW

This chapter presents the relevance of online learning carried out by students with disabilities as evidenced by facts or findings from several reliable sources of previous research.

A. Hearing Disability in Education

According to The Americans with Disabilities Act (ADA), disability is a person with a physical or mental disability that severely restricts one or more important life activities. This includes people who have been shown to have such a disability, even if they do not currently have show one. This includes people who have no disability but are considered to have a disability. People with disabilities experience physical, mental, intellectual, or sensory barriers for a long time interacting in their social environment so that they can stand with their full and effective participation in society based on the same as citizens in general. As part of human beings and citizens, people with disabilities constitutionally have the right and equality n the presence of the law and government. Therefore, increasing participation in the development, protection, and fulfillment of the rights and obligations of persons with disabilities in national development is a very urgent and strategic matter (Nursyamsi, 2015).

Hearing loss varies in type and severity. People with hearing impairments are probably to have diminished ability to hear certain levels of frequencies (pitch) or might be difficult to hear at all frequency levels. Hearing loss can also be caused by tinnitus (ringing). In United States law, Online learners with hearing impairment or totally deaf must have access to the same audio information available to non-disabled learners. Online students with hearing impairment have difficulty hearing materials presented by teachers through online learning media or learning videos and audio (Kevin, 2008).

Children with hearing impairment are children who have problems with their organs hearing, resulting in an inability to hear, ranging from mild to very severe, classified as deaf and hard of hearing. A deaf person is a person who has a hearing disability so that they experience difficulties in processing language information through their hearing with or without the use of hearing aids. Meanwhile, the person who doesn't hear well (a hard of hearing person) is someone who usually uses a hearing aid, hearing is sufficient for the successful processing of language information, it means that if the person who does not hear well uses a hearing aid, he is still can catch speech through hearing. (Hernawati, 2007).

Disorders of the organ of hearing can occur in the outer, middle, and inner ear. The anatomical location of the disorder classifies the deaf into conductive, sensorineural, and mixed types. The conductive type of hearing loss is caused by the presence of disturbances in the outer and middle ear,

while sensorineural hearing loss is caused by damage to the inner ear and the auditory nerve. Mixed hearing loss is a combination of conductive and sensorineural types. Deafness can occur in pre-language and post-language. Prelingual deafness, is hearing loss that occurs before speech and language skills develop, while post-deafness language (post-lingual deafness), is hearing loss that occurs after the spontaneous development of speech and language skills (Hernawati, 2007).

B. Disability in Indonesia Education

The right to education is one of the human rights that belongs to positive rights, positive rights mean rights which a person is expected to discharge some service or to do good independently or to be a completely society. Therefore, there is an obligation of the state or government to fulfill the right to education for all people, including people with disabilities. This is specified in Article 28 I paragraph (4) of the 1945 NKRI Constitution which specifies "Protection, promotion, enforcement, and fulfillment of human rights is the responsibility of the state, especially the government". From these provisions, the obligation of the state to the right to education of persons with disabilities is to protect, advance, enforce, and fulfill. In line with this, the obligations of the state according to the International Covenant on Economic, Social, and Cultural Rights Committee there are 4 (four) instruments that must be fulfilled by every state party in the field of education, where the state must make education available, affordable,

acceptable, and adaptable (Nursyamsi, 2015). These four obligations can be described as follows:

1. Availability, in which case various programs of educational institutions shall be available in sufficient quantities within the jurisdiction of that country. For example, all programs of institutions tend to require physical protection from certain elements, sanitation facilities for everyone, healthy drinking water, trained teachers with competitive salaries, teaching materials, and so on, some of will also require facilities such as libraries, computer laboratories, and information technology.

2. Affordability, in this case various programs of educational institutions shall be afforable to all persons without discrimination, within the jurisdiction of that country. Accessibility has three dimensions of general characteristics, namely:

   a. Without discrimination, education must be accessible to all, especially by the most vulnerable groups, legally and actual without discrimination against any prohibited areas.

   b. Physical accessibility, where education must be physically safe to reach, either by people in a supportive geographical area or through modern technology.

   c. Economic accessibility, where the cost of education must be affordable for everyone. To primary, secondary, and high

school should be free of charge for all, the state should progressively introduce free secondary and high school.

3. Acceptance, in this case the form and substance of education, including the curriculum and teaching methods, must be acceptable (e.g. relevant and appropriate in terms of culture and quality) by students.

4. Adaptability, where education must be very flexible so that it can adapt to the need to change society and community, and respond to the needs of students in their diverse society and cultural order (Nursyamsi, 2015).

The constitution of government in Indonesia is required to achieve not only the realization of justice and prosperity but also the intelligence and welfare of the entire community, including the education for disabilities. Therefore, as ruled in the national education system in the country, we could find special education intended for children with special needs. In the system, special education is available for the levels of primary and secondary education. The system has the management patterns of (SLB) schools for special education consisting of six types:

1. SLB type A for visual impairment

2. SLB type B for hearing and speaking impairment

3. SLB type C for mental retardation

4. SLB type D for physical disability

5. SLB type E for the unsociable

6. SLB type G for multiple disabilities

C. Online Learning Growth

Opportunities for online learning began to grow in importance in the early 1990s, and opportunities for online education for students from kindergarten to high school continue to expand rapidly. Even in traditional schools, the use of the Internet for education and learning is now a common approach to education. As these resources become more available and sophisticated, online learning opportunities can become an integral part of the educational environment. Currently, there are full-time virtual schools nationwide in 31 states with an estimated 275,000 students (Cavanaugh, 2013). In a fully online school, teachers use software and a web-based education system to teach classes over the Internet from various locations to facilitate a learning environment (Liu F, 2011). Online interactions between teachers and students can be synchronized with real-time teacher-student interactions (such as video chat) or asynchronous with different times of interaction (such as email). Another approach to online education, blended learning, combines online learning opportunities with traditional face-to-face attitudes. The Online Learning Program includes; (a)Online delivery, (b)Some degree of student management of content and teaching time, place, route, or pace, and (c)Locations of monitored buildings where at least some learning takes place (Andrew I, 2012).

The increased use of information and communication technologies (ICTs) in utmost sectors of society and recent developments in adaptive equipment and software have allowed individuals with disabilities to do effects that were complicated or insolvable for them to do in history. For illustration, it has allowed people who are eyeless to read using text-speech technology, people who are deaf to communicate using converse programs, and people with difficulties using their hands or arms to write and communicate using dictation software. In the high school area, e-learning (i.e., ICTs used in tutoring) is considerably used by professors in nearly all sodalities and universities, not only in the United States but also in Canada. Whether it PowerPoint donations in class, the use of web-grounded conversations to further in-class discussion, or courses delivered fully over the Internet, it's clear that similar technologies used by professors to educate (Catherine, 2009).

E-learning can promote the education with colorful addition. For illustration, online courses provide enhancement affordability for people who are blocked by climate, health, transportation, or physical availability, to attending classroom-based courses. Also, in traditional classes students who have print impairments can enter course notes and handouts on the course website without assistance, so long as these are designed to be accessible (Catherine, 2009).

D. Learning Experience

In malignancy of the tremendous availability afforded online learning for learners with disabilities, there are a variety of walls that restrict their effectiveness. A crucial concern is that faculty and individualities responsible for supporting and enforcing learning within school institutions, in the rush to integrate technology into tutoring, fail to suppose the availability requirements of students with colorful disabilities. For illustration, those in charge of supporting and planning to learn generally don't confirm ahead of time whether academic software that recently bought is compatible with adaptive software that reads what's on the screen to individualities with print impairments. PowerPoint demonstrations in class, if not posted online ahead of time, can beget difficulties for scholars with visual and other disabilities taking adaptive software to read and follow the lesson. Videotape clips posted on a course website with no captioning can create problems for students with hearing impairments. Indeed online learning can cause problems for students with literacy, visual, and neuromuscular disabilities when they use adaptive software similar to screen demonstration, screen reading, and dictation software (Catherine, 2009).

Previous research has proven how online learning is related to students with disabilities, it has identified some of the challenges in providing these services. One challenge is that the curriculum of the course is not yet fully accessible in terms of readability and vocabulary, and

teachers are expected to arrange for the differences in support. Parents are responsible for part of this responsibility, but teachers are the representatives of the school closest to the family. Therefore, there can be many benefits to supporting a teacher's work, especially give chance to the teachers to connect with the student and family. Online teachers expect relationships with their students and know that it needs to be achieved through frequent and regular contact, they have an understanding about which strategies are more effective. For the time unpreparedness to implement a particular educational strategy in an online environment can cause limitations to increase explicit instruction (Mary F, 2016).

Another research also provides other evidence, the growing presence of online education programs from kindergarten to high school tends to promise greater flexibility, increased efficiency, and increased involvement in learning. Students with disabilities can get benefit from dynamic online educational environments, but only to the extent that they can access and participate in the learning process. As enrollment of students with disabilities in full-time virtual schools may not be keeping up with the growing enrollment rates of their peers, educators better identify barriers to access that may be the cause part of this current scenario. Thus, the future landscape of online education is both a challenge and an opportunity for students with disabilities. Teacher behavior is a central starting point for making classroom decisions, as teachers are directly responsible for implementing the goals and support outlined in the student's lesson plan.

With increasing emphasis on personal learning networks, ongoing professional development, and reflective classroom practices, awareness of online accessibility can also become a topic of discussion across schools. The guidelines and resources identified will help decision-makers (educators) redesign their online resource selection for accessibility. This is an important first step in expanding participation in online learning programs. This perspective can also facilitate the selection of digital learning resources that emphasize inclusion and access needs rather than flashy products or strong product marketing campaigns. Ideally, the demand for accessible online learning resources stimulates educational programmers and designers to eqalize the competition through improved accessibility and ensure that all students have greater opportunities for online learning benefits. The development of more online learning products that will allow teachers to navigate the learning process (Kristen B, 2013).

The Center On Online Learning and Students with Disabilities (COLSD) published its first annual report, Equity Matters: Digital and Online Learning for Students with Disabilities. The main focus of the first report was to highlight various issues in the field of K12 online education for students with disabilities and their families. This report is interested in facilitating a greater focus on online learning for students with disabilities and other diverse learning needs, and the unknowns of online learning for students and special education disciplines to provide a constructive basic understanding. In this new world of K12 education, the practice has been

driven by many factors, like academic research and human resources development. In the expansion of the modern education system, educators moderately embrace online learning to meet challenges of innovation and social demand. This acceptance includes notes on the transformative various policies and practices required for online learning. As the center is tasked to conducting research, it understands the difficulties and complexity that associated with measuring, designing, and implementing learning environments that consist of both physical and digital elements. The new growth in online learning continuously poses challenges in this area in designing and supporting learning environments that effectively involve all learners. Most important are learners with disabilities (James, 2016).

The next research is a study that discusses the wishes of students in online learning. This research was written by Davies (2011) and focuses on what things must be developed by educators or teachers in learning strategies. According to Davies (2011), there are several things that must be improved or developed in learning design as desired by students, such as course development, and selection better materials design, more learner-centredness, and teacher self-development. Davies (2011) also adds that students need direction first before implementing new teaching methods or strategies from teachers or educators. Many students also need time to adapt to the applied learning methods.

As digital learning reshapes K12 education, educators, researchers and developers are unprecedented in transforming the education system

based on the desire to create a meaningful and just environment for all learners. People can get an opportunity to support these changes, different groups need to work together to fully understand and design the environment, considering the volatility and environment of each learner. If online learning is the main reason for a student's learning experience, there are several areas to consider, such as academic, social, professional, and skills. By definition, students with disabilities have more integrated needs than students without disabilities, and these requirements are in an online learning environment. People need design considerations about how they can support. By this understanding that the work of the center was started. In this publication, The Center on Online Learning and Students with Disabilities (COLSD) has identified some new practices that can help supply this need. To help people understand the context of these practices, the following terms are used in this publication:

1. Online learning: It is an education where teaching, content and learning are provided primarily through network technologies such as the Internet.

2. Virtual full-time: When students take all academic courses primarily in online settings. This type of learning is usually done in virtual schools or called fully online schools.

3. Blended Learning: A formal educational program in which students learn at least partially through online learning using elements that control time, place, route, and/or pace. At least

partially monitored remote areas. In modalities along the learning path of each student within a course or subject are linked to providing an integrated learning experience.

4. Supplemental Online Learning: When a student is enrolled in one online environment to complement another major learning environment. For example, some people are taking Mandarin or object oriented programming classes online rather than in private classrooms because local schools do not offer classes.

5. Digital learning: The use of digital technology to support learning. The use of this term is contextually refers to the type of technology, environment, education, classroom design, material and environment interaction. Digital learning includes other things, online, blended, and personalized learning. Digital learning also includes a non-online environment focused on integrating digital technologies to support learning.

6. Digital Materials: Electronic textbooks, workbooks, activities, simulations, assessments, and other elements of the primary and secondary curriculum available to students via computers, tablets, or mobile devices.

7. Digital Delivery Systems: A content management or learning management utility that displays, accesses, or presents digital materials used by students. Most of these systems require individual student login using a username/password or a unique

student identification number. They often record and display student usage and performance data.

8. Personalized Learning: An approach in which the educational approach, issues, content, conditioning, pace, tools, and supports are customized for each learner's needs. Individualized literacy takes advantage of the real-time progress monitoring capacity of numerous digital delivery systems that provided well-timed (e.g., daily, weekly), practicable updates on student literacy and/ or achievement through a course of study. Numerous substantiated literacy settings also follow a faculty or proficiency-grounded educational design.

9. Competency/Proficiency-Based Learning: In this curricular structure, students' progress is based on mastery of consecutive actions. Students are frequently grouped by age and/ or proficiency situations, not by grades. Movement through a course of study is based on substantiation or knowledge literacy.

10. Universal Design for Learning (UDL): A science-based framework aimed at supporting the diversity of all learners through aggressive and iterative design (James, 2016).

In Indonesia, online learning is already quite familiar to normal students, they can certainly easily operate media or communication tools used in online learning. But not with students with disabilities. Specifically students with hearing impairment. They may not be able to do online

learning to the fullest because in Indonesia we can not find sources or previous research that discusses well-implement online education for disabilities in Indonesia. The absence of online learning plans from teachers or teachers to facilitate students with disabilities in online learning is a big question mark. Whether in Indonesia online learning is not very well applied in extraordinary schools or there is no extra attention from teachers related to this case. Because as we know, there is already a law that guarantees the right to education for students with disabilities in Indonesia. Whatever the circumstances, students with disabilities should still get their rights, including in the right to acquire high quality knowledge or information through online learning.

E. English Learning as Foreign Language for Students with Disabilities

After discussing experiences in the world of education for disabilities in general, here the researcher will present some results from previous research that examines how to apply to learn English as a foreign language for students with disabilities. At this point, the researcher will also provide evidence of previous research that discusses online English learning for students with special needs and some evidence about the experience that has been through by teachers and students in teaching and learning.

The first study is research conducted by Sowell (2020), he has explored the problem of students with disability faced by teachers in providing foreign language teaching and found that there was a lack of

understanding of students in conveying or communicating using English. In addition, the researchers found the fact that there were no teaching methods developed by the teachers in overcoming the problem of students' inability to communicate. It does not stop there, Sowell (2020) also provides several methods of teaching English to teach students with disabilities to be tested in their learning. The result is that there are still deficiencies or inability of students to understand English lessons.

According to Sowell (2020), there must be awareness for the lack of learning disability training for English teachers. The institutions with EFL courses must recognize the needs for learning disability training, whether that means improving the existing training for learning disability to be stronger or starting training for learning disability in institutions that did not previously exist. While it is ideal for teachers to attend workshops with experts and to participate in ongoing training for learning disability, but the arrangement may not be feasible in every institution. Nonetheless, there are still ways for teachers to increase their knowledge of learning disabilities and accommodation. For example, teachers can take online courses or access various online resources. Teachers can also share experiences and knowledge among themselves and within their own institutions or communities. Since almost all English teachers will inevitably have students in their classrooms with disabilities, knowing how to accommodate them is important for creating more inclusive classrooms that are productive learning spaces for all students.

The second study is related to previous research. The main focus of this research is to create English teaching methods for students with disabilities which will be implemented by teachers to find out how effective the learning methods that have been created and tested. The arrangement of the learning method itself is made by considering the rules or guidelines of the Postsecondary EFL context specifically. This is due to the fact that these teaching environments often lack established protocols and procedures to provide support for students with disabilities. The steps or teaching methods described here are dynamic and iterative and will include built-in accountability checks to ensures that the support system can continue to improve and respond to the needs of a growing student population. In addition, to implementing teaching strategies or methods in the field, English teachers or educators must reach a common understanding of the best way to continue discussions around issues that extend from the intersection of language learning and education for disability. The paradigm agreement is the best way to bridges and unites both educational domains with the community of practice and the best service for all students. Meanwhile, English teachers must remain committed, methodical, and objective in providing services to students with special needs, as well as in their reflection on the efficacy and suitability of the services (Young, 2020).

The third study, the next research is a research conducted in Japan in order to test the teaching methods provided by the teacher and also to test the effectiveness of English learning for students with disabilities in Japan.

According to Martinson (2014), gaining proficiency in English can create opportunities for non-native learners in the fields of education, work, and even their personal lives. Moreover, this benefit can be even more important for non-native English learners who have a disability mold by closing the gaps due to their condition by creating opportunities in economics and social construction. He added that the main problem faced with the current situation is that although people with disabilities will benefit greatly from digital English education, they find it difficult to succeed due to the reliance on instructional multimedia that does not have assistive devices, which would allow the users to receive instruction. which has the same quality as normal students. Although Martinson's research has different research objectives and it is not directly related to the learning experience for students with hearing impairments, but this research proves that the effectiveness of online English learning methods development can provide benefits for students with disabilities.

The next study is a research that discusses how teachers apply English learning methods through online media. Since students with disabilities experienced frustration in learning at school, especially in English lessons, it is important for teachers or educators to apply innovative teaching techniques to help students succeed in the classroom (Huang, 2020). Huang (2020) believes that English teachers should plan teacher talk in the duration used in learning, teacher talk is meant to be a chat that does not dominate the classroom atmosphere such as giving questions with clear

types and objectives of the questions, then there must be a speech or direction from the teacher that is more specific to each student with a disability. In English grammar instruction, students with disabilities can do their best to perform well when they receive comprehensive input, not beyond their cognitive load. The use of teaching multimedia with technology-enhanced is a better method of teaching grammar rules, compared to traditional teacher-centered one-way teaching following textbooks. Students with disabilities have a positive attitude toward the effectiveness of video instruction in learning certain rules of English grammar. They show a better understanding of learning grammar rules in context. Students in video instruction had better learning outcomes than students who received traditional teaching methods (Huang, 2020).