

The Peer Tutor Method: Implementation in Hybrid Learning Settings for Students with Disabilities

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Abstract—Students with disabilities have different characteristics. The different characteristics of students with disabilities depend on their respective disability categories. These conditions are generally related to physical, intellectual, or sensory functioning. Based on these conditions, there is a reason that in making a learning innovation with a Hybrid system for students with disabilities, it must be a solution to face the problem. Under certain conditions, students with disabilities need a process to be able to adapt to learning activities. The form of adaptation that may be carried out is related to the stages of learning activities with a hybrid system, both regarding sources and teaching materials or the platform and assistive technology used. This article aims to examine the application of the Peer Tutor method in learning activities with students with disabilities. The Peer Tutor method puts forward the relationship between students to provide direction to others in the learning process. The application of this method has a very positive impact on inclusive learning activities. In the process, students with disabilities can take part in various stages of learning through peer assistance.

Keywords—peer tutor method, hybrid learning, students with disabilities

I. INTRODUCTION

Inclusive education has shown progress over the last two decades. The application of inclusive education has been developed in Indonesia since 2000 and has begun to be applied in primary education to secondary education [1]. In recent years, the government has been very serious about promoting the development of inclusive education in Indonesia. This is shown by the issuance of Law No. 8 of 2016 and *Permenristekdikti No. 46 of 2016* concerning special education and special services at the higher education level. Of course, with the fact that progress requires universities to provide special education and special services for students with special needs [2]. Organizing learning for

students with disabilities is not just about including them in lecture settings that have been running smoothly before. Educators or lecturers are required to be able to create curriculum innovations that are friendly to students with disabilities. In the last two years, online learning has grown very rapidly [3]. The pandemic condition has had a major influence on the development of online learning. Learning with a hybrid system has become a new topic as pandemic cases gradually decline in various countries. Hybrid learning seeks to combine online and offline learning systems in one concurrent learning activity. The idea is considered appropriate for the moment of adjustment to the development of the pandemic towards normal conditions. However, this concept requires relevant innovations if students with disabilities participate in one learning setting [4]. This is based on the theory that persons with disabilities have various characteristics.

Students with disabilities have the meaning of students who have obstacles due to certain conditions related to physical, intellectual, or sensory functions. This condition allows them to require special services to be able to participate in the learning process [5]. Based on these theories, it becomes a foundation that learning innovation must be a solution to problems in certain conditions that make it difficult for students with special needs to adapt to the lecture process with a hybrid system [6]. Therefore, the learning innovations applied cannot be generalized to all lectures attended by students with different disabilities.

In the process, student involvement has a very good impact on the achievement of learning objectives. The basis of these findings is the basis for the use of the peer tutor method as an innovation that allows it to be applied to hybrid learning. Peer tutoring has similarities with peer teaching which prioritizes student involvement in the learning process. This study aims to

review the application of the peer tutor model in hybrid learning involving students with disabilities.

II. METHOD

A narrative review was used to write this article, which is a research strategy that involves summarizing and contrasting different research results to provide a holistic understanding. This research examines the information, ideas, and conclusions found in the body of academic-oriented literature.

III. RESULT AND DISCUSSION

A. *Students with Disabilities*

Individuals with disabilities need certain methods, tools, and environmental conditions so that they can carry out learning activities and other activities easily and safely. In accessing information, the blind need to be facilitated to use equipment that emphasizes the auditive (hearing) and tactile (touching) functions. Deaf people need visual media to be able to access information easily and effectively [7]. Physically disabled people need to modify their equipment and physical environment so that they can carry out activities and mobility easily and safely. Autism requires a special approach to communicate and interact with others effectively. Likewise with other types of disabilities. They each require a different approach, related to the differences in these characteristics, the categories of students with disabilities are described as follows.

1. Blind people are those who have lost their sight or who experience significant visual impairments that require special aids, environmental modifications, or alternative techniques to replace their visual impairment to fully participate in learning activities and other activities in the community. In general, the blind are divided into two groups, namely low vision and blind. Low vision is those who have visual impairments, but still have the residual vision, which can be used for learning activities, such as reading and writing. Blind are those who have lost their visual function completely or have a severe or very severe visual impairment, so they can no longer use their vision for reading and other learning activities, and therefore they must use braille or audio media.
2. Deafness is a state of hearing loss that includes all gradations or levels, either mild, moderate, severe, and very severe which results in communication and language disorders, thus requiring special services. Deafness includes 2 categories, namely hard of hearing and deaf. Hard of hearing is a mild hearing impairment so that it is still possible for them to hear loud sounds or sounds. Hearing aids are still useful for them in improving the quality of their hearing. Deaf is a hearing loss or impairment that is severe or so severe that they can no longer rely on their hearing to understand speech.

3. Disabled people are those who have physical and/or motor impairments that require special aids, environmental modifications, or alternative techniques to be able to fully participate in learning activities and other activities in the community. Several conditions are included in the quadriplegic group, namely, (1) loss of limbs, (2) disability or abnormality in limbs, (3) dysfunction of limbs, (4) disorders of motor function and movement are easily recognizable from this group. cannot (or has difficulty) walking or moving and must use a wheelchair, crutches, canes, leg/hand supports, artificial organs, or other assistive devices.

Autism is a disorder characterized by obstacles in social interaction and communication (Irvan, 2016). Barriers to social interaction can be seen from the individual's difficulty in making eye contact, fostering social relationships, expressing emotions, understanding social rules and non-verbal language. Communication barriers can be seen from speech delays, speaking in a language that is not understood, or speaking out of context. In addition to barriers to social interaction and communication, individuals also have repetitive motions, unnatural interest in things, and/or excessive rigidity in routines. ASD is a spectrum disorder which means that individuals with ASD have different degrees of the disorder. Individuals with ASD generally also have sensory problems where they may have a high sensitivity to sound, light, or general textures. The biggest obstacle that is generally experienced by individuals with ASD in their teens or young adults is in adapting to new environments and socializing.

B. *Peer Tutor Method*

The Peer Tutor method is a method that maximizes the role of students in the teaching and learning process [8]. The Peer Tutor method utilizes other students who have mastered the material and a sequence of learning activities to become mentors or tutors for other students who have not mastered. The application of this method aims to balance the achievement of predetermined learning standards. In terms of the process, the peer tutor method is a knowledge transfer process based on the experiences that students have had with other students [9]. The process of transferring knowledge from partners can easily achieve success because it is based on the experience formed. This is relevant to other statements about active learning-based learning, namely the most effective learning is carried out by peer groups [10]. The purpose of the application of the peer tutor method is to support the learning process to achieve the planned learning outcomes.

The application of the peer tutor method must take into account various aspects. Several principles must be emphasized by lecturers [11], including 1) Tutor students must have an understanding of the objectives, materials, mastery of technology, understanding of learning activities, and problem-solving in learning

concepts; 2) Tutor students must be willing to volunteer to assist students with disabilities; 3) Each student must be responsible for their respective learning obligations; 4) Problem-solving procedures must be democratic. In this case, the lecturer has the authority to provide guidance; 5) In the process, it must ensure a sense of comfort and security in participating in learning activities.

Applying the peer tutor method can train students in various skills. In general, students can be actively involved at every stage of learning. Through the process of discussion and mentoring, communication skills, social relations, and collaboration skills will be formed in each student who takes part in the method. For students who are guided, get psychological support that can build confidence in completing each stage of learning activities. Based on these arguments, the application of the peer tutor method is considered to have a good effect if it is integrated into the learning process.

C. Peer Tutor Method for Students with Disabilities in Hybrid Learning Lecture Settings

Organizing lectures that are attended by students with disabilities clearly increases the diversity of student learning characters in study groups. This is related to the condition of students with disabilities who are different from other students. For example, blind students who have visual impairments have different learning characteristics from deaf students who actually have hearing impairments. This phenomenon is important to know and become the focus of attention for lecturers as captains in carrying out learning activities on campus [12]. The application of the inclusive education system in general aims to provide opportunities for persons with disabilities to study together with other students in the same learning environment [13].

When examined further, the various types of classes used in the inclusive education system are not fully applicable at the higher education level. Implementation of regular classes with special assistants can generally be implemented by empowering student volunteers who are tasked with providing assistance to students with disabilities. Student volunteers can act as peer tutors in this learning setting. They can bridge the information conveyed by lecturers to students with disabilities. In general, accompanying students do not play a role in carrying out various tasks given by lecturers to students with disabilities. However, the accompanying student is tasked with providing assistance during lectures or when independent learning takes place.

By implementing a regular or regular class system with special assistants, it has provided opportunities for students with disabilities to study together with other students [14]. In the context of learning with a hybrid system, learning activities are required to utilize various technologies that support such learning. The use of the

LMS (Learning Management System) platform, learning rooms or web meetings, as well as the use of assistive technology allow them to play a major role in the hybrid learning process [15]. Therefore, the selection of peer tutor companions must be done carefully [16], namely students who have mastered the technical lectures both online and offline. Peer tutors should really master the various sources of support that may be used in the learning. This is expected to help students with disabilities in participating in lecture activities properly, so that learning objectives can be achieved optimally [17].

Offline learning is generally applied conventionally, namely through face-to-face directly in the same location. Involving students with disabilities basically there is no significant difference with offline learning that is generally carried out. However, there are several things that need to be considered in carrying out offline learning by involving students with disabilities 1) The position of the bench occupied by students with disabilities has more or less an influence on the quality of acceptance or understanding of the material presented. It is necessary to ensure that the position of the bench is in the front row and close to the tutor student [18]; 2) In the learning process, it is necessary to provide opportunities for students with disabilities to ask questions and or ideas related to material or various matters related to learning activities; 3) The material given in offline learning should be delivered in a loud voice and clear facial expressions. This may need to be considered if there are students with hearing impairments in the class. In this case it is also necessary to ensure that the tutor students have mastered sign language to help them.

In addition to online learning, tutorial activities also need to be considered in the online learning process. Online learning can be done through various available platforms, web meetings or LMS. This approach makes it easier for everyone to learn and attend lectures anywhere and anytime without having to do face-to-face meetings. The implementation of peer tutoring in learning through web meetings may not be much different from offline learning. Lecturers need to ensure that student tutors are also available in the same meeting room and are connected on live chat with students with disabilities. Meanwhile, learning through LMS, platform accessibility, learning resources, and teaching materials need to get more attention. Implementation of online learning requires students to study independently [19], [20]. This demand is commensurate with the demand for the availability of learning resources. The lack of learning resources of course also has an impact on the percentage of achievement of learning objectives. This condition also applies to students with disabilities. Moreover, the availability of learning resources for students with disabilities must have adequate accessibility.

IV. CONCLUSION

Lectures that are friendly for people with disabilities are not impossible. The hybrid learning system is an advanced learning model that will definitely be applied and will continue to grow in the future. The system allows learning activities to be carried out offline and online. That is, the learning process utilizes various forms of resources and teaching materials as well as platforms and assistive technology. Involving students with disabilities is not an obstacle to carrying out learning activities. hybrid. Through a good planning system, learning with students with disabilities can run optimally and achieve learning objectives. The application of the peer tutor method is a relevant option to help them overcome various problems related to the accessibility of hybrid learning. In future research, it is necessary to examine the effectiveness of the application of peer tutors in the hybrid learning process. Psychological aspects, environmental support, technology accessibility, are parts that have a role in success.

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