Home Learning for Student with Disability in the Pandemic Situation

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Abstract: The global COVID-19 pandemic has an impact on almost all aspects of life, including education. The education system, which has been carried out in classrooms, has dramatically changed to be carried out online from each student's home. Many studies highlight students' learning behavior at home, for example, their engagement, but few studies focus on engagement in students with disabilities. This study aims to review previous studies on student engagement in students with disabilities while studying at home in this pandemic situation. The review was carried out systematically by applying the PRISMA-2009 guidelines. The online databases used in the search were: Springer, Sciento Direct, Scopus, and Google Scholar with a previously defined search strategy. Screening is done by applying inclusion and exclusion criteria. The articles included in the review (N=3) also underwent an eligibility assessment. The results showed that school closures and the implementation of home learning provided mental health benefits for students with disabilities. However, if viewed from the side of education, it will have an impact on the low student engagement of students, especially on the dimensions of behavioral engagement and cognitive engagement. This is due to barriers to internet and technology access and is related to the low emotional engagement of students. Support from teachers, parents, and peers is reported to promote better student engagement.

1 INTRODUCTION

In 2020, it is known that due to the COVID-19 pandemic, 98% of students received the impact caused by the pandemic, namely school closures (UNESCO, 2020). The impact of school closures has made students and teachers start doing remote learning and teaching by utilizing the internet and technology. During school closures, students will experience a change in the learning environment, using electronic devices that have never been used before, and difficulty meeting and interacting with the social environment. This situation becomes a challenge for teachers and students doing home learning. Crisis conditions due to the COVID-19 pandemic that have an impact on health, isolation, and a declining economy can trigger a situation that is not right in supporting student learning needs. As a result of this, students' mental health conditions began to deteriorate during online learning due to the COVID-19 pandemic (Singh et al., 2020). Students' mental health conditions, of course, will affect motivation and student engagement during home learning or online learning. Student learning motivation and student engagement will emerge if students get support from teachers and peers (Lietaert et al., 2015). So to manage the motivation and student engagement that students have during home learning, support from various parties is needed.

The condition of distance learning is a concern for parents because it does not have the same quality as learning conditions at school (Zhang, 2021). The learning atmosphere and the different environmental conditions between home and school lead to low aspects or dimensions of student engagement, namely emotional engagement and cognitive engagement. The low condition of aspects of student engagement has an impact on the emergence of a pessimistic attitude in parents towards the success of learning carried out by students during home learning due to the COVID-19 pandemic (Zhang, 2021).

Back to discussing student engagement which refers to the condition of students who are actively involved in learning activities and have a high...
commitment to academic achievement (Christenson et al., 2012). Student engagement has four dimensions, namely behavioral engagement, emotional engagement, cognitive engagement, and agentic engagement. Behavioral engagement refers to the extent to which students are involved in learning activities so that it can be reviewed by looking at the level of student attendance, class participation, students’ efforts in the learning process, intensity, and also persistence of students. Emotional engagement refers to the feelings that students have for teachers, peers, activities carried out during the learning process, experiences at school, and a sense of attachment to learning activities. Cognitive engagement describes the extent of the efforts made by students in completing tasks and learning materials. Lastly, agentic engagement, which refers to taking initiative or creative action that contributes to teaching and learning activities.

In addition, home learning is one of the policies set by the government in every country, which combines online learning and distance learning. Then distance learning carried out at home during the pandemic utilizes the internet and computer networks, so that home learning refers to the condition of students learning by using E-learning or online learning. Online learning is a program of organizing online learning classes using technology to reach a massive and broad target group (Bilfaqih & Qomarudin, 2015) and aims to increase knowledge and skills (Kuntarto & Asyhar, 2016). According to Saavedra, 2020 (in Ro’fah et al., 2020) explains that home learning is more effective to reach all levels of society. Home learning refers to the condition of combining online learning that can be accessed by computers and internet networks and learning by utilizing several facilities that are under the infrastructure of a country. Home learning allows students to learn online through several web pages and can also access knowledge by viewing television shows, podcasts, radio, or using social media networks. So home learning in students is more trying to integrate the learning system to suit the conditions of the community and can be reached by all students without paying attention to factors such as economic conditions. In conclusion, this study still used distance learning or online learning but that’s definition includes home learning and continues to use home learning for this study.

In online learning, the condition of the learning environment, grade level or level, and teacher autonomy are factors of student engagement during the COVID-19 pandemic (Chiu, 2021). It does not stop there, student engagement in students can increase when online learning is influenced by creativity in building learning strategies, infrastructure, gender, individual characteristics, and access to computers and internet networks (Abou-Khalil et al., 2021). So it can be assumed that students with certain characteristics will have different levels of student engagement during Home learning. The report from Mole, (2016) that students in-home learning show differences in achieving educational standards and are twice as prone to drop out. Meanwhile, the Daruku & Nagaci research, (2020) stated that students with disabilities who did home learning during the lockdown due to the COVID-19 pandemic had a very low level of student participation and the benefits of learning gained. The low participation of students is due to the lack of supporting technology and lack of experience in home learning. The condition of the low benefits of home learning will result in a decrease in the standard of achievement of the learning process.

The achievement of educational standards will certainly be differences between students in general and students with disabilities, for students with disabilities home learning does not have a significant impact (Scheer & Laubenstein, 2021). However, during home learning, students with disabilities need special assistance, to avoid the socio-emotional impacts that children receive during the lockdown, even though the impact is less than for children in general. Possible impacts on students with disabilities during the lockdown and home learning are vulnerable to violence caused by stress from parents, emotional neglect, and isolation (Clemens et al., 2020). So, maintaining the standard of educational attainment requires the efforts of various parties such as accompanying teachers, psychologists, assistants, and family during online learning at home (Daruku & Nagaci, 2020).

The condition described by Scheer & Laubenstein (2021) regarding the minimal impact that appears on students with disabilities during online learning at home is in line with the research of Lyner-Cleophas et al., (2021). The study revealed that students with disabilities had different behaviors during the pre-pandemic COVID-19 and during the pandemic, where students with disabilities felt more comfortable studying during the pandemic and felt stressed when schools were about to reopen. Home learning during the pandemic makes students with disabilities more active due to a feeling of comfort without seeing the stigma circulating them (Lyner-Cleophas et al., 2021). This condition does not mean that the condition of students with disabilities does not have a crisis side during the pandemic and home learning.
Some literature mentions the relationship of distance learning to students’ mental health and student engagement as the impact of learning at home, but it is still not specifically focused on students with disabilities.

Therefore, Home learning also has consequences, exactly for the learning process. This condition has been described previously where students experience low participation in the class. There more it is necessary to know whether only the low level of participation in the class, have a describes the low condition on one aspect of student engagement. Low conditions for student engagement can impact learning achievement. So it needs to be analyzed mode deeply regarding the behavior of students with disabilities that are caused during home learning and the things that cause these behaviors to appear. This systematic literature review aims to report a review of previous studies on student engagement in students with disabilities during home learning. So, The writing of this literature refers to answering the question of disabilities during home learning. So, The writing of this literature refers to answering the question of whether home learning during the pandemic is related to a decrease in student engagement in children with disabilities?

2 METHODS

The literature review serves to display facts related to home learning during the pandemic that will influence student engagement for students with disabilities. The initial search for articles was carried out in June 2020 using an e-database to identify peer-reviewed articles in English published in the last 5 years (2016-2021) which can be downloaded in full versions. In this literature review, the method used is the SLR scientific approach (Systematic Review of Literature) using the PRISMA 2009 guide in conducting literature selection (Moher et al., 2009). The keywords used in this research are “home learning” OR “home-based education” OR “homeschooling” OR “school closure” OR “distance learning” OR “online learning” AND “student engagement” AND “children with disabilities” OR “special need children” OR special education need” AND “pandemic”. The search was carried out using scientific databases, including Springer, Sciento Direct, Scopus, and Google Scholar.

The articles found will go through a screening process by applying inclusion and exclusion criteria, including:

1. Peer-reviewed article (published in a journal)
2. Empirical studies are not literature studies (using quantitative and/or qualitative methods)
3. Articles about Student engagement with students with disabilities during the pandemic and learning at home

Articles that meet the inclusion and exclusion criteria will then be examined in more detail for their quality using the article quality assessment guidelines from the Critical Appraisal Skills Program (CASP). A thorough examination is used to determine the suitability of the article to be used in the review. The initial process is carried out by screening and examining the articles found. The screening and inspection process is described in the following flow chart.

After screening, the articles that passed (N=3) were articles with qualitative studies. Furthermore, the three articles were checked for quality/eligibility using the CASP qualitative checklist. Several criteria must be met to categorize the qualitative study as qualified based on the CASP qualitative checklist, namely as follows;

1. Was there a clear statement of the aims of the research?
2. is a qualitative methodology appropriate (right methodology for addressing the research goal)?
3. Was the research design appropriate to address the aims of the research?
4. Was the recruitment strategy appropriate to the aims of the research? (HINT: (explained how the participants were selected)
5. Was the data collected in a way that addressed the research issue?
6. Has the relationship between researchers and participants been adequately considered? (HINT: How the researcher responded to events during the study)
7. Have ethical issues been taken into consideration?
8. Was the data analysis very rigorous? (HINT: Whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process • If sufficient data are presented to support the findings)
9. Is there a clear statement of findings?
10. How valuable is the research?

Based on these criteria, 3 (three) articles are categorized as good and/excellent quality study (low risk) while 1 (article) is categorized as poor quality study (high risk) so it must be aborted. The three articles were included in this systematic review.
Three articles were involved in the review, namely:
1) Study from Page et al., (2021) with the title "Fostering school connectedness online for students with diverse learning needs: inclusive education in Australia during the COVID-19 pandemic" is a journal with research qualitative with high quality. An Excellent quality because the journal meets the ten criteria of the CASP qualitative checklist. In addition, the journal of Carver & Rowe, (2021), with the title "Students with Disabilities and Online Learning in a Pandemic" with good quality research journals. Good quality in this study is because the journal does not mention one of the criteria of the CASP qualitative checklist, namely point 6, whether the researcher pays attention to how the relationship with the participants is. Furthermore, Cherian's research, (2020), with the title "Pedagogy of the Virtual Space: Content Analysis of Voices from K-12 Online Classrooms of Four Indian Cities "has a good quality category. The good quality obtained in this qualitative research is because it does not write down two criteria from the CASP qualitative checklist, namely the 6th point and 7th point in detail.

3 RESULTS

The search results with the e-database found 3 (three) journal articles that were relevant and met the inclusion-exclusion criteria as well as the predetermined quality assessment. Overall the research was conducted in Amerika, India, and Australia. The 3 articles reviewed, found some data related to home learning during a pandemic associated with decreasing student engagement in children with disabilities. Complete data obtained from the 3 articles can be seen in Table 1 below:
## Table 1: Summary of Data Extraction Results.

<table>
<thead>
<tr>
<th>Article title and Author</th>
<th>Fundamental Theory &amp; Facts</th>
<th>Variable (sample &amp; Setting(s))</th>
<th>Method (research design &amp; data analysis)</th>
<th>Key Findings</th>
</tr>
</thead>
</table>
| Students with Disabilities and Learning Online in a Pandemic (Carver & Reese, 2021)  | - The emergence of challenges for teachers and parents during the pandemic and school closures and the important role of teachers  
- The role of parents is an important component that is often overlooked in online education for students with disabilities | - United States of America  
- Parents with children with disabilities who try to support instructional home learning  
- Done on children who have taken online classes for 6 months  
- Through the semi-structured interview method | - Case studies in schools with disability classes | - Parents feel that at least once their child has no engagement during online classes  
- Engagement of students with disabilities seems low during home learning  
- The importance of technology experience to increase student engagement of students with disabilities  
- Students' lack of experience with technology makes students not reluctant to end class  
- The positive impact of home learning for students with disabilities is the flexibility to do assignments and study according to students' abilities |
| Pedagogy of the Virtual Space: Content Analysis of Voices from K-12 Online Classrooms of Four Indian Cities (Chelian, 2020) | - Distance learning is an alternative according to parents' views but it does not always meet educational standards  
- Students experience learning difficulties, especially mathematics because if one material is skipped, students will have difficulty understanding the next material  
- Not all students have access to the use of computers or the internet, so it is necessary to broadcast material using radio  
- It is very difficult to understand the use of online learning  
- There is no interaction occurs in the classroom because the teacher will ask students to mute during learning | - Student sample in India  
- Sample of survey (n=52) respondents from four cities in India namely Delhi, Mumbai, Bangalore, and Kochi. Data were collected via the internet using video conferencing software and telephone media from March 2020 to July 15, 2020, through purposive sampling | A qualitative study with content analysis | The number of students attending class is decreasing during online learning due to the tendency to be truant  
- Lack of access to the internet and electronics is an obstacle in the learning process  
- Students with disabilities when learning at home need assistance but students do not like when they get assignments that require offline actions or social activities. |
4 DISCUSSION

Distance learning or online learning, namely home learning that is done by students during the pandemic, has a very diverse impact, one of which is how students have engagement with schools. Lam & Jimerson (2011) said that there are five aspects of student engagement, namely liking for learning, like for school, effort, and persistence, extracurricular, and cognitive. Liking for learning refers to the condition of students who have motivation in learning. The motivation of students will form a comfortable feeling when learning so that students will find relevant and interesting ways of learning to benefit from the learning process. Liking for school describes the happy feelings of students when they are at school and builds positive relationships between students, teachers, and peers. The formation of liking for school can be influenced by the availability of facilities and infrastructure in schools and the education system implemented in schools. Effort and persistence describe the involvement of students with the school as seen from the behavior of students to continue to try and be diligent in the learning process. Extracurricular is a condition where students have the urge to be involved in participating in activities that are not formal lessons at school. Cognitive, describes the intellectual abilities of students. These abilities can be in the form of knowledge, understanding, analysis, synthesis, and evaluation. So in reviewing student engagement students need to pay attention to the aspects contained.

In addition, student engagement has four dimensions, namely behavioral engagement, emotional engagement, cognitive engagement, and agentic engagement (Christenson et al., 2012). One of the dimensions of student engagement is cognitive engagement, which positively plays a role in the learning process at home during the pandemic. Students' willingness to listen, concentrate and participate in class must emerge from students during the learning process. Conditions, where students display responsible behavior, will make learning interesting and make students stay involved in the classroom during learning at home. However, the effectiveness of online learning at home or home learning is not always the same, but varies across age groups, internet access, economy, and does not rule out students with disabilities (Cherian, 2020).
During the home learning that is carried out during a pandemic, it has a positive impact on students with disabilities, where students can reduce the barriers they have in carrying out social activities and reduce the stigma received from the surrounding community and a flexible learning system (Lynner-Cleophas et al., 2021). Students with disabilities also feel happy and relax when learning at home during the pandemic (Castro-Kemp & Mahmud, 2021). Home learning gives the benefit of freedom and flexibility for students with disabilities to do learning. Students with disabilities had more time to plan their intensities to learn and to do assignments. All of these refer to the mental conditions possessed by students but do not answer regarding the conditions of academic achievement of students with disabilities during the pandemic.

At the same point, home learning not only provides benefits for students such as time freedom and flexibility but will also provide its challenges. Based on the findings of the literature, it is stated that learning at home during the pandemic is most influenced by the involvement of both teachers, parents, and students as well as institutional or non-institutional support systems. The importance of the involvement of various parties in the learning process will reduce the impact caused by learning at home during the pandemic. The reason is that, during school closures, students will have an impact on children's welfare, hampering the learning process, and children's physical and mental health (Asbury et al., 2021). This condition explains that the support and participation of students and the social environment during home learning will increase student involvement in learning during the pandemic (Bray et al., 2021).

Students with disabilities tend to have a structured learning system, so that during a pandemic and requiring students with disabilities to do home learning, will have an impact on them. Home learning has a different structure and learning system from what it did before, so this can lead to a decrease in student engagement (Carver & Rowe, 2021). In addition, when a pandemic occurs, students often leave class or skip class, this can happen due to inadequate infrastructure conditions or difficulties for students to understand and access the material described. Unlike students when they are in school, students with disabilities receive individual attention from trained professionals and are familiar with their specific needs that parents may find difficult to imitate at home. Such conditions will raise serious concerns about the deterioration in skills and functioning. So it will be a more difficult condition for certain groups of students with physical and mental disabilities to move from the school environment to the home environment (Faden et al., 2020). Explained that students with disabilities or special needs need an environment that is adapted to participate in activities or events that are routinely and continuously the same environment (Bell, 2021).

Doing home learning students with low attachment to school will have an impact on high absenteeism in class so that it triggers the low academic achievement of students during distance learning (Kuhfeld et al., 2020). During the pandemic, students with disabilities who have low academic achievement will tend to invest less time in studying, and vice versa where students with high academic achievements will have a stable learning frequency (Nusser, 2021). Continuing with these conditions, home learning certainly requires assistance from parents, because if this is not done, students with disabilities will close the online class web page when the internet network is inadequate or has difficulty understanding lessons (Cherian, 2020). Closing the web page if it is associated with student engagement will show low engagement behavior in students. Behavioral engagement on students refers to the extent to which students are willing to be involved in learning activities so that it can be reviewed by looking at the level of student attendance, class participation, students' efforts in the learning process, intensity, and also the persistence of students. When students close the web page due to low connections, it already illustrates that students have low effort in obtaining learning, so that there is a lack of student involvement and participation during the learning process.

Students with disabilities also tend to have low learning activities during the pandemic, so this has an impact on the decline in students' academic achievement (Nusser, 2021). The low time spent on learning activities indirectly describes the behavior of engagement in students with disabilities. The behavioral engagement has been described as related to student involvement in learning activities so that it can be reviewed by looking at the level of student attendance, participation in class, student effort in the learning process, intensity, and also persistence of students. The low intensity of students with disabilities illustrates that school closures during the pandemic are also able to create a decrease in student engagement. The condition of the low intensity of time used for learning activities can be shown by the way students with disabilities perform truant behavior in class or home learning.

Skipping class behavior in students with
disabilities can be caused by a lack of assistance while home learning so that when students do not understand the use of computer and internet access they will close the web page in online learning (Cherian, 2020). Difficult situations in using technology and the internet are a real form of obstacles that will arise during the home learning process during the pandemic. Constraints in using electronic devices will certainly trigger the low student engagement of students with disabilities during home learning. So that in online learning for students with disabilities, the need for technology or electronic devices that are easily accessible by students, one of the forms is by telephone (Page et al., 2021). The use of the telephone for home learning can be one solution because in these conditions it can form a communication relationship between teachers and students or with their friends. Then the communication that is formed by telephone will make students have an emotional attachment to the teacher and also their friends. However, the use of the telephone will be an obstacle for students who are mute, so doing online learning and learning at home requires strategies that are relevant to the conditions of the disabled students themselves. But use the telephone has difficulty explaining and the process of transferring knowledge or material.

There may be many parents who feel that students with disabilities seem comfortable at home, and feel stressed when they have to go back to school. However, students with disabilities during the pandemic also need support from the people around them, so that this can form high student engagement in students. Student engagement in students can be raised, one of which is when students have emotional engagement both with teachers, the school environment, or peers. So for students with disabilities, relatively frequent communication with peers is needed to maintain the emotional engagement of students with disabilities during the pandemic (Page et al., 2021). Student engagement in students with disabilities can be positively influenced by interactions between teachers and students (Bray et al., 2021). This condition is caused by the teacher while at school already accompanying students and understanding the condition of students directly. In a condition that requires students with disabilities to be at home, they do not have the same learning environment as at school, especially if it is done online. So emotional engagement for students with disabilities with teachers is needed to foster the desire and attachment of students to keep learning even though there is a pandemic that requires learning online and from home.

Research conducted by Umnah & Arifin (2018) in their observations found that students with disabilities had lower learning outcomes compared to their other friends. Tarnoto's research (2016) reveals various factors that become obstacles in the process of teaching and learning activities in inclusive schools, including the lack of class assistant teachers who understand the condition of students with disabilities, each student with disabilities has different problems and requires different handling. Students with disabilities experience difficulty following the subject matter, and the attitude of students with disabilities who have not been able to follow the rules so that it interferes with the teaching and learning process. The next opportunity the researcher observed was the behavior of students during the learning process and it was found that the students were not able to listen to the teacher's explanation well. This raises the problem of the inclusion of students in the aspect of cognitive engagement. So that the findings in this study based on the literature reviewed, it is known that school closures and home learning during the COVID-19 pandemic have an impact on student engagement in students with disabilities.

Based on the findings of this literature, it can be seen that school closures and the implementation of home learning provide benefits in the form of mental health for students with disabilities. However, if viewed from the education side, it will have an impact on the low student engagement of students. The low engagement of students with disabilities was also reported by parents. Reports of parents of students stated that their children during online learning at home experienced low student engagement (Carver & Rowe, 2021). The low behavior of student engagement of students with disabilities is illustrated by the flow behavior of student engagement by closing the class web page when the connection is unstable and also the appearance of skipping class behavior. In line with student engagement where students with disabilities also have low cognitive engagement due to low achievement, learning achievement, and student learning outcomes. This decline occurred because students had barriers to internet and technology access and low emotional and behavior engagement among students. So from this condition, to increase the engagement of students with disabilities, it is possible to provide support from teachers, parents, and peers.
5 CONCLUSION

The COVID-19 pandemic that has spread throughout the world has an impact on all aspects of life, one of which is education. The learning process during the pandemic is carried out online, where all students will study at home by utilizing technology and the internet. This condition gives rise to various kinds of student conditions, such as decreased learning motivation, student welfare, mental and physical health, as well as a decrease in student interest in learning in general. So in this paper, we write about the impact on student engagement that students with disabilities have during the pandemic. Based on this objective, it was found that several journals stated that home learning for students with disabilities causes the behavior of students with disabilities to tend to skip class if they cannot access web pages or do not get proper support from parents. So the condition and ability to access the internet and computer devices becomes a challenge for students with disabilities during learning at home. Student engagement in students also began to decline due to low interaction and emotional bonding between teachers and students, or students and peers. However, some conditions also state that learning at home will lead to happy student conditions.

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