Assessing Students' Readiness for Online Learning during the COVID-19 Pandemic

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ABSTRACT

The COVID-19 pandemic brought significant changes to the education system, forcing schools to transition from face-to-face learning to online instruction. This sudden shift required students to adapt to a new learning environment that depends heavily on digital literacy, self-regulation, and motivation. This study aimed to assess the level of students' readiness for online learning during the COVID-19 pandemic at a junior high school in Aimas District. Using a quantitative descriptive design, the research involved 30 eighth-grade students who participated in online learning activities during the pandemic. Data were collected through a questionnaire focusing on key indicators of readiness, including self-directed learning, learner control, motivation, computer and internet self-efficacy, and online communication. The data were analyzed using descriptive statistics to determine the overall readiness level. The results showed that the students' overall readiness for online learning was at a moderate level. The highest score was found in the motivation aspect, indicating that most students had a positive attitude toward online learning. However, the lowest scores were observed in computer self-efficacy and online communication, suggesting that technical limitations and lack of interaction hindered students' participation. These findings highlight the need for schools to strengthen digital skills training, provide adequate learning support, and develop strategies that promote active engagement in online environments.
Keywords: Readiness; Online Learning; COVID-19

INTRODUCTION

The COVID-19 pandemic transformed the global education system, forcing schools to rapidly shift from traditional classroom instruction to online learning. This transition, while necessary to ensure learning continuity, created significant challenges for teachers and students, especially in regions with limited technological resources and unstable internet access. In Indonesia, the abrupt change to digital learning highlighted gaps in digital literacy, infrastructure, and student preparedness (Dwiyanti, Pratama, & Manik, 2020). Many students, particularly at the junior high school level, were unfamiliar with independent online

study and lacked the self-regulated learning skills required for success in virtual environments (Kurniawati & Widodo, 2021).

Online learning readiness refers to the degree to which learners are equipped with the skills, motivation, and confidence needed to participate effectively in an online setting. It involves students' ability to manage time, use technology proficiently, maintain motivation, and communicate virtually (Hung et al., 2010, as cited in Demir Kaymak & Horzum, 2022). Students with a high level of readiness tend to perform better academically because they can adapt to digital platforms, while those with low readiness often struggle to complete tasks and sustain focus (Dai, Luan, & Lin, 2021). In junior high school contexts, this issue becomes more complex because younger learners are still developing autonomy and typically rely on direct teacher supervision to stay engaged.

During the pandemic, Indonesian schools adopted platforms such as Google Classroom, Zoom, and WhatsApp to facilitate remote instruction. Although these tools enabled teaching continuity, they also exposed the digital divide between urban and rural students (Managas, Ferry, Yulianjani, & Kristiadi, 2022). Students in rural areas often faced limited connectivity, shared devices with family members, and lacked technical support, making it difficult to participate consistently in online classes. In Aimas District, many students depended solely on smartphones and prepaid data, which limited their ability to access materials and engage in interactive learning sessions. These obstacles directly affected students' attendance, task submission, and learning outcomes.

Readiness for online learning can be examined through several dimensions: self-directed learning, learner control, motivation, computer and internet self-efficacy, and online communication (Hung et al., 2010; Demir Kaymak & Horzum, 2022). Self-directed learning reflects the ability to plan and evaluate one's progress independently, while learner control refers to the flexibility students exercise in managing their study time and environment. Motivation determines their persistence and willingness to adapt, and computer self-efficacy involves confidence in handling digital tools. Meanwhile, online communication skills are crucial for interacting effectively with teachers and peers in a virtual space. When one or more of these dimensions are underdeveloped, students' performance in online learning tends to decline.

Several studies have emphasized the importance of evaluating students' readiness to ensure the effectiveness of online learning. Dwiyanti et al. (2020) found that junior high school students in Indonesia showed moderate readiness levels, with motivation being relatively strong but technical skills remaining weak. Similarly, Dai et al. (2021) reported that readiness, combined with online self-regulated learning, significantly influenced satisfaction and academic achievement in remote learning environments. These findings suggest that readiness is not only a technological matter but also a psychological and behavioral one, requiring attention to motivation, discipline, and communication.

In Aimas District, many schools struggled to implement online learning effectively because of technological and environmental constraints. Teachers reported that some students had difficulty submitting assignments on time, while others were unresponsive during online sessions. These challenges reflect not only infrastructure problems but also a lack of readiness in adapting to autonomous learning. Understanding the current state of students' readiness is essential to improve online learning implementation in this context.

Therefore, this study aims to assess the level of students' readiness for online learning during the COVID-19 pandemic at a junior high school in Aimas District. It focuses on identifying the strengths and weaknesses across five key dimensions of readiness: self-directed learning, learner control, motivation, computer and internet self-efficacy, and online communication. The results of this research are expected to help teachers and school administrators develop targeted interventions—such as digital literacy workshops, mentoring programs, and communication support—to enhance students' preparedness for future online or blended learning. Furthermore, the findings will contribute to understanding how readiness affects the overall success of digital learning, particularly in semi-rural educational contexts where technological access remains limited.

LITERATURE REVIEW

Concept of Online Learning Readiness

Online learning readiness refers to a learner's preparedness to engage successfully in virtual learning environments. It encompasses several dimensions, including self-directed learning, motivation, learner control, computer and internet self-efficacy, and online communication (Hung et al., 2010; Demir Kaymak & Horzum, 2022). Students who possess high readiness levels are typically able to manage their learning independently, navigate digital platforms confidently, and sustain motivation throughout online instruction. Conversely, students with low readiness often struggle with time management, technological challenges, and lack of participation (Dai, Luan, & Lin, 2021). In online learning, readiness is not only determined by technical skills but also by psychological and behavioral factors. Students must be able to regulate their learning pace, remain motivated in isolated environments, and communicate effectively with peers and teachers (Dwiyanti, Pratama, & Manik, 2020). The Online Learning Readiness Scale (OLRS) developed by Hung et al. (2010) has become a widely used tool to assess these dimensions and has been adapted to various educational contexts worldwide.

Dimensions of Online Learning Readiness

The first dimension, self-directed learning, involves students' ability to plan, implement, and evaluate their own learning. In online settings, where teacher supervision is limited, self-direction is crucial to maintaining learning consistency

(Senjaya, 2022). The second dimension, learner control, refers to the ability to manage study schedules, learning pace, and learning strategies according to personal preferences. This flexibility enables students to adapt learning activities to their own needs (Nguyen, 2020). The third dimension is motivation for learning, which influences how persistently students engage with online materials. High motivation helps students overcome challenges such as connectivity issues and lack of direct interaction (Dai et al., 2021). The fourth dimension, computer and internet self-efficacy, relates to students' confidence in using technology for academic purposes. According to Gabriella (2022), students who believe they can use digital tools effectively show higher satisfaction and engagement in online learning. Finally, online communication self-efficacy reflects students' ability to interact appropriately and confidently in virtual learning environments. Effective communication fosters collaboration and reduces feelings of isolation (Hermawan, 2022).

Previous Studies on Online Learning Readiness

Several studies have examined students' readiness for online learning during the COVID-19 pandemic. Dwiyanti et al. (2020) investigated junior high school students in Denpasar and found that while students showed moderate readiness, motivation and self-directed learning were relatively strong compared to technical skills. Similarly, Managas et al. (2022) found that students' readiness in high schools in Tangerang varied widely, with many students showing low computer literacy but strong motivation to learn online. These findings indicate that emotional and motivational readiness can compensate to some extent for technological limitations. Gabriella (2022) reported that university students in Jakarta had a high level of readiness in using online platforms but still faced difficulties managing learning schedules independently. This suggests that readiness may differ depending on educational level and prior experience with technology. Meanwhile, Senjaya (2022) found that students in rural areas were less prepared for online learning due to limited internet access and lack of digital devices. These contextual differences highlight the importance of location and resource availability in determining online learning success. Internationally, Nguyen (2020) validated the OLRS among secondary school students and found that motivation and self-efficacy were the strongest predictors of online learning satisfaction. Similarly, Dai et al. (2021) confirmed that online self-regulated learning and readiness significantly predicted academic achievement and satisfaction during the pandemic. These studies collectively underscore that readiness is a multifaceted construct that involves both psychological and technological competencies.

Online Learning Readiness in the Indonesian Context

In Indonesia, the sudden shift to online learning during the COVID-19 pandemic revealed significant disparities among students. Rural and semi-urban areas, such as Aimas District, faced greater challenges due to inconsistent internet coverage and limited access to devices (Dwiyanti et al., 2020). Many students relied on

smartphones and shared data packages with family members, leading to irregular attendance and incomplete assignments. Teachers also reported that students often lacked confidence in using online learning platforms and required continuous guidance to complete tasks (Hermawan, 2022). Despite these challenges, studies indicate that students in Indonesia are gradually adapting to online learning. Dwiyanti et al. (2020) and Senjaya (2022) observed that repeated exposure to digital platforms improved students' technical confidence and engagement. However, motivation and self-regulation remain key factors determining learning outcomes. This suggests that interventions should not only focus on providing access to technology but also on fostering autonomous learning skills and emotional readiness.

METHOD

Design and Sample

This study employed a quantitative descriptive design to assess the readiness of students for online learning during the COVID-19 pandemic. This design was chosen because it allows the researcher to describe and interpret students' levels of readiness based on specific indicators without manipulating any variables. The study aimed to identify the extent to which students were prepared for online learning in terms of self-directed learning, learner control, motivation, computer and internet self-efficacy, and online communication. The population of this study consisted of all eighth-grade students of a junior high school in Aimas District during the 2023/2024 academic year. From this population, one class consisting of 30 students was selected as the research sample through purposive sampling. The selection was based on the school's recommendation that the class represented an average level of academic achievement and active participation in online learning during the pandemic period. Although the sample size was limited, it was considered adequate for descriptive research, where the objective is to obtain a clear overview of the students' readiness level rather than to generalize the results to a larger population.

Instruments and Procedures

The main instrument used in this study was a questionnaire on students' readiness for online learning. The questionnaire consisted of 25 statements covering five dimensions: (1) self-directed learning, (2) learner control, (3) motivation, (4) computer and internet self-efficacy, and (5) online communication. Each statement was rated using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total score represented each student's overall readiness level. Before its implementation, the questionnaire was validated by two English education lecturers to ensure content relevance and clarity of items. The validation process ensured that the statements accurately reflected the aspects of online learning readiness and were suitable for junior high school students. A pilot test was also conducted with another class of the same grade to check the reliability of the

instrument. The reliability coefficient obtained using Cronbach's Alpha was 0.85, which indicated a high level of internal consistency. The data collection procedure began with the distribution of the questionnaire to the selected class through Google Forms, ensuring that students could complete it easily on their mobile phones. The researcher explained the purpose of the study and provided clear instructions on how to respond to each item. Students were given one full day to complete the questionnaire to allow flexibility in case of internet connection issues. After all responses were collected, the data were exported to Microsoft Excel and analyzed using SPSS Analysis.

Data Analysis

The data gathered from the questionnaires were analyzed quantitatively using descriptive statistical methods. The analysis focused on calculating the mean, percentage, and standard deviation for each readiness dimension to determine the overall readiness level of students. The classification of readiness followed three categories: high readiness, moderate readiness, and low readiness, based on the average mean score obtained. To interpret the findings more precisely, each readiness aspect was analyzed separately. The mean score for self-directed learning indicated students' ability to manage their study habits independently. The learner control mean reflected their capacity to plan, organize, and regulate learning activities. Motivation scores revealed students' willingness and enthusiasm to engage in online lessons. The computer and internet self-efficacy mean represented students' confidence in using digital tools, while online communication measured their ability to interact effectively in virtual classrooms. The overall readiness level was determined by combining the mean scores from all five aspects. The results were then compared to identify which areas showed strength and which required improvement. In addition, the researcher used graphical presentations to visualize students' readiness levels for better interpretation and understanding.

The data analysis aimed not only to describe the numerical results but also to interpret their implications for online learning practices in junior high schools. The findings were expected to provide valuable insights into students' preparedness for digital learning, particularly in semi-rural contexts like Aimas District, where technological infrastructure and access vary widely. This information could help teachers and policymakers design appropriate strategies to improve online learning readiness, such as digital literacy workshops, structured guidance sessions, and blended learning programs that combine both online and face-to-face elements.

RESULT AND DISCUSSIONS

This study aimed to assess the level of students' readiness for online learning during the COVID-19 pandemic among junior high school students in Aimas District. The readiness was measured across five dimensions: self-directed learning, learner control, motivation for learning, computer and internet self-efficacy, and online communication. Data were collected from 30 students through a questionnaire

consisting of 25 items adapted from the Online Learning Readiness Scale (Hung et al., 2010). The questionnaire used a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The data were analyzed using descriptive statistics to calculate mean scores, standard deviations, and overall readiness categories.

Overall Students' Readiness for Online Learning

Table 1. Level of Students Readiness

Dimension	Mean	Standard Deviation	Category
Self-Directed Learning	3.42	0.57	Moderate
Learner Control	3.28	0.63	Moderate
Motivation for Learning	3.75	0.54	High
Computer and Internet Self-Efficacy	3.10	0.69	Moderate
Online Communication	3.21	0.60	Moderate
Overall Readiness	**3.35**	**0.61**	**Moderate**

As shown in Table 1, the overall mean score for students' online learning readiness was 3.35, which falls within the moderate category. This indicates that students were somewhat prepared to participate in online learning but still faced challenges in several dimensions, particularly in technical skills and learner control. Among the five dimensions, motivation for learning obtained the highest mean score (3.75), showing that students were generally enthusiastic and willing to engage in online classes despite difficulties. In contrast, computer and internet self-efficacy recorded the lowest mean score (3.10), suggesting that students lacked confidence in using digital tools for learning purposes.

Students' Readiness by Dimension

Self-Directed Learning

Students demonstrated a moderate level of self-directed learning (M = 3.42, SD = 0.57). Most respondents agreed that they could manage their study time and plan their learning goals; however, some still depended on teachers for instructions. This finding indicates that while students had some degree of autonomy, they required further guidance to develop independent study habits. These results align with Dwiyanti et al. (2020), who found that junior high students in Indonesia often rely heavily on teacher supervision due to limited experience in managing online tasks independently.

Learner Control

The mean score for learner control was 3.28 (SD = 0.63), categorized as moderate. Students reported that distractions at home, such as household noise or shared

devices, affected their ability to focus during online classes. The lack of structured schedules also made it difficult for some students to allocate study time effectively. Similar findings were reported by Managas et al. (2022), who observed that learners in online environments struggle with self-regulation and maintaining concentration without direct classroom management.

Motivation for Learning

Motivation recorded the highest score (M = 3.75, SD = 0.54), indicating that most students were eager to learn online despite various obstacles. Students expressed that they wanted to continue studying and complete assignments even when internet access was unstable. The positive motivational response may stem from students' understanding of the importance of maintaining academic progress during the pandemic. This finding supports Dai et al. (2021), who concluded that motivation plays a vital role in sustaining engagement and persistence in online learning contexts.

Computer and Internet Self-Efficacy

Students' confidence in using technology for learning purposes was moderate (M = 3.10, SD = 0.69). Many students admitted that they experienced difficulties using platforms such as Google Classroom and Zoom without assistance. This result reflects the limited technological literacy among students in semi-rural areas like Aimas, where exposure to educational technology is still developing. Gabriella (2022) emphasized that students' familiarity with digital tools strongly influences their online learning effectiveness, particularly in lower-resource settings.

Online Communication

The mean score for online communication was 3.21 (SD = 0.60), categorized as moderate. While students were able to interact with teachers and peers through chat or voice messages, many felt uncomfortable expressing opinions or asking questions during online sessions. This suggests a lack of confidence and insufficient training in virtual communication etiquette. Hermawan (2022) found similar issues, noting that students' reluctance to communicate online often stems from anxiety and unfamiliarity with digital interaction norms.

Overall, the findings indicate that students at the junior high school in Aimas District demonstrated moderate readiness for online learning during the COVID-19 pandemic. Their motivation to learn online was relatively high, but their technical proficiency and self-regulation were limited. The results reveal that psychological readiness (motivation) outpaced technological readiness (self-efficacy). This pattern suggests that while students were emotionally willing to engage in online education, they lacked the technical support and digital skills needed to fully benefit from it.

The findings of this study revealed that students at a junior high school in Aimas District demonstrated a moderate level of readiness for online learning during the COVID-19 pandemic. This suggests that while students were emotionally and motivationally prepared to engage in online learning, they lacked sufficient technical skills and self-regulated learning abilities to sustain effective participation. The overall mean score of 3.35 indicated that students were able to adapt to some aspects of virtual learning but still needed significant support, particularly in computer self-efficacy and learner control.

The high level of motivation (M = 3.75) found in this study aligns with Dai, Luan, and Lin (2021), who emphasized that students' internal drive is a key determinant of online learning success. Motivation often acts as a buffer against external challenges such as poor connectivity or limited teacher presence. Students in Aimas expressed enthusiasm for continuing their studies despite unstable internet access and limited resources, showing resilience and a positive learning attitude. Similarly, Dwiyanti, Pratama, and Manik (2020) found that Indonesian students displayed moderate readiness but strong motivation when faced with the sudden transition to digital learning, indicating a desire to maintain academic progress even under constrained conditions.

However, the study also showed that computer and internet self-efficacy scored the lowest among the five dimensions (M = 3.10). This finding underscores the persistent technological gap between urban and rural students in Indonesia. Many participants lacked confidence in using online platforms independently, often relying on teachers or peers for guidance. Gabriella (2022) highlighted that technological readiness directly influences students' engagement and performance in online learning, as those who feel unskilled in using digital tools tend to participate less actively. Similarly, Hermawan (2022) found that students in rural schools struggled with online communication and technology-related anxiety, which hindered their ability to express ideas and collaborate effectively.

The results further revealed that self-directed learning and learner control were both at a moderate level. Students showed some ability to plan and manage their study time but remained dependent on teacher instructions and structured schedules. This is consistent with Kurniawati and Widodo (2021), who reported that junior high school students in Indonesia were less autonomous in online environments due to their developmental stage and limited experience with independent learning. The transition from teacher-centered to learner-centered instruction requires gradual training in self-regulated learning strategies, such as setting goals, monitoring progress, and managing distractions (Nguyen, 2020). Without these skills, students may struggle to maintain focus and productivity during online sessions.

The moderate score for online communication (M = 3.21) also reflects an important challenge in online education. Many students were hesitant to speak up or ask questions during virtual classes. This behavior may stem from a lack of confidence in their language ability, fear of making mistakes, or unfamiliarity with digital

interaction norms. Demir Kaymak and Horzum (2022) emphasized that online communication self-efficacy is crucial for fostering collaboration and social presence in digital classrooms. Without it, students often experience feelings of isolation, which can negatively affect participation and learning satisfaction. The same pattern was observed by Managas et al. (2022), who found that Indonesian students were more passive during online discussions compared to traditional classrooms.

The findings also highlight a key contextual factor: the digital divide in semi-rural areas like Aimas District. Students' limited access to stable internet connections and devices significantly affected their learning experiences. As Senjaya (2022) notes, technological inequality remains one of the primary barriers to equitable online education in Indonesia. Students in urban schools benefit from faster internet and more advanced devices, while those in rural schools often rely on shared smartphones and prepaid data plans. This disparity affects not only learning participation but also readiness, as technological difficulties can reduce students' confidence and motivation.

Despite these challenges, the strong motivational dimension observed in this study offers a promising foundation for developing effective online learning practices. Teachers can build on this strength by designing engaging digital activities that sustain students' interest and promote gradual independence. Cahyono and Widiati (2017) suggested that students' motivation and readiness can be enhanced through interactive and task-based approaches that encourage active participation and self-reflection. In the context of Aimas, integrating blended learning models that combine offline and online methods may provide a more balanced approach, allowing students to benefit from face-to-face guidance while gradually improving their technological skills.

Another important implication is the need for digital literacy training at the junior high school level. Enhancing students' ability to navigate learning platforms, manage files, and communicate online can improve both self-efficacy and learner control. Nguyen (2020) argued that online readiness should be treated as a skill set that can be developed through systematic instruction rather than an innate trait. Therefore, schools should integrate short workshops or mini projects focused on digital communication, online collaboration, and self-regulated learning strategies.

The moderate overall readiness found in this study mirrors global trends during the pandemic. Dai et al. (2021) and Demir Kaymak and Horzum (2022) both reported that students worldwide faced similar challenges in balancing motivation with technical preparedness. This suggests that online learning readiness is a universal issue that requires comprehensive intervention at the pedagogical, institutional, and policy levels. For Indonesia, where disparities in infrastructure and access persist, localized strategies must be developed to ensure inclusivity and equal learning opportunities.

However, this study also acknowledges certain limitations. First, the sample size was relatively small (n = 30), representing only one junior high school in Aimas District. Therefore, the findings cannot be generalized to all schools in the region. Second, the study relied solely on self-reported questionnaire data, which may not fully capture students' actual performance or behavioral readiness. Future research could employ mixed methods, incorporating interviews or classroom observations to gain deeper insights into students' attitudes and challenges. Finally, the study was conducted in a specific pandemic context; thus, students' readiness levels may change as schools return to hybrid or fully offline learning models.

In summary, this study confirms that students in Aimas District demonstrated moderate readiness for online learning, characterized by strong motivation but limited technological and self-regulatory capabilities. The findings reinforce the need for targeted interventions that strengthen digital literacy, promote self-directed learning, and improve online communication skills. With adequate support and gradual exposure, students in rural and semi-rural contexts can develop the competencies required to thrive in increasingly digital learning environments.

CONCLUSIONS

This study investigated the readiness of junior high school students in Aimas District for online learning during the COVID-19 pandemic. The findings revealed that students demonstrated a moderate level of readiness, indicating that they were somewhat prepared to participate in online learning but still faced several challenges. Among the five dimensions measured self-directed learning, learner control, motivation, computer and internet self-efficacy, and online communication motivation received the highest score, showing that students were eager to continue learning despite technical and environmental difficulties. In contrast, computer and internet self-efficacy recorded the lowest score, reflecting students limited digital skills and lack of confidence in using online learning platforms effectively. These results suggest that students in semi-rural areas like Aimas District possess strong motivation to learn but require additional support to enhance their technological readiness and self-regulation skills. Factors such as unstable internet access, limited devices, and lack of direct teacher supervision also contributed to lower performance in online settings. Nevertheless, the positive attitude and enthusiasm displayed by students represent an important foundation for future digital learning initiatives. The findings highlight the need for schools and policymakers to provide targeted interventions that strengthen students' digital literacy, time management, and communication skills. Teachers should integrate interactive and blended learning approaches that combine the benefits of online flexibility with the structure of face-to-face instruction. Such approaches can help students gradually build autonomy and confidence in digital environments.

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