Challenges encountered by rural primary pupils in Ha Giang Province toward online learning

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Abstract

Due to teacher shortages in Ha Giang Province, elementary schools have turned to online learning as a temporary solution. However, this shift presents challenges for schools, teachers, and especially students. Therefore, the study employed a qualitative approach with a descriptive and explanatory design to examine student engagement and online learning challenges of third graders in Ha Giang. Data collection involves interviews with 25 pupils, 2 online English teachers, and 4 homeroom teachers, along with classroom observations at two primary schools. The findings reveal two key aspects, including student engagement levels and the challenges faced by students which contributes to our understanding of online learning in remote areas, highlighting the need to address engagement and overcome challenges to ensure effective online education for rural students.

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Keywords

online learning, rural area, challenges, learning process

1 Introduction

Undoubtedly, the rapid development of technology has brought online learning closer to everyone and made distance education more accessible. Simultaneously, the emergence of online learning methods has changed traditional learning methods. Through the turbulent times of the pandemic, online learning seems to have been widely applied and popular until now. In Viet Nam, online learning is considered as an emerging and booming industry as it reaches everyone and has become the current educational trend [1]. It is proved that online learning is advantageous for more and more users for its merits ranging from its convenience in terms of flexible study options, timesaving characteristics, and remarkably frugality to its east accessibility [2]. Owing to its numerous benefits, studying online, especially in urban communities, is easy and familiar. Unlike urban areas, accessing online learning in rural areas provides unique challenges when the circumstances of people here are still deprived and poor [3]. Ha Giang Province is a mountainous region in northern Viet Nam, home to many ethnic minority communities such as H'Mong, Tay, and Dao. Despite having a diverse cultural life and traditions associated with the land in which they live, each community faces challenges such as poverty, a lack of infrastructure, and remoteness. According to the Ministry of Education and Training, Ha Giang currently lacks more than 3,000 teachers in all grades, especially those who teach specialized subjects like English at the primary school level. This is a serious and urgent problem that requires a timely solution to ensure the quality of training and implementation of the new general education program. In recent years, the province has introduced temporary solutions to solve the problem of teacher shortage. However, the immediate solution only addresses the issue of human resources. The implementation of online learning in remote districts still poses many potential problems [1].

Several studies have discussed the advantages and disadvantages of online learning, particularly in the context of the Covid-19 epidemic. However, there are very few articles written in the post-Covid-19 era in Viet Nam. As a result of lacking teachers of English and teaching facilities, Ha Giang's elementary students have to participate in online learning in English subject. This paper will explore and clarify the challenges that rural children, especially the third-grade pupils, of Ha Giang Province face when learning online. Based on these findings, relevant parties can come up with solutions and plans to deal with this problem.

2 An Overview of Online Learning

2.1 Platform of Online Learning

Online learning can be defined as a process of providing instruction through digital devices to support and assist learners in achieving educational goals [4]. Its content can be delivered with the help of Internet access, audio, video, and basic manipulations of online learning courses were performed with the use of other media in the form of images, animation text, links to material, or online videos [5]. Similarly, online learning uses the Internet, so teachers and students do not need to interact face-to-face during the learning process. In the online learning environment, learners share study materials via platforms such as Messenger, WhatsApp, and Telegram because supporting softwares such as Google Classroom, Moodle, and Zoom Meeting are required [4]. As a result, online learning has emerged as a potential learning method in the digital age, thus changing traditional education through its accessibility and flexibility.

2.2 The Roles of Online Learning in Education

The educational landscape has undergone a dramatic transformation with the rapid growth of online learning. This can be explained by the numerous benefits that online learning offers. Learners can quickly access features such as pre-recorded lectures, live online sessions, and interactive modules over the Internet. Online learning is used at numerous levels, from elementary school to higher education, and it is still expanding [6].

One of the most appealing advantages of online learning is its inherent flexibility. Students can access resources, participate in courses and learn activities quickly [7]. This flexibility is especially advantageous for educators seeking to improve the quality of training. Online learning overcomes physical limitations and allows students from remote areas and areas with limited educational resources to access more courses and highly qualified teachers [3]. Furthermore, investment costs for online education have been more optimized than for traditional education, reducing costs related to commuting, accommodation, and course materials [6]. This economic accessibility provides many educational opportunities for students who come from poor backgrounds. Personalized access has empowered individuals who want to pursue educational goals regardless of their circumstances, promoting greater equity in education and lifelong learning.

Another important aspect is that online learning also opens doors for innovative pedagogical approaches. Educators can use virtual reality (VR) and augmented reality (AR) technologies to create more engaging learning environments. Moreover, online learning platforms make it easier for educators to create open, freely available course materials that may be tailored to specific learning objectives and local contexts. This shift to open and collaborative learning enables educators to exchange best practices and continuously enhance pedagogical approaches [8].

2.3 Challenges of Online Learning in Rural Areas

Online learning in rural regions has distinct implementation issues. One typical example that is immediately recognized in rural areas is that the lack of computers, smart electricity, and Internet access in households has a significant impact on students' learning processes. Then, another issue exploited is that families here have minimal incomes, yet the deployment necessitates network and other connected expenditures. The transition from face-to-face to online learning presents several obstacles due to limited financial resources and learners' need to balance job and family responsibilities [9].

Besides, online classes are ineffective without teachers' dedication. On the contrary, in many cases where online classes are held, students continue to demonstrate a lack of participation. Consequently, communication and the relationship between teachers and learners seem challenging. Lack of face-to-face interaction with peers and instructors can lead to feelings of isolation and hinder collaboration. Another difficulty is that teachers lack ICT skills. From mastering online platforms and managing technical issues to effectively integrating technology and providing online assessments, these educators encounter hurdles that can hinder their capacity to deliver engaging and effective online lessons. This eventually impacts the student's learning experience [10].

Furthermore, low socioeconomic situations and a lack of technological expertise in rural areas also matter. It is also known that some parents are busy with working and conducting errands, thus they are unable to engage

in their children's education. More importantly, studying in an uncaring home context and poor surroundings puts tremenduous pressure on students. As a result, students' motivation is reduced in an online learning environment. Each student has a different style, personality, or model as well as online learning problems. Hence, children need support from their parents and teachers [11].

2.4 The TPACK Framework

Online learning is the process of acquiring knowledge and skills through Internet-based platforms. It uses a variety of approaches to impart knowledge, including pre-recorded video lectures, live online sessions, interactive learning modules, and collaborative online environments. Teachers and students can interact and work in either a synchronous or asynchronous environment. In general, technology plays a significant role in online learning. To run successful online learning sessions, a deep combination of technology, pedagogical, content, and knowledge is required. The study intends to explore to what extent students in rural areas access online learning, as well as the challenges they are facing. Therefore, the researcher believes that the TPACK theoretical framework is most applicable to the study's objectives. Based on the notion of integrating technology into education, the researcher can identify the problems that students and teachers encounter while implementing online learning in remote places. Furthermore, the researcher will seek suitable solutions to assist students and instructors in resolving issues.

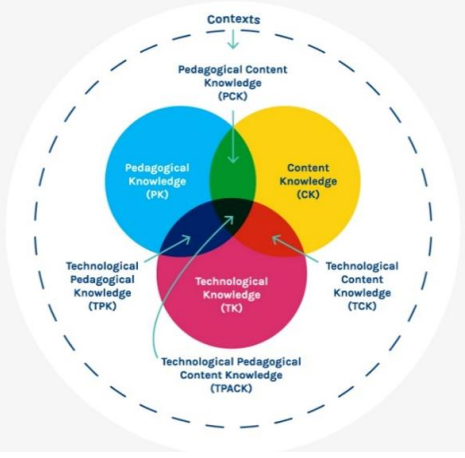

Figure 1 The TPACK Framework

TPACK, which stands for Technological Pedagogical and Content Knowledge, describes teachers' understanding of educational technology and how pedagogical content knowledge interacts to provide effective teaching involving technology. Evolved over time and through a series of publications, the TPACK framework is a model that shows the relationship among three types of knowledge: Technological Knowledge (TK), Pedagogical Knowledge (PK), and Content Knowledge (CK). The model also considers the interconnections between these bodies of knowledge, which are represented as PCK (Pedagogical Content Knowledge), TCK (Technological Content Knowledge), TPK (Technological Pedagogical Knowledge), and TPACK.

3 Research Method

A qualitative approach in terms of descriptive and explanatory design was used in this paper. The aim of the study is to learn about the reality of online learning in Ha Giang province regarding the pupils' engagement and identify problems. Hence, qualitative research instruments, particularly interviews and observations, are employed to collect data.

The participants were 25 third-grade pupils, and 6 teachers, including 2 online English teachers and 4 homeroom teachers who are teaching assistants in the class. Can Chu Phin primary school and Pa Vi primary school were selected to conduct observations and interviews. These pupils were taking part in online English classes for the 2023-2024 school year and had completed at least one semester of online study.

The researcher observed and evaluated the class based on the online classroom observation protocols including the teaching process, student learning activities, learning assessment process, and distant learning platform reliability [11]. The lesson was evaluated using two key criteria: the observation report and student engagement level. The online class was held via Zoom application and the lesson was videotaped to increase reliability and to assess the lesson more precisely. The course was divided into multiple periods, each lasting 5 minutes. Student engagement level was measured based on the following levels: High (H), Medium (M), and Low (L). After conducting each observation session, the researcher invited six teachers and eleven students to participate in interviews. Teachers and students shared their experiences, feelings, and personal opinions to respond to interview questions related to online

learning. Each interview was videotaped and lasted from 3 to 10 minutes. The interview was conducted in Vietnamese to allow pupils and teachers to express themselves with greater confidence. Responses were in Vietnamese, which were then translated into English during the data analysis process, were carefully considered and chosen to show interview excerpts with explanations. The researcher took time to collect all the data from observations to interviews carefully and started to analyze the data.

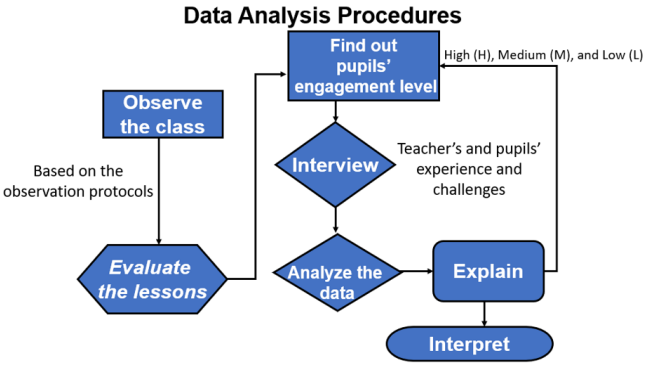

Figure 2 Data Analysis Procedures

4 Findings and Discussion

The findings of the research were divided into two aspects, including the level of class participation of students and the challenges of online learning for Ha Giang students as follow.

Pupils' engagement	Experiences and challenges
High level: 24 % Medium level: 68 % Low level: 8 %	- shortage of face-to-face interation, - require much time for adjustment, - limited Internet connectivity, - communication barriers, - fear of making mistake, - insufficient parental support, - deficiency in learning devices, detachment from the testing and examination workflow, - low attention span

4.1 Research Question 1: To what extent are the third-grade rural pupils of Ha Giang Province typically engaged during online learning?

The data were analyzed using both content and thematic analysis. The content analysis was derived from the field notes. Subsequently, thematic analysis was employed to present the observation results. Furthermore, the researcher conducted quantitative analysis by creating tabulated tables based on the Likert scale data, which assessed the levels of student engagement in the learning process. This quantitative analysis determined the percentages of students with low, medium, and high levels of involvement.

Figure 3 showed how actively engaged pupils were while learning online. As can be seen, the average level of pupils' participation could be classified from low to high.

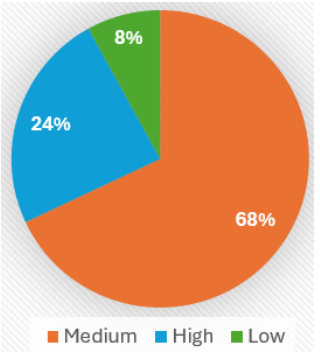

Figure 3 Pupils' engagement level during online learning process

When pupils performed well and were always proactive in class, they were classified into the high level group. Pupils who maintained order, always follow the teacher's instructions, and showed little initiative in class would be classified as medium level group. Finally, low-level group pupils were those who did not appear to follow the lecture and rarely completed their own work in class. Accordingly, the proportion of pupils at the medium level was the largest, at 68 %; the class with 6 pupils, accounting for 24 %, performed excellently throughout the online learning process, and there appeared to be just two pupils, 8 % failed to concentrate in class.

4.2 Research Question 2: "What challenges do the third-grade rural pupils of Ha Giang Province encounter toward online learning?"

The researchers conducted interviews with the participants to obtain further information about their challenges. When presenting the results, codes were used to identify the individuals. The interview results were divided into two sections: students and teachers.

4.2.1 Interview Question 1: "What is your experience during online learning?"

Students faced distinct challenges when learning online. Seven of the 11 students interviewed (63.6 %) had a positive experience when studying online, whereas 2 students (18.2 %) reported a negative experience. For the remaining two students (18.2 %), they experienced both positive and negative experiences. When being asked how long it took to adjust to this new learning style, 10 students answered it took them (2-3) weeks. Suprisingly, only 1 pupil took 1 week to adjust to this online learning.

4.2.2 Interview Question 2: "Do you encounter any problems while studying online? If yes, what are they?"

Regarding the difficulties pupils had when learning online, all pupils mentioned concerns with communicating with teachers. In fact, 63 % of pupils said they had difficulty communicating with online teachers. Most of the cases were about language use issues among Vietnamese, English, and the mother tongue. Nearly half of pupils (45 %) kept silent when they did not understand the lesson because they were afraid of making mistakes. They would ask their friends instead of the teacher when they had questions. More than half of interviewees (54 %) thought that their parents did not care about online learning. The reason could be explained because they spent a lot of time making a living and they did not have a high level of education background.

4.2.3 Interview Question for Teachers: "What challenges do you face when conducting online classes?"

During the process of operating online classes, six teachers including two online teachers and four teaching assistants stated they frequently confront hurdles in online classes. All teachers said that they sometimes had difficulties in connecting to the Internet, mostly due to local terrain and bad weather. Regarding equipment supported during online learning, all teachers reflected on the lack of webcams and microphones during class organization. As aforementioned, communication between teachers and students was a problem that affected most subjects.

4.3 Discussion

The findings showed that student involvement in class was average. Students did well in the first 5-10 minutes, but they lacked initiative and remained hesitant in class. Students only followed the teacher's instructions and showed little interest in the subject. Simultaneously, the findings highlighted both common online learning obstacles and unique difficulties specific to the region including shortage of face-to-face interation, much time for adjustment, limited Internet connectivity, communication barriers, fear of making mistakes, insufficient parental support, deficiency in learning devices, and low attention span.

First and foremost, the problem of pupils performing passively in the classroom can be explained by the characteristics of pupils from rural areas. Due to poor living conditions and a lack of access to technology and people from other locations, children are typically hesitant around others and fearful to express themselves, especially with strangers. Furthermore, language and cultural disparities create a barrier between students and teachers. This is also one of the reasons why kids have limitations on communication and are afraid of making mistakes. Students in the Meo Vac district of Ha Giang are frequently from the H'mong ethnic minority. They frequently converse with family and friends in their mother tongue. When they want to say something or convey a viewpoint, they frequently insert their mother tongue in conversation.

This also leads to kids remaining quiet in class and afraid of making mistakes.

Secondly, because of the characteristics of high mountainous terrain and narrow roads with steep passes, travel distances in the district are often quite difficult. Therefore moving and installing electrical equipment and delivering Internet connections to this area continues to be problematic. Furthermore, because the weather in Meo Vac district frequently produces fog and thunderstorms, Internet access is not always assured. Another typical obstacle is a lack of family motivation in education. Parents in low-income areas often need to work extremely hard hours. Furthermore, parents often have inadequate education levels, making it even more difficult to support their children's education. The students also mentioned that they have to help their parents with household duties after school. It can be noted that, due to regional features, students in Meo Vac district, Ha Giang, must consider multiple issues when studying. As a result, their capacity to concentrate is also compromised.

Similar to the current study, previous research has shown that lack of equipment, shortage of motivation and poor network connectivity are common issues in online classrooms, as indicated by [4]. Consistent with [12], pupils in this study generally took 2-3 weeks to adapt to online classes. Furthermore, the findings of recent studies indicate that students often lack family support during online learning [11]. The current study found that the pupils' parents were largely uninterested in guiding their learning, possibly due to poverty and a lack of education. While prior research has linked communication difficulties to Internet connection and knowledge exchange, this study suggested language and cultural differences as the primary barriers. Finally, the paper's findings contrasted with previous research suggesting that teachers often have difficulty in assessing and evaluating students in online learning environments.

5 Conclusion

In summary, with qualitative methods, the researcher investigated the challenges Ha Giang students faced when learning online, as well as determined the level of students' proactive participation in class. Regarding the students' experiences, the majority of them felt disconnected from the online teachers, despite their efforts to establish an exciting learning environment. Furthermore, network connectivity issues and a lack of equipment made the lessons more difficult. Students struggled to communicate with subject and homeroom teachers due to linguistic and cultural differences. As a result, when students did not want to ask their teachers, they got bashful and did not dare to ask because they were afraid of making mistakes and not knowing what to say.

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Những thách thức khi học trực tuyến của học sinh tiểu học tại tỉnh Hà Giang

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Tóm tắt Do tình trạng thiếu giáo viên ở tỉnh Hà Giang, các trường học đã chuyển sang học trực tuyến như một giải pháp tạm thời. Tuy nhiên, sự chuyển đổi này đặt ra nhiều thách thức cho các trường, giáo viên và đặc biệt là học sinh. Do đó, nghiên cứu này sử dụng phương pháp định tính với thiết kế mô tả và giải thích để xem xét mức độ tham gia của học sinh và những thách thức trong khi học trực tuyến của học sinh lớp Ba tại Hà Giang. Việc thu thập dữ liệu bao gồm phỏng vấn 25 học sinh, 2 giáo viên tiếng Anh trực tuyến và 4 giáo viên chủ nhiệm, cùng với quan sát lớp học tại hai trường tiểu học. Kết quả cho thấy hai khía cạnh chính: mức độ tham gia của học sinh và những thách thức mà học sinh phải đối mặt, góp phần nâng cao hiểu biết về học trực tuyến ở vùng xa, nhấn mạnh nhu cầu giải quyết vấn đề tương tác và vượt qua những thách thức để đảm bảo giáo dục trực tuyến hiệu quả cho học sinh nông thôn.

Từ khóa học online, khu vực nông thôn, thách thức, quy trình học tập