



Developing self-learning abilities for students in the context of the Covid-19 pandemic: A case study in Vietnam

Dao Viet Hung¹, Dang Thi Oanh², Nguyen Do Huong Giang³, Lam Thanh Toan⁴, Nguyen Mau Duc^{5*}

^{1,3} Thai Nguyen University of Agriculture and Forestry- Thai Nguyen University, Vietnam

⁴ Cantho University of Technology, Cantho, Vietnam

^{2,5} Hanoi National University of Education, Hanoi, Vietnam

* Corresponding Author: **Nguyen Mau Duc**

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Abstract

The COVID-19 pandemic has drastically changed educational settings around the world, making a drastic shift to online learning. This health crisis affected schools and the educational systems in developing countries like Vietnam in a major way as they struggled with problems because variations existed at levels of technology availability, readiness for distance.

This research aims to discuss the development of self-learning abilities in Vietnamese students during the pandemic. It will emphasize how the students cope with online learning, how effective were the digital platforms for it, and the systems that helped bring about this change. This is a mixed-method study that incorporates quantitative data in the form of student and teacher surveys as well as qualitative insights derived from interviews and focus groups. This methodology would enable to provide a comprehensive understanding of student experiences and challenges faced by students while adapting to self-learning. The findings report on a plethora of adaptive strategies employed by the students and successes and challenges. The major challenges are with respect to the discrepancies in accessibility to digital tools, varying levels of self-motivation as well as the need to be better online pedagogies. However, in the midst of all these challenges, so many students showed outstanding adaptability and resilience in self-learning development skills. The research firmly draws the conclusion that the pandemic has proven a catalytic effect over significant educational shifts in Vietnam, and practice reorientation must require robust digital infrastructure, equivalent learning resources accessible to all students as well as new pedagogical appropriateness interventions. The findings of this study inform the policymakers and the educators in every capacity in charting their future education strategies not only for Vietnam but also for other similar setups across the world.

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1. Introduction

The COVID-19 pandemic has shocked acute global education crises with brutal changes in teaching and teaching methods (Ledeneva, 2021) ^[10]. This unexpected crisis has presented not only the biggest challenges but it has churned out ways for pedagogical innovation in fostering self-learning capabilities amongst students especially in Vietnam (Tran, D.Q., 2021) ^[10]. This paper looks into an in-depth case study that is focused on Vietnam with the aim of dissecting strategies used, what hurdles met and results gained towards building self-learning personal capabilities during the pandemic. This, therefore, has presented a challenge for them with developing autonomous learning skills, critical thinking, as well as digital literacy in transitioning very fast into remote and blended learning models.

This transition, imposed by the pandemic conditions, underlines the transfer in the educational practices from the conventional old-fashioned teacher-oriented methods towards the learner-centered systems (Dumitru, 2023)^[4]. The main issue remains to find out how these changes have impacted upon the development of self-learning abilities at different educational levels from primary to higher education through both urban and rural patterns in Vietnam.

The methodology approach in this project is, therefore, engrained in mixed methods using surveys, interviewing as well as classroom observation. This combination of the different methods offers a holistic view of perspectives and experiences from both students and educators as well as administrative staff. The course mainly aims to critically examine the role of technology in promoting self-learning, critique pedagogical approaches towards the improvement of self-learning, as well as analyze the main bottlenecks facing learners adapting to self-directed learning models (Dumitru, 2023)^[4]. In addition, it is also a study on the mechanisms in place to aid such transition for instance, support from the institution, community help, and government programs. This paper, through a critical evaluation of these approaches and tools such as online learning platforms and digital resources, seeks to allow one to have a better understanding of how they can be effectively applied as means of fostering independent learning attitudes (Pullen *et al.*, 2023)^[13, 14]. The present study also investigates the pedagogical changes precipitated by remote learning and how teachers adjusted downloading methods to facilitate self-learning amongst the students.

This rapid shift to online learning, for a significant part triggered by COVID-19 pandemic, came as a huge challenge to a Vietnamese education system that was largely tagged with rote memory-based learning and teacher-centric approaches. This sudden change highlighted the necessity for more learner-centered educational practices, following world's trends that critically highlight critical thinking, problem solving, and self-directed learning as the key 21st-century learners' competencies (Nguyen, H. P., & Phan, T. B., 2022)^[11]. The study critically analyzes the problems of students in view to the motivational issues, time-management challenges, and requirements of utmost support and resources in the new learning environment (Kokoç & Üstün, 2023)^[9]. On the contrary, this period of disruption has also opened an opportunity for educational reforms and compels educators to seek new teaching methodologies and technologies that teach more resilient, flexible, and independent learners. In conclusion, the paper posits that while presenting myriad challenges upon the education sector of Vietnam, COVID-19 pandemic also acted as a catalyst making educational reform. The findings of this research give important insights into the processes and outcomes of building students' self-learning capabilities, providing implications on policy, practice, and future research in education.

2. Literature Review

Lately, in connection with the COVID-19 pandemic, the educational system across the globe had to switch completely to distance education and blended learning formats. In terms of self-study skills, this development becomes of prime importance. Phu Ha, N., Tram Anh, L., & Hong Thai, L. (2023)^[12] chronicle the disruptive nature of the pandemic on traditional teaching and learning methodologies, in particular emphasizing on the swiftness with which classroom teaching had to be replaced by digitalization. This change though

abruptly implemented has brought into focus the importance of self-directed learning skills. In their analysis Ahuja, K. (2022)^[2] argue for a necessity shifting from teacher-oriented to learning-oriented paradigms due to the educational challenges induced by the pandemic, and where it has been arguably most pronounced is Vietnam. In the Vietnamese context, these authors emphasize the great domination of rote-learning in the education system and how the pandemic has been a clarion call for a fundamental re-examination aimed at fostering autonomous learning skills.

Vietnam has seen a confluence of challenges and innovations in this light. Dung, D. A (2023)^[5] outline the swift implementation of the remote learning policy by the government, and Vietnamese educational institutions, though critique that the teachers and students were not provided support to adapt in these new methods. Country differences to access different digital tools have further complicated this transition. Their research points a digital divide impacting more the students from rural areas and making a case for equal fair access to online resources.

There have been a number of challenges relating to developing self-learning abilities in Vietnam, and all first tips contributed to the same. According to Bahar *et al.*, 2021^[3] critically notable challenges that are summed up a lack of motivation, difficulties in time management, and voids of structured learning environments. These difficulties are compounded for students in semi-urban or non-urbanized areas where weak technological infrastructure adds on to the existed prevailing difficulties. These circumstances have given way to a rethinking on pedagogic strategies. Juhary, 2022 feel that the role of educators has changed as they slowly transited from the traditional teaching roles to now facilitators of learning. They stress on the point of professional development programs for the teachers which would in turn help the pupils gain autonomous learning skills are a requirement.

Higher education has been characterized by this movement towards self-learning. Changes of university curricula as well as pedagogical approaches have to be reviewed with much expectation of unearthing an emergence of a slow but partial integration of self-directed learning within frameworks of higher education. Their findings resonate with comparative studies that provide an international perspective about the impact of COVID-19 on education. Some studies highlight differences in the practices promoting self-learning in the various educational systems, signaling divergence in practice and outcome depending on the cultural setting and institutional context (Yahya *et al.*, 2022)^[16].

One of the most critical factors implicating role play in the various dimensions is government policies in supporting transition during the pandemic. In light of identifying the initiatives that the Vietnamese government have taken to support the education sector, it has been identified that in addition to assistance offered in shifting towards digital learning settings, comprehensive policies must also be instigated for dealing with wider associated challenges of self-learning competencies (Ninh Nguyen & Dung Tran, 2022)^[11]. The element of interest here is the impact self-learning has on student welfare. (Elgeka & Pujibudojo, 2023)^[6] Go into psychological aspects to note that while self-learning fosters individuality and endurance, it equally besets isolation and stress especially with remote learning settings. In summary, it has been evidenced by the literature that the COVID-19 pandemic acted as a herald for educational reform

in Vietnam with much accent demonstrated on the development of self-learning abilities. The transitioning though challenging presents an opportunity for the educator to re-imagine and reshape the landscape around learning that is in alignment with 21st-century educational needs. Research and policy development that follow should, therefore, build on these gains for sustainable and all-inclusive practices that equip or empower the learner in becoming independent and life-long learners.

3. Results

The findings presented here are derived from a comprehensive study focused on understanding the development of self-learning abilities among Vietnamese students during the COVID-19 pandemic. The study utilized a mixed-methods approach, incorporating surveys, interviews, and classroom observations, with a sample size of 800 students from universities in the mountainous region of Northern Vietnam.

3.1. Technological adaptation

a) Adoption and impact of online learning platforms in Vietnam during COVID-19

Amidst the COVID-19 pandemic, educational institutions in Vietnam were given an immediate task to switch on for online learning, and transition was important as it would contribute not only to ensuring distance among students but also supported to prioritize measures intended to enhance self-learning skills of students. This shows that about 85% of universities across Vietnam quickly adopted the online learning platforms. Urban universities were quicker with a 90% adoption rate within the first month of the pandemic as opposed to 70% in rural universities. This is an issue of the digital divide that exists where rural universities struggle with infrastructural limitations and little resources. The effectiveness of these online platforms varied notably between the urban and the rural setting. In the case of the urban areas, almost 70% of the universities indicated a high level of effectiveness with most experiencing active student participation and the regular use of the comprehensive learning management systems such as Moodle and Google Classroom whereas in the case of the rural areas, only about 30% of the universities obtained a score on excel for this aspect. In rural universities, similar effectiveness, at the same time, was reported in only 45% of cases, and often such communication was carried out with the help of the most basic of tools, including Google Meet, Zalo, and Facebook groups due to infrastructural constraints. However, there can be a positive trend drawn from such challenges, that online platform's regular users were observed to have an increased level of 30% in their self-management and independent problem-solving abilities. In this view, a correlation ($r = 0.65$) also associated the use of the platform to enhancing research and digital literacy in supporting self-independent inquiry through navigating through resources online and management of schedule autonomously too. However, aside from the varied benefits, online learning did not intrinsically lack challenges. On the other side, apart from learning hurdles, some serious issues turned out to be major road blocks in rural regions for over 60% of students, which are lack of connectivity, and enough access to the digital devices. On professional development, 40% of urban and rural lecturers cited a need for digital pedagogy even though this means extra training to fully regard the use of online

platforms These bring to the limelight, equal access to technology as well as enough support towards capitalizing on the potentials of online education from the lecturers and students' view.

In conclusion, the introduction of online learning systems during the period of the pandemic in Vietnam played a very vital role to ensure consistency of different educational activities and also improve the independent learning skills of students. Whereas urban university had a better similar facility that implied implementation was efficient, rural university had to grapple with serious challenges due to the digital divide. This calls for strategies that are targeted to ensure equitable access of the digital resources and versions of training for the educators on an enhanced note, i.e. in order to make those online learning platforms capable enough to do complete justice with the development of self-learning abilities across diverse educational landscapes.

b) Usage patterns of digital tools for self-learning in Vietnamese students during COVID-19

The disruption caused by the COVID-19 pandemic to Vietnam's traditional educational system led to a marked increase in the use of digital tools, significantly influencing students' development of self-learning skills. Our data-based study reveals that during the pandemic, 95% of students transitioned to digital learning tools, a sharp rise from the pre-pandemic figure of 40%. Urban students predominantly used Learning Management Systems (LMS) such as Moodle and Google Classroom (75%), whereas 60% of rural students, limited by internet access, turned to simpler platforms Zalo and Facebook. Additionally, 50% of students explored educational apps like Khan Academy and Coursera for extra learning, indicating a varied use of digital tools.

This transition to digital tools notably enhanced self-learning capabilities. Students who frequently used LMS platforms reported a 35% improvement in learning management and organization. Furthermore, diverse digital tool engagement was linked with a 40% increase in digital literacy, especially in research and information evaluation skills. However, a digital divide was evident; rural students averaged 15 hours a week on digital platforms, compared to 25 hours for urban students, mainly due to poor internet and limited device access. About 65% of rural students experienced regular learning disruptions, contrasting with the more stable digital learning environment in urban areas. Despite widespread digital tool use, 50% of lecturers lacked sufficient training in digital pedagogy, highlighting a gap in educator readiness that could limit the full potential of these tools in promoting self-learning.

In summary, the utilization of digital education tools in Vietnam during the pandemic has been both beneficial and challenging. It greatly aided in maintaining educational continuity and improving self-learning skills but also exposed significant systemic issues, especially in rural regions. Addressing the digital access disparity and providing comprehensive digital pedagogy training for lecturers are imperative. These findings suggest that equitable resource distribution and focused efforts to train educators are essential for maximizing the effectiveness of digital tools in enhancing self-learning in this new educational landscape.

3.2. Pedagogical strategies

a) Shift in teaching methodologies

The transition to online learning required lecturers to adapt

their teaching strategies significantly. According to our survey, 80% of lecturers reported altering their methodologies to suit the online learning environment. This adaptation included the integration of new instructional strategies and the use of various digital tools. Notably, 55% of lecturers adopted project-based learning approaches, allowing students to engage in more hands-on, practical projects that could be conducted remotely. This method was particularly effective in fostering critical thinking and problem-solving skills, essential components of self-learning.

Additionally, 40% of lecturers implemented flipped classroom models. In this approach, students were first exposed to new content at home, usually through digital mediums, and classroom time was then used to deepen understanding through discussion and problem-solving. This method was found to be effective in promoting independent learning and analytical skills, as students prepared beforehand and engaged in active learning during virtual class sessions.

However, this shift also revealed a significant gap in lecturers' preparedness for online teaching. Our data showed that 40% of lecturers expressed a need for further professional development in online teaching methods. This need highlights the importance of ongoing training and support for educators, especially in adapting to rapidly changing educational landscapes.

b) Effectiveness of asynchronous and synchronous learning

The study examined how asynchronous and synchronous learning modes affect self-learning skills in different age groups. Synchronous learning methods like live online classes and real-time lecturer interaction increased student engagement by 60%. The immediate feedback and structured approach of synchronous learning helped these learners, who needed more guidance and support.

With 70% satisfaction, students preferred asynchronous learning. These students liked asynchronous learning's flexibility and self-paced nature, which let them manage their schedules and learning. This method helped self-regulation and time management most. During the COVID-19 pandemic in Vietnam, project-based learning and flipped classrooms helped develop self-learning skills, but they also highlighted the need for teacher professional development. The need for a flexible and adaptable educational approach to meet the needs and learning styles of all students. The pandemic presented challenges and opportunities for the Vietnamese education system to adopt new pedagogical methods to improve self-learning.

3.3. Student engagement and self-learning skills

a) Student engagement in remote learning

The COVID-19 pandemic's shift to remote learning revealed varied levels of student engagement in Vietnam, significantly influenced by educational levels and available resources. Students in the city reported a notably higher engagement rate in self-learning activities at 95%, compared to 55% among students in the countryside. This disparity largely stemmed from differences in technological access, a factor statistically significant ($p < 0.05$) in influencing engagement. Students in the city, with better personal access to digital devices and more stable internet connections, found it easier to engage consistently with online learning platforms. In contrast, students in the countryside often encountered challenges like

shared devices and unreliable connectivity, impeding their ability to participate actively in remote learning.

b) Development of self-learning skills during the pandemic

The pandemic period was pivotal in enhancing self-learning skills among students, a key component in adapting to the new educational landscape. By the study's conclusion, a substantial 65% increase in students' confidence in independently managing their learning was observed. This surge is a testament to the adaptive capabilities of students navigating the uncharted territory of extensive remote learning. Time management skills, in particular, saw significant improvement, with 60% of students reporting a heightened ability to organize their study schedules and adhere to deadlines. This development was likely fueled by the need to handle various asynchronous learning components autonomously, a stark departure from the structured environment of traditional classroom settings. Furthermore, goal-setting abilities, a critical facet of self-learning, improved among 55% of students. The remote learning context, necessitating more student autonomy over academic goals, likely contributed to this enhancement. The ability to set and pursue clear, achievable objectives became crucial as students navigated their educational paths more independently than ever before.

c) Implications and conclusion

The analysis underscores the complex dynamics of student engagement and the development of self-learning skills in Vietnam's remote learning scenario induced by the COVID-19 pandemic. While urban students demonstrated a relatively smoother transition with higher engagement rates, rural students faced more pronounced challenges. These findings highlight the necessity of age-appropriate and resource-sensitive strategies in remote education to cater effectively to different student groups. The improvements in key self-learning skills, such as time management and goal setting, are encouraging indicators of students' adaptability. However, the notable disparities in engagement levels point towards a pressing need for targeted strategies to ensure all students are provided equitable and effective learning opportunities. Factors like technological access, home environment quality, and the nature of online instruction emerge as critical elements in shaping successful remote learning experiences. As the educational landscape continues to evolve in the post-pandemic era, these insights offer valuable guidance for educators and policymakers in designing and implementing educational frameworks that support and enhance student learning, engagement, and self-directed educational growth.

3.4. Challenges in developing self-learning abilities

a) Student motivation and focus

Impact of reduced classroom interaction

One major obstacle in fostering self-learning skills in students is keeping them motivated and focused, a challenge reported by about 60% of students. The absence of in-person classroom interactions significantly contributes to this issue. In a conventional classroom, the physical presence of classmates and the environment fosters a sense of community and engagement, an aspect difficult to emulate in online settings. Students' qualitative feedback underscores the negative impact of missing this physical interaction and extracurricular activities on their motivation levels. This diminished motivation can result in reduced engagement with

academic content and a subsequent drop in academic achievement, highlighting a critical area for improvement in online learning environments.

Psychological effects

The pandemic has triggered feelings of isolation and stress in students, impacting their focus and self-motivation. The sudden switch to online learning, along with overall pandemic-related anxiety, has produced a setting where concentrating on studies is challenging. This environment has made it difficult for students to maintain attention and motivation in their academic endeavors.

b) Assessment and feedback challenges

Difficulties in remote assessment

A major obstacle in remote learning is the effectiveness of teacher evaluations of student progress. Approximately half of the lecturers face challenges in giving prompt and impactful feedback. Online settings make traditional assessment approaches, such as written tests and live presentations, less practical. This drawback not only complicates the evaluation process but also influences the caliber of feedback given to students, which is crucial for their educational and personal growth.

Adoption of innovative methods

To overcome these educational challenges, approximately 30% of lecturers have embraced new assessment techniques, including online quizzes and peer reviews. The intention behind these methods is to offer quicker feedback and to engage students in a more interactive format. Yet, the success rate of these innovative approaches is inconsistent. Adapting to these new technologies and methods poses a separate challenge for both lecturers and students.

During the COVID-19 pandemic, Vietnamese students have faced significant obstacles in developing self-learning skills, primarily due to issues with motivation and assessment in the shift to online learning. This situation has prompted a reevaluation of established educational practices and underscored the necessity for additional support mechanisms to assist students in adapting to these changes. While new methods are being implemented, there's an evident demand for more all-encompassing solutions to effectively tackle these difficulties. Essential measures include offering psychological support to students, equipping lecturers with skills in digital teaching methods, and enhancing the interactivity and appeal of online learning platforms. The pandemic has hastened the need for educational reform, making it imperative to address these challenges to foster the ongoing growth of self-learning capabilities in Vietnamese students and beyond.

Conclusion

In light of that, the researched self-learning abilities of Vietnamese students during COVID-19 are a reflection of the main changes in an educational process. The extraordinary going over to remote learning, determined by circumstances of the pandemic, has created new favorable conditions and challenges for students, teachers, and persons on school management. Findings include awareness regarding diverse strategies entailed to adapt self-learning, technology as one of the critical initiatives to facilitate educational continuity, and disparities in access to digital resources.

The research greatly emphasized the necessity for developing

proper digital infrastructure and pedagogical strategies in favour of the proper online learning. On the other hand, it highlighted the needs for better policies to be implemented so that perfect technological assistance can be availed along with distributing resources in an equal manner during referring underprivileged regions or for benefiting students from such regions. Although outcomes of an unprecedented headwind are found to be impressive in term of resilience and adaptability, as documented by this study, the exploits of the Vietnamese education system, there are also areas specified within this research that require continued attention and up-scaling.

Looking ahead, this research opens avenues for further inquiries into the long-lasting impacts of these shifts in education and the possibility of easily implanting successful online learning practices into post-pandemic education systems. The Vietnam experience gives the necessary lessons to countries solving similar problems, that flexibility, innovativeness and equity in education are the key to winning. Instead, the pandemic has tested the resilience of the education system rather and offered the opening to re-imagine and reform educational practices for the future.

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