Developing self-learning skills in higher education in Vietnam: A survey of current practices and proposed solutions

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ABSTRACT

Purpose: This research explores how Vietnamese university students develop self-learning skills within traditional educational practices, focusing on fostering autonomy and lifelong learning in a student-centered environment.

Design/Methodology/Approach: The study employs a mixed-methods approach. Quantitative data was collected through surveys, and qualitative data was gathered from interviews conducted with 508 student participants from six leading universities across Vietnam, representing a variety of academic disciplines. A 39-item questionnaire was used to measure opinions, experiences, and perceptions related to self-learning, utilizing a five-point Likert scale.

Findings: The research shows that while Vietnamese students acknowledge the importance of self-learning, they face significant challenges due to the traditional teacher-centered educational model emphasizing rote learning. Key factors influencing self-learning include cognitive abilities, learning conditions, and the credit-based education system. Major pedagogical reforms are needed to foster an environment conducive to autonomous learning.

Conclusion: The findings highlight the need for Vietnamese universities to adopt a more student-centered approach, enhance learning resources, and foster an inquiry-driven, autonomous learning culture. The development of comprehensive policies and institutional support is essential to create a conducive atmosphere for self-learning.

Practical Implications: The study suggests that universities should focus on developing strategies and resources to promote student autonomy and independent learning. This includes the creation of policies and a supportive infrastructure to guide the transition toward more flexible and student-driven learning methods.

Contribution to the Literature: This study highlights challenges in implementing self-learning in Vietnamese higher education and offers recommendations for reforms to align with global trends in autonomous learning.

Keywords: *Higher education, Self-learning skills, Self-study capacity, Students, Practices, Proposed solutions, Universities.*

1. INTRODUCTION

Self-directed learning has emerged as a crucial skill for students in the dynamic realm of global education (Masaki, 2022; Tan et al., 2023). Known as autonomous or independent learning, an important aspect is taking control of one's education without direct guidance from their instructors (Seitova & Adilbaeva, 2020). This ability is imperative for the successful accomplishment of academics, and equally, for lifelong learning in the face of changing circumstances (Brockett & Hiemstra, 2018; Mundy, Green, Lingard, & Verger, 2016). Attention on

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enhancing one's self-learning capacity was indeed ramped up, especially as nations attempted to reform not just the bought-in content of their educational systems but also pedagogical delivery modes in accordance with 21st-century dictates ("Global perspectives on home education in the 21st century," 2021; (Nguyen et al., 2020). Vietnam follows this stream properly, correctly combining its skyrocketing economic growth deep cultural roots ("Growth, poverty, and income inequality: The case of Vietnam," 2015; (Nguyen & Pham, 2018).

The Vietnamese education system has experienced rapid evolution in recent decades (Pham, 2016). A country that has promised to lift the educational standards, starting with the Renew forms in the late 1980s, which unlocked it up to the world outside, and the present stress on internationalization and attuning to the world educational norms (Mundy et al., 2016). However, Vietnam faces significant challenges in its efforts to ensure quality education for its young population (UNICEF, 2022). To note, the major challenge is that students lack the capacity for self-learning and adaptation to changes in the contemporary world.

Confucianism-based traditional education in Vietnam has seen the most emphasis being put on memorizing as well as looking up to teachers (Duong, 2013). While there are merits in this approach, quite often it leaves not much scope for learning independent of the students, problem-solving, and critical thinking (Chin, Li, & Siow, 2023; Do, 2023). There is an urgent need to move away from a teacher-centered education to a child-centered one that will enable students to be in charge of their learning experiences as Vietnam seeks to assimilate its students into the world community (Phuong & Huang, 2019). This document analyzes the current system and proposes methods for enhancement (Vu, 2023). This introduction has briefly outlined the importance of autonomous learning and the barriers confronting Vietnam in manifesting this skill, as well as the benefits of effectively employing self-learning tactics within the context of Vietnam (Phung, 2022; Tran & Tran, 2021).

In today's technological era, self-guided learning is highly valued as it fosters curiosity and develops critical thinking, contributing to lifelong education (Blair, 2023). Self-learning, in isolation, fosters curiosity, enhances critical thinking, and enhances lifelong education (Akgün, Mede, & Sarac, 2022; Roick & Ringeisen, 2018). As a consequence, it allows learners to review knowledge at their own speed, examine and investigate things extensively, and autonomously form problem-solving abilities (Koekoek, Dokman, & Walinga, 2022; Soboleva, 2019). Additionally, due to the decreasing duration of knowledge relevance (Gao, Wan, & Lin, 2023), it is necessary to enhance the learning process for both personal and professional development (Bal, 2020; Zuti, 2017). While self-learning is gaining recognition in every country in the world, it is encountering several difficulties when it comes to Vietnam's education landscapes (Masaki, 2022). Obstacles consist of remnants of its former educational system, limited resources, and established practices that hinder the encouragement of independent learning. Lack of opportunities to learn about new instructional methods and lack of recognition of the importance of self-directed learning worsen the situation (Vu, 2023). Despite these factors, there are still positive elements that effectively promote self-learning among Vietnamese students (Duong, Dao, & DeJaeghere, 2023). In addition to academic achievements, fostering self-directed learning can greatly contribute to developing an innovative and entrepreneurial mindset. As Vietnam becomes increasingly influential on a global scale, having a highly adaptable workforce that is capable of learning and innovating will be a significant advantage.

So, the specific research questions were to:

(1) What are the key factors influencing the development of self-learning skills among Vietnamese university students?

(2) What are the identified specific challenges that Vietnamese students face in terms of developing self-learning skills within the existing educational system?

(3) How do different instructional approaches engage with the development of self-directed learning skills among the students who are studying within the existing educational institutions of Vietnam?

2. LITERATURE REVIEW

Self-learning refers to the independence of students to learn on their own without the need for direct supervision or even being physically present in a traditional classroom. It is a crucial component of the modern educational framework as it enhances flexibility and fosters a lifelong learning attitude, enabling learners to better understand and adapt to the ever-evolving global landscape. Researchers have conducted numerous studies on the benefits, strategies, and outcomes of self-learning, offering valuable insights into its intricate process. These studies emphasize the significance of self-learning in developing cognitive skills and autonomy among students, which is

essential for their academic and professional growth.

The theoretical foundation of self-learning is deeply rooted in the constructivist learning theories proposed by Collier (2023) and Usher and Schunk (2017), which suggest that learners construct knowledge through their interactions with people and the environment. Ergen and Kanadlı (2017) further developed the concept by introducing the theory of self-regulated learning, highlighting key components such as goal setting, self-monitoring, and self-evaluation as critical aspects of the learning process. These theories underscore the importance of self-directed learning in enabling students to take charge of their educational journey, thereby improving their problem-solving abilities and comprehension of complex materials.

In the context of Vietnam, the educational system has traditionally emphasized test results and rote memorization, which hinders the development of critical thinking, creativity, and self-learning skills. As noted by Yüce (2023), there is a pressing need for reforms to foster autonomous learning and encourage critical thinking. Recent research in Vietnam has explored various strategies to promote self-learning, addressing challenges such as the lack of digital resources and the restrictive teaching styles that limit student autonomy (Nilson, 2023; Pham, 2016). Despite these challenges, there are promising opportunities to integrate self-learning methodologies into the curriculum to better prepare students for the demands of a knowledge-based economy.

Moreover, the influence of self-learning on academic performance and its role in enhancing self-regulation have been widely acknowledged. Studies, such as those by Ergen and Kanadlı (2017), reveal that self-learning positively impacts students' attitudes toward studying, problem-solving skills, and overall understanding of course materials. Vietnam has reported encouraging progress, with increased student engagement and improved outcomes in self-learning programs (Xuan, 2022). As the global workforce shifts toward knowledge-intensive industries, the development of self-learning programs becomes increasingly essential. This has been described in the literature study where great strides have been made in educational demands as the world is moving to knowledge-based businesses; students from Vietnam will need independent learning capability.

3. METHODS

3.1. Research Design

This research examined the development of self-learning capabilities among Vietnamese students through a mixed-methods approach. To provide a thorough explanation of the current situation and the challenges self-learning faces in the Vietnamese learning environment, this research aligns with the study's objectives and fits well within the theoretical framework developed from the literature review. Empirical data was collected through a survey applied to 508 students from different universities in the nation. Of the four big clusters of academic programs, namely Educational Science, Natural Sciences, Engineering and Technology, Social Sciences, and Humanities, 6 institutions were selected based on their strong research output and positive reputation in their respective fields. The instrument consisted of 39 items attempting to measure the students' opinions, experiences, and perceptions of self-learning using a five-point Likert scale. The qualitative component consisted of semi-structured interviews with a narrower, purposively selected sub-sample of the survey respondents.

3.2. Participants

The study involved a total of 508 students, hailing from six prominent universities across Vietnam. These institutions were Can Tho University, Can Tho University of Technology, Dong Thap University, Hanoi University of Education, Thai Nguyen University, and Hanoi Pedagogical University 2. Selecting these universities was strategic, as it ensures a wider representation of academic disciplines as well as geographical locations within the country. The participants were students of a few categories, namely educational sciences, natural sciences, engineering and technology, social sciences and humanities. The diversity of academic backgrounds enables a timely and broader analysis of self-learning capabilities across disciplinary domains, providing valuable insights into how disciplinary academic differences could influence self-learning practices and understanding. Selection of participants from universities with different academic fields may have different valuable or substantial, instead, diverse viewpoints about self-learning, hence generalizing the emerging findings to the wider educational context in Vietnam.

3.3. Data Collection Instruments and Data Analysis

The study data collected online using a survey that included 39 items in a questionnaire. The questionnaire items

were formulated using closed-ended questions presented in a five-point Likert scale format, ranging from 'Strongly Disagree' to 'Strongly Agree.' Following this, a pilot study was conducted with 508 students to assess the internal consistency of the questionnaire's clusters. The survey was given out to students at universities around Vietnam, and a total of 508 samples were collected. Descriptive analysis of all quantitative data was performed using the Statistical Package for the Social Sciences (SPSS) software program (version 2.0). Descriptive statistical analysis was conducted to calculate the Cronbach's alpha (CA), Mean (M), Standard Deviations (SD), Exploratory factor analysis (EFA), and analysis of variance (ANOVA) for each item, assessing their respective levels.

3.4. Experimental Process

The survey tools used in that research were to assess the development of self-learning capability in Vietnamese students. The process of the survey is divided into preparation and implementation phases.

The preparation phase precisely prepared the survey question design for the research team. This included setting criteria for the evaluation of self-learning abilities, picking out the most relevant tools and methods for data collection, and finally instating a study sample size.

The implementation stage involves putting the survey tools into practice. The attention during the activities was directed towards several tasks and activities that will stimulate and take measure of the self-learning capabilities of the students. The literature review establishes a theoretical framework that guided the activities, providing both quantitative and qualitative data. The tasks also varied in their difficulty levels and were meant to mimic the day-to-day life situations of the students, where they required drawing upon self-learning abilities.

Following the collection of data, the collected data were analyzed using statistical procedures, and factors affecting students' self-learning abilities were analyzed. Such an approach made it possible to understand the self-learning abilities of the students in terms of strengths, weaknesses, and areas where improvements are required comprehensively.

4. RESULTS

The results of the paper highlight the difficulties, possibilities, and changing character of students' self-learning as it examines the consequences of these discoveries within the framework of Vietnam's educational paradigm. The study is critical for understanding the effectiveness of the strategies implemented and for concluding the current state and future directions of self-learning in the Vietnamese educational system. The chart below shows the gender distribution in the fields of study of students at the universities participating in the research. This data provides a comprehensive view of the involvement of male and female students in the fields of educational science, natural sciences, engineering, and technology, as well as social sciences and humanities.
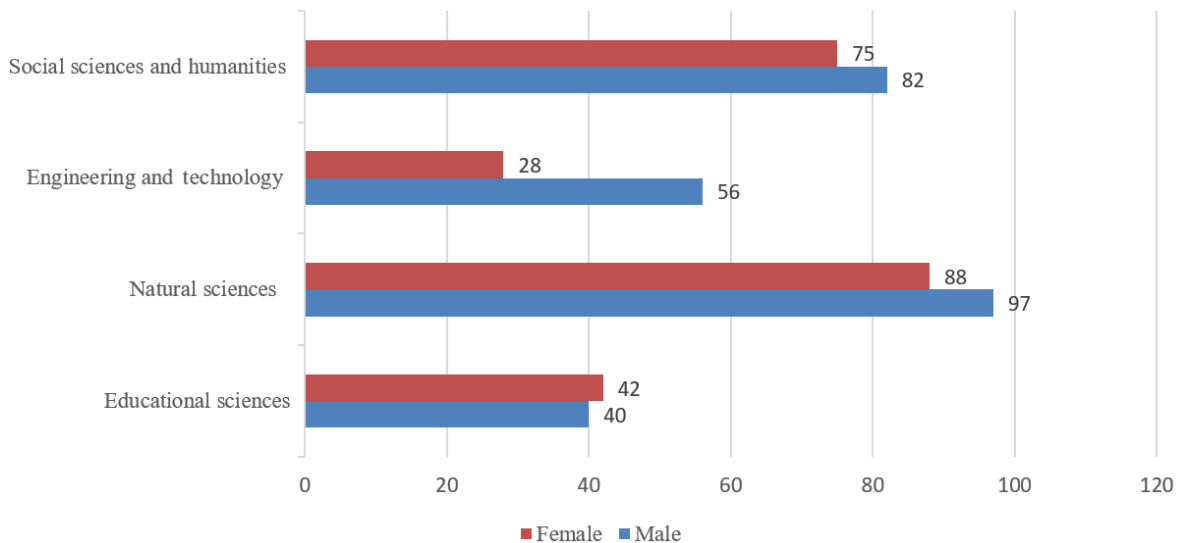

Figure 1. Field of study.

Figure 1 shows intriguing gender representation patterns across these fields. In educational science, 40 men and 42 women are nearly equal. The parity of genders in this field may indicate that educational science is inclusive or appealing to both genders. Balance is important in education because it promotes diversity and equality, which are considered progressive. The Natural Sciences have 97 male participants and 88 females, showing a slight gender bias. This minor difference may indicate a long-standing male predominance in this field. This may be due to societal perceptions, educational pathways, and gender-specific interests and encouragement. Further research is needed to determine if this trend is decreasing, constant, or increasing and what factors are affecting it. With 56 men and 28 women participating in engineering and technology, this field has the biggest gender disparity. There is a glaring disparity between genders in science, technology, engineering, and math (STEM) fields, particularly in engineering and technology. Stereotypes in society, gender bias in education, a dearth of female role models in these fields, and early interest or encouragement could all contribute to this disparity. This kind of discrepancy impacts field diversity and innovation as well as student education. To encourage female participation in these fields, it highlights the necessity of focused interventions and policies. In contrast, the social sciences and humanities have 82 men and 75 women. This implies that these areas are more gender-balanced, possibly because they are by nature more accessible or pertinent for both genders to be a part of. This balance ensures multiple perspectives and approaches in these fields, thus making social and humanistic studies that much more holistic and all-inclusive. Overall, the male participants, who numbered 275, outnumbered their female counterparts 233 across all the fields. This overall trend calls for a critical examination of academic gender representation. It indicates that in some fields there is good gender balance, but in others, the disparities are quite wide apart. This greatly impacts the policies in education, practices, as well as the academic environment. It underscores the need for gender-inclusive educational pathways and environments, especially in fields where major disparities exist.

The following chart illustrates the capabilities that students consider most important for their academic and professional success.
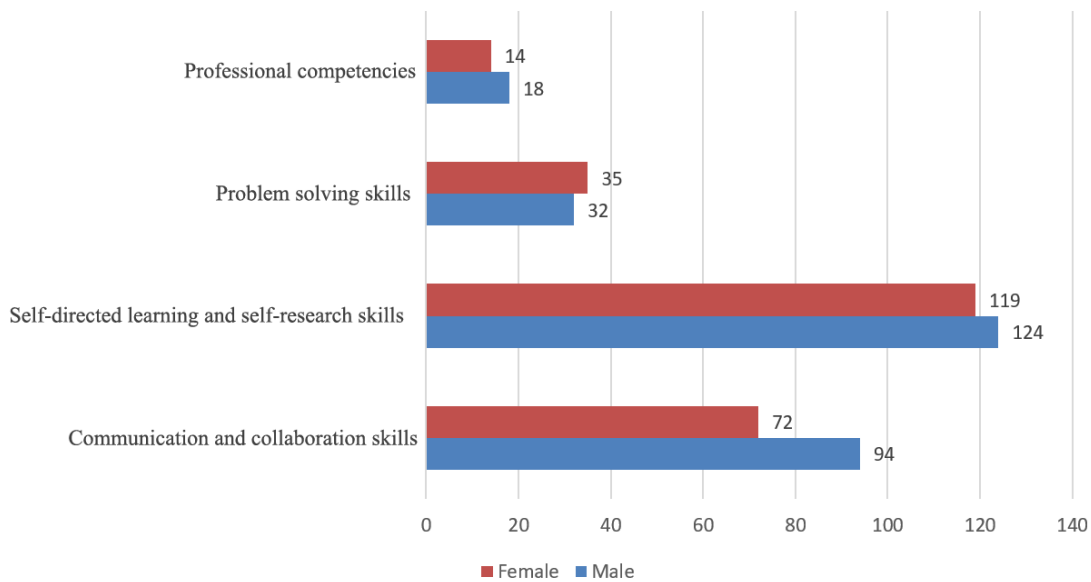
Figure 2. The most important capability of students.

Figure 2 illustrates that 124 male and 119 female students rank self-directed learning and self-research skills as the highest priorities. Students are aware of the importance of being proactive and self-motivated in their learning and research; these are essential skills in the modern, information-rich workplace. 94 male and 72 female students value communication and collaboration skills. This shows that teamwork and communication are becoming more important in diverse and interdisciplinary fields. Fewer students (32 males and 35 females) value problem-solving skills. This may indicate that students view this skill as less important or that their educational programs have

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adequately developed it. Professional competencies-domain-specific knowledge and skills are the least important, chosen by 18 male and 14 female students. This could suggest that they believe their studies cover professional competencies, or that they can acquire them on the job.

The total of 268 male and 240 female responses shows a generally balanced view of these capabilities, with a slight male predominance. This data shows students' priorities for future careers, emphasizing self-directed learning, communication, and collaboration.

In conclusion, the data shows a shift toward self-learning and interpersonal skills, which are increasingly important in the changing job market. These student perspectives can help educators and policymakers design educational programs that meet modern workforce competencies.

The chart below demonstrates how students perceive the necessity of self-learning in their educational journey.
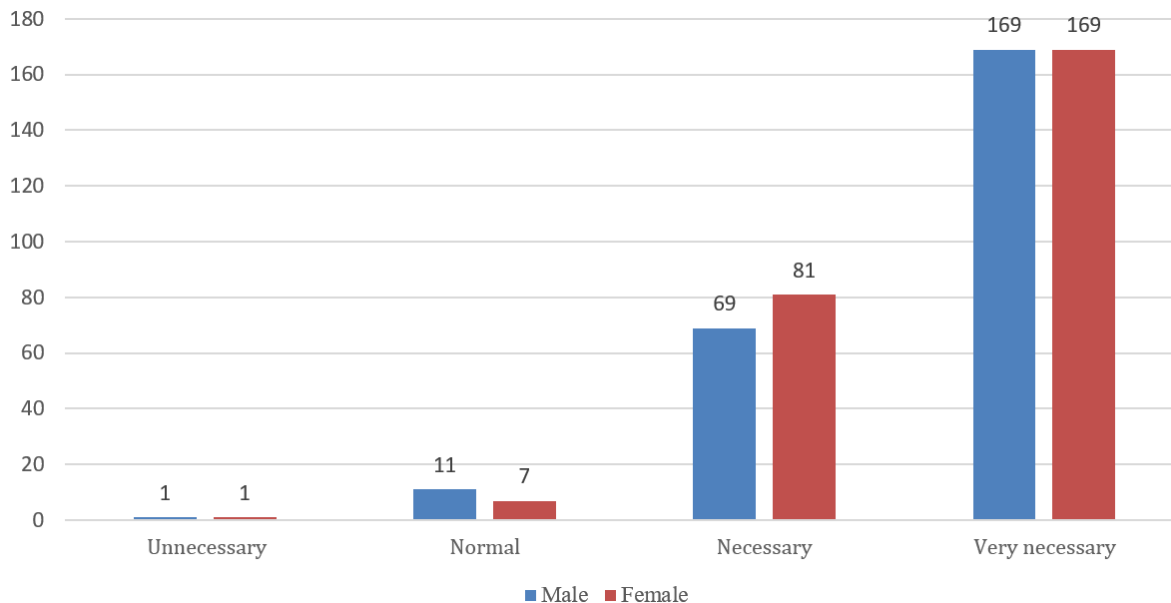

Figure 3. Self-Learning is necessary for students.

Figure 3 shows that most students, male and female, consider self-learning necessary or very necessary. Specifically, 169 male and 169 female students rate self-learning as very necessary, indicating strong consensus. Moreover, 69 male and 81 female students consider self-learning necessary. In an era, where lifelong learning is essential, students' growing awareness of the importance of self-learning in their educational and professional development (238 males and 250 females for necessary and very necessary) is evident. A small number of students (1 male and 1 female) consider self-learning unnecessary or normal. This low representation suggests that students do not view self-learning as optional or unimportant. Overall, 250 male and 258 female responses emphasize self-learning, with a slight female predominance. This data may suggest a gender-related learning style or value of independent learning.

Table 1 illustrates the survey in the table below:

Table 1. Survey items, Cronbach's alpha (CA), mean (M), and standard deviations (SD)

Items	Factor and description	CA	M	SD
Factor A. Students' opinion about self-learning				
A1	Self-learning is the process of self-reinforcement and the accumulation of knowledge.	0.910	3.85	1.416
A2	Self-learning is the act of studying at home during one's free time.	0.915	3.42	1.485
A3	Self-learning is the act of studying on your own when there is no direct teacher or instructor.	0.905	3.58	1.447
A4	Self-learning is reading books and materials on your own.	0.902	3.57	1.445
A5	Self-learning is the process of independently seeking out and researching topics	0.901	3.87	1.414

Items	Factor and description	CA	M	SD
	related to a subject to explore and expand one's knowledge.			
A6	Self-learning is studying the lessons taught in class and fulfilling the study requirements set by the teacher.	0.906	3.37	1.453
A7	Self-learning is creating your own study plan and following through with it.	0.902	3.74	1.427
A8	Self-learning is studying according to one's own interests and passions.	0.911	3.32	1.479
Factor B. Students' opinion on the role and significance of self-learning for yourself				
B1	Self-learning helps you master the knowledge taught in class.	0.947	3.82	1.360
B2	Self-learning helps you expand and deepen your understanding of the material.	0.945	3.97	1.338
B3	Self-learning helps you expand and deepen your understanding of the material.	0.945	3.80	1.365
B4	Self-learning helps you excel in completing the study tasks set by the teacher.	0.944	3.80	1.358
B5	Self-learning enhances your independence and creativity in learning.	0.945	3.83	1.338
B6	Self-learning equips you with the ability to identify and solve study-related problems.	0.943	3.95	1.340
B7	Self-learning fosters the development of lifelong learning skills.	0.945	3.82	1.296
B8	Self-learning satisfies your curiosity and desire for knowledge in both academics and life.	0.945	3.90	1.351
B9	Self-learning empowers you with the capacity to independently grasp knowledge.	0.946	3.81	1.364
Factor C. Factors influence the development of self-learning skills for students				
C1	Credit-based education system	0.935	3.93	1.046
C2	Learning conditions (Living conditions, library, Curriculum and reference materials, facilities)	0.925	4.15	1.003
C3	Time allocated for learning	0.923	4.26	0.936
C4	Teachers provide program framework and objectives for each chapter	0.921	4.20	0.940
C5	Methods of testing and assessing learning outcomes	0.923	4.14	1.013
C6	Teaching methods, testing, and evaluation of students' learning outcomes by instructors	0.921	4.15	0.993
C7	Student study methods	0.924	4.31	0.912
C8	Cognitive abilities (Scientific reasoning, creative thinking, self-assessment)	0.930	4.17	0.982
Factor D. Difficulties during the self-learning process				
D1	Unable to create a study plan	0.892	3.51	1.207
D2	Unable to execute the study plan	0.891	3.49	1.221
D3	Limited self-learning skills	0.885	3.34	1.180
D4	Lack of resources for self-study (learning materials, school facilities, etc.)	0.888	3.31	1.200
D5	Lack of time for self-study	0.900	3.43	1.261
D6	Lack of a suitable learning environment (Quiet study room, study groups)	0.932	3.96	1.079
Factor E. Basic skills for developing at the university				
E1	Identifying issues for self-study	0.907	3.55	1.152
E2	Creating a self-study plan	0.905	3.51	1.139
E3	Read documents and summarize information by issues for self-study	0.903	3.75	1.026
E4	Coordinate appropriate self-study methods	0.904	3.74	1.016
E5	Self-supplement knowledge after reading documents	0.904	3.71	1.039
E6	Self-assessment and self-evaluation of one's knowledge	0.909	4.08	1.125
E7	Use self-study tools: Books, newspapers, phones, computers, etc.	0.909	3.85	1.144
E8	Skills in exploiting and using information technology applied in the self-study process	0.906	4.02	1.100

The used items in the questionnaire prove a reliable and consistent show, whereby the data corresponds with those organized across factors with high values of Cronbach's Alpha from students' self-learning opinions to skills developed for the university. The mean value for factors A (students' opinions about self-learning) to E (basic skills for developing at the university) is in the range of 3.32 to 4.31, indicating that students agree on self-learning's importance, influence, and challenges. The median values above 3, wherein most of the responses lie in agreement with the statement, support this positive outlook. The values of the standard deviation range from 0.912 to 1.485, indicating that students' perceptions and experiences vary, but not significantly.

Table 2. Descriptive statistics

Items	Mean		Median	Std. deviation	Skewness		Kurtosis	
	Statistic	SD			Statistic	SD	Statistic	SD
A1	3.85	0.063	5.00	1.416	-0.517	0.108	-1.560	0.217
A2	3.42	0.066	3.00	1.485	-0.052	0.108	-1.686	0.217
A3	3.58	0.064	3.00	1.447	-0.191	0.108	-1.692	0.217
A4	3.57	0.064	3.00	1.445	-0.132	0.108	-1.790	0.217
A5	3.87	0.063	5.00	1.414	-0.546	0.108	-1.547	0.217
A6	3.37	0.065	3.00	1.453	0.023	0.108	-1.632	0.217
A7	3.74	0.063	5.00	1.427	-0.326	0.108	-1.759	0.217
A8	3.32	0.066	3.00	1.479	-0.002	0.108	-1.550	0.217
B1	3.82	0.060	5.00	1.360	-0.450	0.108	-1.540	0.217
B2	3.97	0.059	5.00	1.338	-0.730	0.108	-1.219	0.217
B3	3.80	0.061	5.00	1.365	-0.488	0.108	-1.470	0.217
B4	3.80	0.060	5.00	1.358	-0.455	0.108	-1.543	0.217
B5	3.83	0.059	5.00	1.338	-0.503	0.108	-1.434	0.217
B6	3.95	0.060	5.00	1.340	-0.685	0.108	-1.279	0.217
B7	3.82	0.058	4.00	1.296	-0.520	0.108	-1.326	0.217
B8	3.90	0.060	5.00	1.351	-0.630	0.108	-1.324	0.217
B9	3.81	0.061	5.00	1.364	-0.489	0.108	-1.483	0.217
C1	3.93	0.046	4.00	1.046	-0.773	0.108	0.320	0.217
C2	4.15	0.045	4.00	1.003	-1.296	0.108	1.650	0.217
C3	4.26	0.042	5.00	0.936	-1.349	0.108	1.887	0.217
C4	4.20	0.042	4.00	0.940	-1.212	0.108	1.522	0.217
C5	4.14	0.045	4.00	1.013	-1.191	0.108	1.251	0.217
C6	4.15	0.044	4.00	0.993	-1.183	0.108	1.280	0.217
C7	4.31	0.041	5.00	0.912	-1.413	0.108	2.063	0.217
C8	4.17	0.044	4.00	0.982	-1.204	0.108	1.356	0.217
D1	3.51	0.054	4.00	1.207	-0.555	0.108	-0.439	0.217
D2	3.49	0.054	4.00	1.221	-0.517	0.108	-0.540	0.217
D3	3.34	0.052	3.00	1.180	-0.341	0.108	-0.584	0.217
D4	3.31	0.053	3.00	1.200	-0.277	0.108	-0.664	0.217
D5	3.43	0.056	3.00	1.261	-0.449	0.108	-0.686	0.217
D6	3.96	0.048	4.00	1.079	-1.200	0.108	1.154	0.217
E1	3.55	0.051	4.00	1.152	-0.657	0.108	-0.292	0.217
E2	3.51	0.051	4.00	1.139	-0.590	0.108	-0.306	0.217
E3	3.75	0.046	4.00	1.026	-0.887	0.108	0.644	0.217
E4	3.74	0.045	4.00	1.016	-0.933	0.108	0.846	0.217
E5	3.71	0.046	4.00	1.039	-0.713	0.108	0.210	0.217
E6	4.08	0.050	4.00	1.125	-1.484	0.108	1.661	0.217
E7	3.85	0.051	4.00	1.144	-1.104	0.108	0.636	0.217
E8	4.02	0.049	4.00	1.100	-1.417	0.108	1.634	0.217

Table 2 presents the mean value for factors from A (Students' Opinions About Self-Learning) to E (Basic Skills for Developing at the University), which range from 3.32 to 4.31, giving the verdict that students agree on self-learning's importance, influence, and challenges. The median values, which are mostly above 3, indicate that most respondents agree and support this positive outlook. Student responses vary moderately, with standard deviation values from 0.91 to 1.48. Students' perceptions and experiences vary, but not significantly. Despite differences, students understand self-learning, its importance, and its challenges. The skewness and kurtosis metrics reveal data distribution symmetry and peaking. Negative skewness values indicate that most students scored above the mean on items with a right-skewed distribution. This is especially true of self-learning's role in academic and professional growth.

Table 3 details the exploratory factor analysis of Vietnamese students' self-learning abilities. This analysis divides the items into domains that represent different aspects of students' self-learning.

Table 3. Exploratory factor analysis of the items.

Items	Domain	Factor				
		1	2	3	5	6
A4	Students' opinion about self-learning	0.799				
A5		0.778				
A3		0.776				
A7		0.772				
A6		0.759				
A8		0.723				
A1		0.674				
A2		0.673				
B6	Students' opinion on the role and significance of self-learning for yourself		0.858			
B4			0.819			
B5			0.811			
B8			0.806			
B3			0.804			
B2			0.801			
B7			0.795			
B9			0.780			
B1			0.748			
C4	Factors influence the development of self-learning skills for students			0.828		
C6				0.824		
C3				0.813		
C7				0.806		
C5				0.802		
C2				0.776		
C8				0.741		
C1				0.689		
D6	Difficulties during the self-learning process				0.868	
D3					0.911	
D4					0.898	
D2					0.864	
D1					0.852	
D5					0.813	
E5	Basic skills for developing at the university					0.866
E3						0.861
E1						0.846
E4						0.844
E2						0.826
E6						0.882
E8						0.881
E7						0.824

Table 3 focuses on the items' relationship to the identified factors, which delineate the structure of the self-learning capabilities. Items A1 to A8 have high loading on the first factor, ranging from 0.673 to 0.799, pointing to intrinsic motivation and autonomy in self-learning. Items B1–B9 load strongly on the second factor, ranging from 0.748 to 0.858, referring to personal and academic development through self-learning. The third factor has loadings of 0.689–0.828, referring to factors beyond external and internal influences of self-learning. The fourth identifies general problems from the loading range of 0.813 up to 0.911, while the fifth includes necessary university self-learning skills from 0.824 to 0.882. Other than this analysis, self-learning is influenced by a multitude of factors. This thus supports educational strategies in improving self-learning among Vietnamese students.

The analysis of the data presented in Table 4 reveals significant insights into how self-learning abilities affect Vietnamese students' academic performance. An F-value of 2.159 and a significance level (Sig.) of.000 indicate that student self-learning capabilities are not due to chance and directly affect academic performance.

Table 4. Descriptive statistics of self-learning factors.

Items	Mean	Std. error of mean	Std. deviation	Variance	Skewness	Kurtosis
A1	3.85	0.063	1.416	2.004	-0.517	-1.560
A2	3.42	0.066	1.485	2.205	-0.052	-1.686
A3	3.58	0.064	1.447	2.093	-0.191	-1.692
A4	3.57	0.064	1.445	2.087	-0.132	-1.790
A5	3.87	0.063	1.414	2.000	-0.546	-1.547
A6	3.37	0.065	1.453	2.112	0.023	-1.632
A7	3.74	0.063	1.427	2.036	-0.326	-1.759
A8	3.32	0.066	1.479	2.188	-0.002	-1.550
B1	3.82	0.060	1.360	1.848	-0.450	-1.540
B2	3.97	0.059	1.338	1.790	-0.730	-1.219
B3	3.80	0.061	1.365	1.863	-0.488	-1.470
B4	3.80	0.060	1.358	1.845	-0.455	-1.543
B5	3.83	0.059	1.338	1.789	-0.503	-1.434
B6	3.95	0.060	1.340	1.796	-0.685	-1.279
B7	3.82	0.058	1.296	1.680	-0.520	-1.326
B8	3.90	0.060	1.351	1.825	-0.630	-1.324
B9	3.81	0.061	1.364	1.861	-0.489	-1.483
C1	3.93	0.046	1.046	1.094	-0.773	0.320
C2	4.15	0.045	1.003	1.005	-1.296	1.650
C3	4.26	0.042	0.936	0.876	-1.349	1.887
C4	4.20	0.042	0.940	0.884	-1.212	1.522
C5	4.14	0.045	1.013	1.027	-1.191	1.251
C6	4.15	0.044	0.993	0.987	-1.183	1.280
C7	4.31	0.041	0.912	0.832	-1.413	2.063
C8	4.17	0.044	0.982	0.965	-1.204	1.356
D1	3.51	0.054	1.207	1.456	-0.555	-0.439
D2	3.49	0.054	1.221	1.491	-0.517	-0.540
D3	3.34	0.052	1.180	1.393	-0.341	-0.584
D4	3.31	0.053	1.200	1.439	-0.277	-0.664
D5	3.43	0.056	1.261	1.589	-0.449	-0.686
D6	3.96	0.048	1.079	1.164	-1.200	1.154
E1	3.55	0.051	1.152	1.327	-0.657	-0.292
E2	3.51	0.051	1.139	1.298	-0.590	-0.306
E3	3.75	0.046	1.026	1.052	-0.887	0.644
E4	3.74	0.045	1.016	1.033	-0.933	0.846
E5	3.71	0.046	1.039	1.080	-0.713	0.210
E6	4.08	0.050	1.125	1.266	-1.484	1.661
E7	3.85	0.051	1.144	1.308	-1.104	0.636
E8	4.02	0.049	1.100	1.209	-1.417	1.634

Table 4 provides descriptive statistics for various factors related to self-learning, including mean, standard deviation, skewness, and kurtosis. The mean values, which range from 3.31 to 4.31, indicate that students generally have a positive attitude towards self-learning, with higher means observed for factors related to learning conditions and self-study methods (e.g., C7: 4.31). The standard deviations, which range from 0.912 to 1.485, reflect the variability in students' responses. Factors with lower standard deviations, such as C3 (0.936) and C7 (0.912), suggest more consistent opinions among students about the importance of allocated learning time and study methods. Skewness values mostly indicate a negative skew, implying that many students rated these factors higher on the scale, with only a few giving lower ratings. The kurtosis values show a trend toward platykurtic

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distributions (negative kurtosis), indicating a broader spread of responses than a normal distribution. Overall, these statistics suggest that students recognize the importance of self-learning and are generally consistent in their positive evaluations, particularly regarding structured learning environments and methods.

5. DISCUSSION

The above represents the insights gathered throughout the study on the self-learning opportunities for Vietnam's students, which in turn creates value, both theoretical and practical, along with the global focus on independent learning as an invincible part of contemporary education. The study has emphasized the increasing need for flexibility and resilience in learning, which, in alignment with the findings of Pham (2016), therefore, captured the attention of the influential aspects of self-study in the scenario of the traditional educational system of Vietnam.

This inquiry points toward the variety of challenges Vietnamese students face in building their self-learning capacities, strengthening the findings of Bui and Khuu (2020). These challenges primarily result from a relatively rigid education system that justifies and supports high centralization and obsession with the teacher-centric approaches belied by undue attention given to rote learning (Quyen, 2021). This entrenched approach prevents the adoption of more student-centric, inquiry-based learning models. Surely, recent educational reforms and increased use of digital technologies in classrooms point to the positive development concerning more interactive learning as well as participation in educational tasks (Chen, Chen, & Chen, 2014).

One of the key findings identified was an explanation along with a reconfirmation of the fact that alongside intrinsic motivation, extensive student-focused pedagogies encourage self-study. In addition, students' tendency towards self-directed study and problem-solving skills is tangible evidence of an important alteration in education - from content delivery to focus on critical thinking and self-directed learning (Paterson, 2023; Rhinehart, 2019). This is particularly applicable and relevant to tertiary students in preparing them at work for life, where personal and professional success has become intricately dependent upon adaptability and lifelong learning (Ashall, 2018; Gouthro, 2022).

The insights from these studies confirm the need for radical educational changes in Vietnam. However, the amendments should not only focus on curriculum changes, but also incorporate pedagogical changes that promote a simple learning atmosphere (Dutta & Sahney, 2022; Tedla, 2012). This involves training teachers to give more focus on a learner-centered approach to teaching, building the classroom culture of independent inquiry, and providing the requisite materials that are supportive of this (Huynh, 2023).

Based on these results, it is recommended that researchers in the future should go ahead and analyze how such reforms have been implemented and what the associated motivations are. This would be beneficial for assessing how different learning settings, together with their pedagogical approaches, affect a learner's skills development in self-directed learning. This would further produce information on the career implications and long-term educational outcomes of empowered skills in self-directed learning (Nguyen et al., 2020).

Therefore, this research holds significant importance in highlighting the urgent need to assist Vietnamese students in enhancing their ability to learn independently and establishing a solid foundation for creating effective teaching methods. Vietnam has recognized that to advance educational modernization, it requires fostering self-learning abilities in academia to get ready for the challenges and opportunities of the 21st century (Rhinehart, 2019).

6. CONCLUSION

The conclusion of this research highlights several key findings regarding the development of self-learning skills in Vietnamese students. The study confirms that while there is recognition of the importance of self-directed learning, the current education system still heavily relies on traditional, teacher-centered methods. This approach, focused on rote memorization, limits students' ability to develop critical thinking and problem-solving skills, which are essential for both academic success and lifelong learning.

The survey of 508 students across various academic fields demonstrated that while students acknowledge the value of self-learning, they face significant barriers. These include a lack of resources, limited time for self-study, and inadequate learning environments. The study also revealed that factors like the structure of the education system, the availability of learning resources, and the effectiveness of teaching methods influence students' self-learning abilities.

Despite these challenges, the research points to a shift toward more interactive, student-centered learning approaches, driven by recent educational reforms and the integration of digital technologies in classrooms. These changes are gradually creating an environment more conducive to self-learning, fostering students' autonomy and creativity.

7. RECOMMENDATIONS

Future studies should advocate for the integration of information technology within the educational paradigm, with the realization of the vital role the same is likely to play in allowing learners to be self-dependent in their learning and making the spread of information widespread. Additionally, the recommendations show the requirements for the education of educators on the acquisition of skills in inculcating capacities for independent learning on the part of the students, which particularly refer to time management, effective retrieval of information, and skills in analyzing the retrieved data. Proposals for a re-evaluation of the educational curriculum necessitate further research to establish a learning environment that prioritizes student autonomy, creativity, and critical thinking. Also, the adoption of innovative teaching methodologies must be contemplated, such as project-based and problem-based learning. Finally, the recommendations make important the issue of investment by governmental and educational institutions in terms of resources—financial and infrastructural, as well as for high-quality educational materials—for the self-learning environment to be at its peak level. This approach offers a learner-centered educational paradigm, fostering the use of technology and equipping the student with skills for life-long learning.

INSTITUTIONAL REVIEW BOARD STATEMENT
The Ethical Committee of the Hanoi Pedagogical University 2, Vietnam has granted approval for this study on 7 April 2017 (Ref. No. 190/QĐ-ĐHSPHN2).

TRANSPARENCY
The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

COMPETING INTERESTS
The authors declare that they have no competing interests.

AUTHORS' CONTRIBUTIONS
All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

REFERENCES

Akgün, E., Mede, E., & Sarac, S. (2022). The role of individual differences on epistemic curiosity (EC) and self-regulated learning (SRL) during e-learning: The Turkish context. *International Journal of Assessment Tools in Education*, *9*(3), 565–582. https://doi.org/10.21449/ijate.907186

Ashall, W. (2018). Lifelong learning participation in a changing policy context: An interdisciplinary theory. *Widening Participation and Lifelong Learning*, *20*(3), 109-113. https://doi.org/10.5456/wpll.20.3.109

Bal, P. M. (2020). *Age and lifelong learning. In M. London (Ed.), The Oxford Handbook of Lifelong Learning* (2nd ed.): Oxford University Press. https://doi.org/10.1093/oxfordhb/9780197506707.013.32

Blair, J. (2023). Communication challenges for people with learning disabilities in the digital age. *Learning Disability Practice*, *26*(6), 16–22.

Brockett, R. G., & Hiemstra, R. (2018). *Self-direction in adult learning: Perspectives on theory, research and practice*. London: Routledge.

Bui, L. T. N., & Khuu, V. T. (2020). Inquiry-based learning: An effective approach to teaching science aiming to develop students' competencies. *Vietnam Journal of Education*, *4*(1), 61-68. https://doi.org/10.52296/vje.2020.9

Chen, C.-Y., Chen, P.-C., & Chen, P.-Y. (2014). Teaching quality in higher education: An introductory review on a process-oriented teaching-quality model. *Total Quality Management & Business Excellence*, *25*(1-2), 36-56. https://doi.org/10.1080/14783363.2011.637789

Chin, Y. L., Li, L. V., & Siow, H. L. (2023). Innovative approach to enhance active online learning: Engagement, feedback and classroom environment. *Asian Journal of University Education*, *19*(2), 1-13. https://doi.org/10.24191/ajue.v19i2.22233

Collier, C. (2023). Learning to do, learning to learn. In Theoretical and Historical Evolutions of Self-Directed Learning. In (pp. 27–34): Routledge. https://doi.org/10.4324/9781003357094-5

Do, M. H. (2023). Affording Vietnamese EFL students' critical thinking in video-translation tasks. *Arab World English Journal*(9).

Duong, B.-H., Dao, V., & DeJaeghere, J. (2023). Complexities in teaching competencies: A longitudinal analysis of Vietnamese teachers' sensemaking and practices. *Pedagogy, Culture & Society*, 1-23. https://doi.org/10.1080/14681366.2023.2262473

Duong, M.-Q. (2013). Internationalization of the curriculum in Vietnamese higher education: Evidence from Vietnam National University of Hanoi. *Journal of Education and Sociology*, *4*(2), 132-136. https://doi.org/10.7813/jes.2013/4-2/21

Dutta, V., & Sahney, S. (2022). Relation of principal instructional leadership, school climate, teacher job performance and student achievement. *Journal of Educational Administration*, *60*(2), 148-166. https://doi.org/10.1108/jea-01-2021-0010

Ergen, B., & Kanadlı, S. (2017). The effect of self-regulated learning strategies on academic achievement: A meta-analysis study. *Eurasian Journal of Educational Research*, *17*(69), 55-74. https://doi.org/10.14689/ejer.2017.69.4

Gao, J., Wan, H., & Lin, Y. (2023). Exploiting global context and external knowledge for distantly supervised relation extraction. *Knowledge-Based Systems*, *261*, 110195. https://doi.org/10.1016/j.knosys.2022.110195

Gouthro, P. A. (2022). Lifelong learning in a globalized world: The need for critical social theory in adult and lifelong education. *International Journal of Lifelong Education*, *41*(1), 107-121. https://doi.org/10.1080/02601370.2022.2033863

Huynh, V. S. (2023). The preparation of teachers and pedagogical universities when reforming the general education curriculum in Vietnam. In International Handbook on Education Development in Asia-Pacific. In (pp. 1–21). Singapore: Springer Nature. https://doi.org/10.1007/978-981-16-2327-1_106-1

Koekoek, J., Dokman, I., & Walinga, W. (2022). Merging digital technology with game pedagogy. In Game-Based Pedagogy in Physical Education and Sports. In (pp. 37–51): Routledge. https://doi.org/10.4324/9781003155782-5

Masaki, F. (2022). Learning about autonomous self-regulation from global professionals: A mixed methods study. *International Education Studies*, *15*(2), 54-72. https://doi.org/10.5539/ies.v15n2p54

Mundy, K., Green, A., Lingard, B., & Verger, A. (2016). *Handbook of global education policy*. Oxford: Wiley-Blackwell.

Nguyen, C. V., & Pham, N. M. (2018). Economic growth, inequality, and poverty in Vietnam. *Asian-Pacific Economic Literature*, *32*(1), 45–58. https://doi.org/10.1111/apel.12219

Nguyen, T.-H.-T., Tran, T., Dau, T.-T., Nguyen, T.-S.-H., Nguyen, T.-H., & Ho, M.-T. (2020). How scientific research changes the Vietnamese higher education landscape: Evidence from social sciences and humanities between 2008 and 2019. *F1000Research*, *9*, 152. https://doi.org/10.12688/f1000research.21790.1

Nilson, L. B. (2023). What is self-regulated learning and how does it enhance learning? In Creating Self-Regulated Learners. In (pp. 1–14): Routledge. https://doi.org/10.4324/9781003443803-1

Paterson, S. (2023). Preparing preregistration students for lifelong learning and practice. *Journal of Paramedic Practice*, *15*(9), 382-385. https://doi.org/10.12968/jpar.2023.15.9.382

Pham, T. (2016). Student-centredness: Exploring the culturally appropriate pedagogical space in Vietnamese higher education classrooms using activity theory. *Australian Journal of Teacher Education*, *41*(1), 1-21. https://doi.org/10.14221/ajte.2016v41n1.1

Phung, H. N. (2022). Gender-based differences in English language learning strategies among Vietnamese EFL high school students. *International Journal of Science and Management Studies*, 272–295. https://doi.org/10.51386/25815946/ijsms-v5i6p122

Phuong, T. T. D., & Huang, H. (2019). A case study on the education of Vietnamese minorities. *Korean Association For Learner-Centered Curriculum and Instruction*, *19*(17), 233–250.

Quyen, V. N. (2021). Research on the framework of mathematics self-study capabilities of Vietnamese high school students. *Linguistics and Culture Review*, *5*(S3), 340-351. https://doi.org/10.21744/lingcure.v5ns3.1516

Rhinehart, R. R. (2019). Preparing students for lifelong learning. *Chemical Engineering Education*, *53*(2), 130-130.

Roick, J., & Ringeisen, T. (2018). Students' math performance in higher education: Examining the role of self-regulated learning and self-efficacy. *Learning and Individual Differences*, *65*, 148-158. https://doi.org/10.1016/j.lindif.2018.05.018

Seitova, M., & Adilbaeva, R. (2020). *Autonomous learning for student teachers of English*: Habarshy. https://doi.org/10.47100/habarshy.v1i2.57

Soboleva, E. V. (2019). Features of designing a digital educational space based on the use of gaming technology. *Science for Education Today*, *9*(4), 107-123.

Tan, C. T., Devilly, O. Z., Lim, S. M., Divo, B., Kok, X.-F. K., Jasin, J., . . . Htein, L. A. (2023). The effect of gamification mechanics on user experiences of adventureLEARN: A self-driven learning platform. *Proceedings of the ACM on Human-Computer Interaction*, *7*(CHI PLAY), 1091-1114. https://doi.org/10.1145/3611062

Tedla, B. A. (2012). Instructional leadership and school climate a case study of a secondary school in Eritrea. *Literacy Information and Computer Education Journal Special Issues*, *1*(1), 755-764. https://doi.org/10.20533/licej.2040.2589.2012.0112

Tran, T. Q., & Tran, P. T. N. (2021). Vietnamese EFL high school students' use of self-regulated language learning strategies for project-based learning. *International Journal of Instruction*, *14*(1), 459-474. https://doi.org/10.29333/iji.2021.14127a

UNICEF. (2022). *Education in Vietnam: Addressing challenges and promoting equity*. Retrieved from https://www.unicef.org/vietnam/education

Usher, E. L., & Schunk, D. H. (2017). Social cognitive theoretical perspective of self-regulation. In Handbook of Self-Regulation of Learning and Performance. In (pp. 19–35): Routledge. https://doi.org/10.4324/9781315697048-2

Vu, L. H. (2023). Chinese reading learning strategies of Vietnamese students. *VNU Journal of Science: Education Research*. https://doi.org/10.25073/2588-1159/vnuer.4717

Xuan, L. D. (2022). Consultation demand of high school students (Overview of Some Studies in Vietnam). *RA Journal of Applied Research*, *8*(5), 1-5. https://doi.org/10.47191/rajar/v8i5.01

Yüce, E. (2023). Critical thinking, autonomous learning, and academic grit among preservice EFL teachers. *Thinking Skills and Creativity*, *50*, 101382. https://doi.org/10.1016/j.tsc.2023.101382

Zuti, B. (2017). Tuddstranszfer s lifelong learning a digittlis victim (Knowledge Transfer and Lifelong Learning in Digital Age) - presentation slides. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3118861

APPENDIX

APPENDIX presents demographic Information and surveying the factors influencing students' self-learning abilities

A.

Demographic Information

1. **Age**: ___ years
2. **Gender**:
    - o Male
    - o Female
    - o Other (please specify): _____
3. **University Name**: _____
4. **Field of Study**:
    - o Educational Science
    - o Natural Sciences
    - o Engineering and Technology
    - o Social Sciences and Humanities
    - o Other (please specify): _____
5. **Year of Study**:
    - o First Year
    - o Second Year
    - o Third Year
    - o Fourth Year
    - o Graduate Student
6. **Which capability do you consider the most important for your academic and professional success?**
    - o Self-Directed Learning
    - o Communication and Collaboration Skills
    - o Problem Solving Skills
    - o Professional Competencies

      o   Other (please specify): _____

7. How necessary do you find self-learning in your educational journey?
- Unnecessary
- Normal
- Necessary
- Very Necessary

B. Surveying the factors influencing students' self-learning abilities

Please indicate your level of agreement with the following statements, where
1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Items	Factor and description	Level				
Factor A. Students' opinion about self-learning						
A1	Self-learning is the process of self-reinforcement and the accumulation of knowledge.	1	2	3	4	5
A2	Self-learning is the act of studying at home during one's free time.	1	2	3	4	5
A3	Self-learning is the act of studying on your own when there is no direct teacher or instructor.	1	2	3	4	5
A4	Self-learning is reading books and materials on your own.	1	2	3	4	5
A5	Self-learning is the process of independently seeking out and researching topics related to a subject to explore and expand one's knowledge.	1	2	3	4	5
A6	Self-learning is studying the lessons taught in class and fulfilling the study requirements set by the teacher.	1	2	3	4	5
A7	Self-learning is creating your own study plan and following through with it.	1	2	3	4	5
A8	Self-learning is studying according to one's own interests and passions.	1	2	3	4	5
Factor B. Students' opinion on the role and significance of self-learning for yourself						
B1	Self-learning helps you master the knowledge taught in class.	1	2	3	4	5
B2	Self-learning helps you expand and deepen your understanding of the material.	1	2	3	4	5
B3	Self-learning helps you expand and deepen your understanding of the material.	1	2	3	4	5
B4	Self-learning helps you excel in completing the study tasks set by the teacher.	1	2	3	4	5
B5	Self-learning enhances your independence and creativity in learning.	1	2	3	4	5
B6	Self-learning equips you with the ability to identify and solve study-related problems.	1	2	3	4	5
B7	Self-learning fosters the development of lifelong learning skills.	1	2	3	4	5
B8	Self-learning satisfies your curiosity and desire for knowledge in both academics and life.	1	2	3	4	5
B9	Self-learning empowers you with the capacity to independently grasp knowledge.	1	2	3	4	5
Factor C. Factors influence the development of self-learning skills for students						
C1	Credit-based education system	1	2	3	4	5
C2	Learning conditions (Living conditions, library, Curriculum and reference materials, facilities)	1	2	3	4	5

Items	Factor and description	Level				
C3	Time allocated for learning	1	2	3	4	5
C4	Teachers provide program framework and objectives for each chapter	1	2	3	4	5
C5	Methods of testing and assessing learning outcomes	1	2	3	4	5
C6	Teaching methods, testing, and evaluation of students' learning outcomes by instructors	1	2	3	4	5
C7	Student study methods	1	2	3	4	5
C8	Cognitive abilities (Scientific reasoning, creative thinking, self-assessment)	1	2	3	4	5
Factor D. Difficulties during the self-learning process						
D1	Unable to create a study plan	1	2	3	4	5
D2	Unable to execute the study plan	1	2	3	4	5
D3	Limited self-learning skills	1	2	3	4	5
D4	Lack of resources for self-study (Learning materials, school facilities, etc.)	1	2	3	4	5
D5	Lack of time for self-study	1	2	3	4	5
D6	Lack of a suitable learning environment (Quiet study room, study groups)	1	2	3	4	5
Factor E. Basic skills for developing at the university						
E1	Identifying issues for self-study	1	2	3	4	5
E2	Creating a self-study plan	1	2	3	4	5
E3	Read documents and summarize information by issues for self-study	1	2	3	4	5
E4	Coordinate appropriate self-study methods	1	2	3	4	5
E5	Self-supplement knowledge after reading documents	1	2	3	4	5
E6	Self-assessment and self-evaluation of one's knowledge	1	2	3	4	5
E7	Use self-study tools: Books, newspapers, phones, computers, etc.	1	2	3	4	5
E8	Skills in exploiting and using information technology applied in the self-study process	1	2	3	4	5