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DIGITAL CAPACITY OF STUDENTS OF THE SCHOOL OF ECONOMICS, VINH UNIVERSITY: CURRENT SITUATION AND SOLUTIONS

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ABSTRACT

In the context of strong digital transformation, digital competencies have become one of the core requirements for students to meet the needs of studying, working and adapting to the modern labor market. This article focuses on analyzing and evaluating the current state of digital capacity of Vinh University students on 06 aspects including: (1) Ability to use technology, (2) Ability to search, exploit and manage digital information, (3) Ability to communicate and cooperate in the digital environment, (4) Ability to communicate and cooperate in the digital environment; (5) Safety and digital ethics competence, (6) Self-development and career orientation capacity. On the basis of analyzing the current state of students' digital capabilities, the study proposes a number of solutions to improve digital capacity for students, contributing to meeting the requirements of higher education in the context of digital transformation.

KEYWORDS: digital competencies, students, digital transformation

1. ABOUT US

In the context of the strong development of the digital economy and the extensive digital transformation taking place in all fields, higher education is facing the requirement of comprehensive innovation to meet the needs of the modern labor market. In particular, for the economic sector, the change of the business environment under the impact of digital technology has led to the emergence of many new models such as e-commerce, platform economy, digital finance and data-based business. This requires human resources not only to have professional knowledge but also to possess core competencies to adapt to the digital environment. Among them, digital competency is increasingly considered one of the fundamental factors, contributing to determining the ability of students to integrate and develop their careers in the digital era.

For students, digital competencies are not only the ability to use technology, but also include the ability



to exploit, analyze and process information, communicate and collaborate in the digital environment, as well as the ability to create content and ensure information security, but also play an important role in supporting data-driven decision-making. improve learning efficiency and adaptability to future job requirements. At the same time, it contributes to promoting creative thinking, self-learning and lifelong learning – essential competencies in the context of constantly updated knowledge.

However, practice shows that the digital capacity of students still has many limitations, especially in applying digital technology to learning and solving practical problems. The level of access and use of technology among student groups is still uneven; Many students mainly use technology for entertainment purposes instead of exploiting it for learning and research. In addition, data analysis skills, digital thinking, and information security awareness have not been properly focused. Stemming from these issues, the research aims to assess the current state of students' digital competencies, thereby proposing solutions to improve digital competencies and meet the requirements of higher education in the digital era.

2. THEORETICAL BASIS

2.1. The concept of digital competencies

Competence is understood as the ability to apply the synthesis of knowledge, skills and attitudes to effectively solve problems in specific situations. Digital competence is also understood as a cognitive, attitude and technological skill that helps alleviate many problems and challenges in today's knowledge society and it is dynamic and transparent. According to digital competence is the ability to use digital technology to access, manage, understand, integrate, communicate, evaluate, and generate information safely and effectively. At the same time, it was emphasized that digital competence includes the use of technology in a confident, critical and creative way to effectively participate in activities in the digital society. Franz E. Weinert (2001) Digital competencies are defined as a set of knowledge, skills, and attitudes required when using digital technology to effectively optimize customer life. date. European Commission (2018) Ferrari Anusca (2012)

Thus, digital competencies are not only a set of technological skills but also a combination of cognitive, behavioral and attitude factors, contributing to improving the quality of learning and adaptability of students in the era of digital transformation.

2.2. Digital Competency Framework

Firstly, The DigComp (Digital Competence Framework for Citizens) framework was developed by. According to DigComp, digital competencies are made up of 5 main competencies, including: (1) information and data competence, (2) communication and cooperation competence, (3) digital content creation capacity, (4) digital safety competency and (5) problem-solving capacity.(Commission, (2018))



Secondly, in the UNESCO Digital Competency Framework (2018), digital competencies are divided into 3 main groups: (1) basic skills in the use of digital devices and technology, (2) information and communication skills, and (3) problem-solving and creativity skills in the digital environment.

In Vietnam, Circular 02/2025/TT-BGDĐT has identified 6 competency domains to orient the development of comprehensive digital competencies for learners, including: (1) Capacity to exploit data and information, (2) Communication and cooperation in the digital environment, (3) Creativity and digital content, (4) Safety, (5) Problem Solving, (6) Artificial Intelligence Applications. This is an important basis for educational institutions to build training programs suitable for the context of digital transformation.

The digital competency framework according to Circular 02 not only inherits core elements from international models but is also adjusted to the characteristics of Vietnam's education system and labor market, with special emphasis on the capacity to apply technology and the adaptability of learners. Therefore, the study uses a system of criteria to assess students' digital competencies according to Circular 02, including: (1) Ability to use technology, (2) Ability to search, exploit and manage digital information, (3) Ability to communicate and cooperate in the digital environment, (4) Ability to communicate and cooperate in the digital environment; (5) Safety and digital ethics competence, (6) Self-development and career orientation capacity.

3. The current state of digital capacity of Vinh University students

3.1. Description of the survey sample

The authors collected research data through an online survey, the questions used the 5-level Likert scale, (1) Completely Unproficient/Very Low, (2) Not Proficient/Low, (3) Medium, (4) Proficient/Good, and (5) Very Proficient/Excellent.

The survey results obtained 397 votes, of which 14 votes were unsatisfactory due to lack of necessary information. The number of valid votes was 383, which met the sample size requirements, so the data was eligible for analysis of the next steps.

Survey respondents are students studying at the School of Economics - Vinh University, of which course 66 accounts for 5.6%, course 65 accounts for 8.6%, course 64 is 70.4% and course 63 is 15.4%; By major, accounting has the largest proportion of 40%, followed by business administration accounting for 27.4%, economics at 19.6% and finance and banking at 13.05%. This statistical result is appropriate because currently the number of accounting students is the largest in the School of Economics.



3.2. Assessment of each competency group

3.2.1. Capacity to use technology

The ability to use technology of students of the School of Economics, Vinh University reflects the ability to operate digital devices and exploit software for learning in the digital education environment. The results show that students possess a relatively solid technical foundation. The criterion "Operating digital equipment (computers, phones)" reached an average of 3.52, reflecting a good ability to master the tool. In addition, "Use of learning/research software" scored 3.53 and "Use of digital services (libraries, banks, etc.)" scored 3.46, showing that students have initially effectively exploited digital utilities in learning and life, although the level of proficiency in specialized tools still has certain limitations.

3.2.2. Capacity to search, exploit and manage digital information

For the information mining and management competency group, the survey results showed a clear differentiation between the component skills. Students demonstrate strengths in "Academic Document Search" (Mean=3.60) and tend to be proactive in using information search aids. However, management and information assessment skills had lower scores, especially "Organizing and managing learning materials on a digital platform" (Mean = 3.40) – the lowest level in all criteria. At the same time, the ability to "Evaluate the reliability of information" (Mean = 3.48) and "Account management, data storage" (Mean = 3.52) is also only at a good level. This shows that students have a strong tendency to exploit information but are still limited in systematic thinking and the ability to evaluate and select information.

3.2.3. Ability to communicate and cooperate in the digital environment

For the digital communication and collaboration competency group, this is one of the outstanding strengths of students. The criterion of "Using online platforms (Teams, Zoom, LMS...)" reached a high level (Mean = 3.60), followed by "Using online applications for learning" (Mean = 3.58). In addition, the skills of "Teamwork and document sharing" (Mean = 3.56) and "Exchanging information with friends and lecturers" (Mean = 3.51) are also at a good level, showing the ability to interact effectively in the digital environment. The criterion "Building a personal academic image" reached 3.57, reflecting that students have a certain interest in developing personal images in the online academic space.

3.2.4. Digital Creativity and Problem-Solving Capacity

For the group of digital creativity and new technology application, students are gradually adapting to the development of modern technology. The criterion "Using AI to search and process information" reached 3.72, higher than the rest of the criteria, reflecting the initiative in approaching and applying new technologies. However, digital content creation skills such as "Digital Product Design" (Mean =

3.48) and "Using design tools or AI to create content" (Mean = 3.59) are only at a good level. In addition, the ability to use specialized software such as Excel or SPSS (Mean = 3.60) is quite good, but there is still a significant percentage of students self-assessing at an average level, indicating that this is a skill group that needs to be strengthened.

3.2.5. Digital safety and ethics

For the group of digital safety and ethics competencies, the survey results recorded positive signals. The criterion of "Respecting copyright and using digital information responsibly" reached a fairly high level (Mean = 3.61), while "Protecting devices and personal information" reached 3.62. This shows that students not only have the ability to use technology but also form a relatively good awareness of legal and ethical issues in the digital environment.

3.2.6. Self-development capacity and career orientation

The survey results showed that students rated the level of "Self-learning through digital platforms" and "Career orientation in the digital era" at about 3.46. Although this is a decent level, compared to other competency groups, especially communication and tool use, there is still room for improvement. This shows that students have not made the most of digital learning resources and have not been really proactive in building a long-term career development roadmap.

Table 3.3. Results of the assessment of the current state of students' digital competencies

Contents	Minimum value	Greatest Value
Capacity to use technology	3,46	3,53
Capacity to search, exploit and manage digital information	3,40	3,60
Ability to communicate and collaborate in the digital environment	3,51	3,60
Digital Creativity and Problem-Solving Competencies	3,48	3,72
Digital Safety and Ethics	3,46	3,62
Self-development and career orientation	3,46	3,46

Source: SPSS analysis results of the authors

4. SOLUTION

Firstly: For the capacity to use technology

Students need to actively improve their ability to master digital tools through many different forms. Specifically, learners should actively study on their own and regularly update new software and applications for learning and work. At the same time, continuous practice with office software and



specialized software is necessary to strengthen skills. Besides, students should take online courses on digital skills and take advantage of technology in the process of doing assignments, presentations, and research.

Second: For the capacity to search, exploit and manage digital information

Students need to practice their ability to process information in a scientific and systematic way. This requires learners to know how to effectively use academic search tools, and at the same time improve their ability to evaluate the reliability of information sources. In addition, students need to be proficient in document management tools such as Google Drive, Notion to store and organize data. The implementation of proper literature citations is also an important requirement to ensure academics and avoid violations of research ethics.

Third: For communication and cooperation in the digital environment

Students need to improve the effectiveness of interaction and teamwork on online platforms. Specifically, students should actively participate in academic discussions, practice professional communication skills through email and online communication channels. At the same time, actively participating in teamwork, sharing documents and coordinating with other members will contribute to improving learning efficiency. In addition, students also need to focus on building a positive and professional personal image in the digital environment.

Fourth: for digital creativity and problem-solving capacity

Students need to develop creative thinking associated with the ability to apply technology. Learners should actively learn and exploit artificial intelligence (AI) tools to support the learning and research process. At the same time, the practice of designing digital products such as presentations, videos or infographics will help improve creativity. In addition, students need to strengthen their skills in using specialized software such as Excel and SPSS and actively participate in learning projects, research or creative competitions to practice problem-solving abilities.

Fifth: For digital safety and ethics

Students need to raise awareness and build the right behavior when participating in the digital environment. Specifically, learners need to focus on protecting personal information and devices, using secure passwords and proactively preventing cybersecurity risks. At the same time, students must comply with copyright regulations, avoid copying materials, and use information responsibly. Information sharing needs to be carried out on the basis of verification, contributing to building a safe and healthy digital environment.

Sixth: For self-development capacity and career orientation



Students need to proactively build a personal development roadmap in the context of digital transformation. This includes long-term learning and skill development planning, as well as effectively leveraging online learning platforms to enhance knowledge. In addition, students need to learn about the skill requirements of the labor market and actively participate in career guidance activities and connect with businesses. Thereby, learners can clearly shape their career goals and improve their ability to adapt in the future.

5. CONCLUSION

The results of the study show that students of the School of Economics, Vinh University have a relatively solid foundation in basic technology skills and communication in the digital environment. However, higher-level competencies such as critical thinking, digital creativity, information evaluation and self-learning are limited, showing the gap between "using" and "mastering" technology, and reflecting uneven development and lack of systematicism in training.

To improve digital capacity, it is necessary to have coordination between schools – students – businesses. In particular, the university plays a central role in training integration and innovation; students need to actively develop their capacity; and businesses need to participate in linking training with practice. This is an important foundation for developing human resources to meet the requirements of digital transformation.

REFERENCES

1. Ministry of Education and Training. (2025). Circular 02/2025/TT-BGDĐT.
2. Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman and Company.
3. Calvani, A., Cartelli, A., Fini, A., & Ranieri, M. ((2009)). Models and Instruments for assessing Digital Competence at School. . *Journal of E-Learning and Knowledge Society*, p. 4(3). Retrieved from <https://doi.org/10.20368/1971-8829/288>
4. Commission, E. ((2017)). DigComp 2.1: The Digital Competence Framework for Citizens.
5. Commission., E. ((2018)). DigComp 2.1: The digital competence framework for citizens with eight proficiency levels and examples of use. . *Publications Office of the European Union*.
6. Ferrari, A. (2012). Digital competence in practice: An analysis of frameworks. European Commission, Joint Research Centre.
7. Iordache, C., Mariën, I., & Baelden, D. ((2017)). Developing Digital Skills and Competences: A QuickScan. *Education*, p. 14(44). Retrieved from <https://doi.org/10.1186/s41239-017-0082-x>
8. Kennedy, D. M., & Fox, B. ((2013)). “Digital Natives”: An Asian Perspective for Using Learning Technologies. . *International journal of education and development using information and communication technology*,, pp. 9, 64–79.



9. Martzoukou, K., Fulton, C., Kostagiolas, P., & Lav. ((2020)). A study of higher education students' self-perceived digital competences for learning and everyday life online participation. *Journal of Documentation*, pp. 76(7), 1413–1458. Retrieved from <https://doi.org/10.1108/JD-08-2019-0136>
10. Ng, W. ((2012)). Can we teach digital natives digital literacy?
11. Nguyen Loc, & Nguyen Thi Lan Phuong. ((2016)). Competence and assessment of competencies in education. . *Vietnam Education Publishing House*.
12. Nguyen Thi Kim Oanh, Mai, T. M. H, & Doan, T. N. T. ((2022)). An overview of the digital competency of college students. *Journal of Science of Vietnam National University of Agriculture*.
13. OECD. ((2019)). OECD Skills Outlook 2019. *Thriving in a Digital World*.
14. UNESCO. (2018). A Global Framework of Reference on Digital Literacy Skills.
15. van Laar, E. e. ((2017)). The relation between 21st-century skills and digital skills.
16. Vishnu, S., Raghavan Sathyan, A., Susan Sam, & , A., R. ((2022)). Digital competence of higher education learners in the context of Covid-19 triggered online learning. *Social sciences*.
17. Vu Hoang Duc, & Do Thi Van Anh. ((2023)). Research on personal and environmental factors affecting the digital competencies of economics students. *Journal of Science*.
18. Zhao.Y, Sánchez Gómez, Zhao, L., Pinto Llorente, A. M., & C., M. ((2021)). Digital Competence in Higher Education: Students' Perception and Personal Factors. *Sustainability*, pp. 13, 12184. Retrieved from <https://doi.org/10.3390/su132112184>
19. Weinert, F. E. (2001). Concept of competence: A conceptual clarification. In D. S. Rychen & L. H. Salganik (Eds.), *Defining and selecting key competencies* (pp. 45–65). Hogrefe & Huber.