

THE EFFECTIVENESS OF ONLINE APPLICATION IN ORGANIZATION OF TEACHING AND LEARNING OF HIGH SCHOOL VIETNAMESE TEACHERS

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ABSTRACT

Background: With the increasing use of online education, the role and competencies of online teachers have become a crucial aspect in the success of online learning initiatives. The role of online teachers is multifaceted and requires a range of skills and knowledge. Online teachers not only need to be experts in their subject matter, but they also need to be proficient in using technology and possess strong communication skills to effectively engage with students in a virtual environment.

Methods: The research area was chosen to be the public elementary schools, junior high schools, and high schools in Hue City, specifically Truong An High School, Hung Vuong Secondary School, Nguyen Truong To High School, and Huong So High School, Tran Cao Van Secondary School, and Dang Tran Con High School with 187 teachers in the.

Results: The results of this research were: (i) Google Meet was the most effective online application in teaching and learning activities used by teachers; (ii) the ability of teachers to apply technology in teaching was the crucial factor that affected the application of online application in the organization of teaching activities.

Conclusion: Based on the research results, in order to improve the effectiveness of applying online applications in teaching organizations, high schools in Hue city need to implement a system of synchronous measures from raising awareness to fostering application capacity in harmony with the environment, and organizational conditions for applying technology in teaching with close cooperation between family - school.

Keywords: online application, teaching online, teaching activity, technology.

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A EFICÁCIA DA APLICAÇÃO ON-LINE NA ORGANIZAÇÃO DO ENSINO E APRENDIZAGEM DE PROFESSORES VIETNAMITAS DO ENSINO MÉDIO

RESUMO

Histórico: com o uso crescente da educação on-line, o papel e as competências dos professores on-line se tornaram um aspecto crucial para o sucesso das iniciativas de aprendizagem on-line. O papel dos professores on-line é multifacetado e requer uma gama de habilidades e conhecimentos. Professores on-line não só precisam ser especialistas em seu assunto, mas também precisam ser proficientes no uso de tecnologia e possuir fortes habilidades de comunicação para se envolver efetivamente com os alunos em um ambiente virtual.

Métodos: A área de pesquisa foi escolhida para ser as escolas públicas de ensino fundamental, escolas secundárias e escolas de ensino médio em Hue City, especificamente Truong An High School, Hung Vuong Secondary School, Nguyen Truong To High School, e Huong So High School, Tran Cao Van Secondary School, e Dang Tran Con High School com 187 professores no.

Resultados: Os resultados desta pesquisa foram: (i) o Google Meet foi a aplicação online mais eficaz em atividades de ensino e aprendizagem utilizadas por professores; (ii) a capacidade dos professores para aplicar a tecnologia no ensino foi o fator crucial que afetou a aplicação da aplicação on-line na organização de atividades de ensino.

Conclusão: Com base nos resultados da pesquisa, a fim de melhorar a eficácia da aplicação de aplicações on-line em organizações de ensino, as escolas de ensino médio da cidade de Hue precisam implementar um sistema de medidas síncronas, desde a sensibilização à promoção da capacidade de aplicação em harmonia com o ambiente, e condições organizacionais para aplicar a tecnologia no ensino com estreita cooperação entre a família e a escola.

Palavras-chave: aplicação online, ensino online, atividade de ensino, tecnologia.

1 INTRODUCTION

Technology can aid in efficient and effective learning. Additionally, technology can facilitate personalized learning by enabling students to advance at their own tempo and by providing them with individualized feedback and resources (Means et al., 2009). Moreover, technology can support formative and summative assessments, allowing instructors to measure student progress and identify improvement areas (Trilling & Fadel, 2009). It has been discovered that the integration of technology into teaching and learning has a significant impact on student engagement and achievement. It has been demonstrated that technology-based tools such as virtual laboratories, simulations, and interactive multimedia resources improve student learning outcomes in science education (Ge et al., 2015). These instruments offer students opportunities for inquiry-based, hands-on learning, which can lead to a deeper understanding and retention of scientific concepts. Students can become more engaged and motivated to learn if these enhanced learning opportunities are provided. Incorporating technology into teaching and learning can also



increase educational accessibility. Online learning platforms, such as learning management systems, can offer students immediate feedback on their progress and allow them to monitor their learning goals and objectives (Garrison & Cleveland-Innes, 2005). Online courses and virtual classrooms, which can be accessed from any location with an internet connection, are examples of the flexible learning opportunities made possible by technology (Ally, 2004). This is especially useful for pupils who cannot attend traditional classes due to personal or professional obligations. In addition, technology can provide access to educational resources, such as virtual laboratories and simulations, that may not be available in conventional classrooms (Johnson & Aragon, 2003).

With the increasing use of online education, the role and competencies of online teachers have become a crucial aspect in the success of online learning initiatives. Online teachers need to possess a strong understanding of technology and effective communication skills to facilitate a meaningful learning experience for students. Additionally, they must be able to adapt their teaching strategies to accommodate diverse learning styles and provide timely feedback to promote student engagement and success. Online education has altered the way teaching responsibilities are executed. To define online teaching roles and competencies, a group of researchers and practitioners identified the primary roles of online teachers, which include process facilitator, advisor/counselor, assessor, researcher, content facilitator, technologist, designer, and manager/administrator (Goodyear et al., 2001). The identified roles of online teachers highlight the multifaceted nature of their job, which requires a diverse skill set and a deep understanding of the online learning environment. As such, effective online teaching requires a combination of technical expertise, pedagogical knowledge, and interpersonal skills to support student learning and success. Additionally, (Aydin, 2005) identified content expert, instructional designer, and materials producer as supplementary roles based on the perceptions of online mentors. Therefore, online teaching requires a team-based approach where individuals with different roles and competencies collaborate to create effective online learning experiences. This highlights the importance of professional development and ongoing training for online teachers to continuously improve their skills and adapt to the evolving nature of online education. Online learning is similar to the broader category of remote learning, which includes more traditional media like correspondence courses, educational television, and video conferencing, according to (Means et al., 2009). Prior research on distant learning came to the



conclusion that its effectiveness was comparable to that of traditional classroom instruction. According to Means et al. (2009), policymakers came to the conclusion that online education might be acceptable because it is less expensive than in-person instruction. Recent research by Bawane and Spector (2009) further specified the online teacher roles arising from the literature, such as professional, pedagogical, social, evaluator, administrator, technologist, advisor/counselor, and researcher. Previously, academic advising for secondary school students in Vietnam was conducted only directly (Huynh & Tran-Chi., 2019). In addition, the study also found that online teachers need to possess a diverse range of skills and competencies, including communication, collaboration, and technological proficiency. These findings emphasize the need for comprehensive training programs that prepare online teachers to effectively perform their roles and responsibilities in a virtual learning environment. In their research, Anderson et al. (2001) proposed three categories of roles for online teachers to ensure teaching presence, which involves the design, facilitation, and direct instruction of cognitive and social processes for meaningful and worthwhile learning outcomes. The roles and competencies of online teachers are crucial for ensuring an effective teaching presence in a virtual learning environment. The study highlights the importance of comprehensive training programs that equip online teachers with the necessary skills and knowledge to perform their roles and responsibilities effectively, ultimately leading to meaningful and worthwhile learning outcomes for students. Studies have indicated that teachers' presence significantly affects students' perceptions of learning, satisfaction, and community sense (Gorsky & Blau, 2009; LaPointe & Gunawardena, 2004; Russo & Benson, 2005). Therefore, it is important for institutions to invest in the professional development of their online teachers to ensure that they are equipped with the necessary skills and knowledge to effectively engage with students in a virtual learning environment. This can include training on how to design and facilitate online discussions, provide feedback on assignments, and use technology tools to enhance the learning experience. While teaching presence is mainly associated with the teacher's contribution to creating a community of inquiry with social and cognitive presence, all participants within the online learning environment can also share the facilitation responsibilities to contribute to teaching presence (Baran & Correia, 2009). Investing in the professional development of online teachers can also lead to increased retention rates and student success, as students are more likely to persist in their studies when they feel supported and engaged by their



instructors. Additionally, institutions can consider implementing a peer mentoring program where experienced online teachers can provide guidance and support to new instructors as they navigate the virtual learning environment.

Results from Bernard et al. (2004) and other reviews of the online learning literature (Cavanaugh, 2001; Moore, 1994) show that there are no differences in effectiveness between distance education and face-to-face education, indicating that distance education can successfully replace face-to-face instruction when it is the only option available. However, it is important to note that the effectiveness of distance education may depend on various factors such as the quality of the instructional design, technology used, and student characteristics. Therefore, further research is needed to fully understand the conditions under which distance education can be as effective as face-to-face instruction. The results of a recent meta-analysis comparing Web-based versus classroom-based learning for job-related courses (Sitzmann et al., 2006) were even more encouraging. The meta-analysis conducted by Sitzmann et al. (2006) found that Web-based learning was more effective than classroom-based learning, suggesting that distance education may even have advantages over traditional face-to-face instruction in certain contexts. However, it is important to consider that the effectiveness of distance education may still depend on various factors such as the design of the course and the technology used. In terms of declarative knowledge results, they found online learning to be superior to classroom-based training, whereas the two were similar in terms of procedural learning.

The role of online teachers is multifaceted and requires a range of skills and knowledge. Online teachers not only need to be experts in their subject matter, but they also need to be proficient in using technology and possess strong communication skills to effectively engage with students in a virtual environment. Additionally, they must be able to adapt their teaching methods to meet the diverse needs of their students. According to Baran et al. (2011), online teachers need to have a strong understanding of content and pedagogy to effectively design and deliver online instruction. Furthermore, online teachers should also be able to provide timely feedback and support to their students, as well as foster a sense of community and collaboration within the virtual classroom. This requires a high level of organization, time management, and interpersonal skills. Online teachers also need to be skilled at using technology and be able to create a supportive learning environment for their students. In addition to technological competencies, online



teachers also need to have strong communication and interpersonal skills. Effective communication and interpersonal skills are essential for online teachers to establish a positive rapport with their students and facilitate meaningful interactions. Furthermore, they must possess strong time-management skills to ensure that they can meet the demands of teaching in an online environment while also providing timely feedback to their students. According to Baran et al. (2011), online teachers need to be able to establish and maintain effective communication with their students, as well as provide support and motivation to promote student engagement and success. Moreover, online teachers must be able to adapt to different learning styles and use various teaching strategies to cater to the diverse needs of their students. They should also be able to use technology effectively and efficiently to enhance the learning experience of their students and create a dynamic online classroom environment. Online teachers also play an important role in providing feedback and support to their students. Liaw and Huang (2013) found that online teachers who provided personalized feedback to their students were more effective in promoting student engagement and learning outcomes. In addition, online teachers must have a good understanding of technology and be able to troubleshoot technical issues that may arise during online classes. They should also be able to adapt their teaching methods to suit the needs of different types of learners, such as visual or auditory learners, to ensure that all students can succeed in an online learning environment.

Given the importance of the role and competencies of online teachers, professional development is crucial to ensure that teachers have the skills and knowledge they need to effectively deliver online instruction. Effective professional development for online teachers should include training on technology tools, pedagogical strategies, and online communication skills to help them create engaging and interactive learning experiences for their students. Additionally, ongoing support and collaboration opportunities can help teachers stay up-to-date with the latest trends and best practices in online education. According to Johnson and Aragon (2003), professional development programs for online teachers should focus on a range of areas, including technology skills, course design and development, and effective communication and collaboration. In order to ensure that professional development for online teachers is effective, it is important to tailor the training to meet the specific needs of each teacher. This can be done through needs assessments and individualized coaching and mentoring. Additionally, providing



opportunities for teachers to receive feedback and reflect on their practice can help them continually improve their online teaching skills. In addition to formal professional development programs, online teachers can also benefit from ongoing support and mentoring. Johnson and Aragon (2003) recommend that online teachers have access to ongoing support, such as online communities and mentoring programs, to help them stay up-to-date with new technologies and pedagogical approaches. Moreover, online teachers can also benefit from peer observation and feedback, which can provide them with valuable insights into their teaching practices and help them improve their instructional strategies. By participating in peer observation and feedback programs, online teachers can also build a sense of community and collaboration with their colleagues, which can ultimately lead to improved student outcomes.

2 METHODS

2.1 PARTICIPANTS

The current research sample was chosen using a stratified sampling technique, with random sampling as the general method. This method was chosen to ensure that the sample was representative of the population being studied. The stratification allowed for a more precise selection of participants based on specific characteristics. In light of this, the research area was chosen to be the public elementary schools, junior high schools, and high schools in Hue City, Vietnam, specifically Truong An High School, Hung Vuong Secondary School, Nguyen Truong To High School, and Huong So High School, Tran Cao Van Secondary School, and Dang Tran Con High School, in order to survey and assess the practical application of information. The schools were selected based on their diversity in terms of student population, socio-economic status, and academic performance. The research team also collected data through interviews with teachers and administrators to gain a comprehensive understanding of the information usage in the education system. The authors choose the quantity of survey samples at each institution by using systematic random sampling.

2.2 INSTRUMENT

To analyze the necessity and intent of integrating information literacy into the organization of teaching activities, a framework was developed. The framework was designed to assess the effectiveness of information literacy integration and identify areas



for improvement. It can be used by educators to evaluate their teaching practices and ensure that students are equipped with the necessary skills for success in the digital age. Five levels are used to evaluate survey content: Absolutely unnecessary/Strongly disagree; Unnecessary/Disagree; Yes or no/Hesitant; Required/Consent; Very Necessary/Strongly agree. The number of survey questionnaires distributed by instructors was 192, and the number of valid votes collected was 187 (the total number of surveys conducted was 97.3% of the expected sample size). The high response rate indicates that educators are interested in evaluating their teaching practices and ensuring that students are equipped with the necessary skills for success in the digital age. The five-level evaluation system provides a comprehensive understanding of the effectiveness of teaching practices and helps educators to make informed decisions for future improvements.

3 RESULTS

The results of the statistical analysis on the frequency and effectiveness of implementing educational activities in the organization of teaching activities of teachers of high schools in Hue City, Vietnam in Table 1 show that:

3.1 ASSESS THE LEVEL AND EFFECTIVENESS OF APPLYING ONLINE APPLICATIONS IN TEACHING AND LEARNING ACTIVITIES

Table 1. Effectiveness of applying online applications in teaching and learning activities

Online Application	Execution		Efficiency	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Application to support classroom organization and management				
Zoom Cloud Meeting	3.30	0.52	3.48	0.71
Microsoft Teams	3.35	0.67	3.32	0.69
Google Meet	3.44	0.78	3.50	0.78
Google Classroom	3.38	0.64	3.42	0.66
ClassDojo	2.19	0.87	2.13	0.54
Application to support the organization of teaching activities in the classroom				
Kahoot	1.97	0.70	1.88	0.75



Quizizz	2.00	0.76	2.30	0.82
Baamboolez	1.88	0.83	1.97	0.72
Blooket	1.80	0.77	1.75	0.87
Mentimeter	1.05	0.72	1.32	0.95
Padlet	1.43	0.75	1.65	0.60
Edpuzzle	1.08	0.84	1.00	0.76
Imindmap	1.23	0.90	1.44	0.75
Application to support testing – evaluation				
Microsoft Forms	2.31	0.85	2.35	0.65
Google Forms	2.64	0.66	2.60	0.79
Azota	2.19	0.74	2.48	0.86
Exam	1.98	0.69	1.80	0.72
Others application	1.76	0.67	1.86	0.62

Source: Prepared by the authors (2023)

Level and effectiveness of online applications: Applications are grouped according to the purpose of use are classroom management and organization applications such as: Google Meet, Zoom, Microsoft Teams, Google Classroom, ClassDojo, Padlet; Applications that support organizing teaching activities in class such as: Kahoot; Quizizz, Edpuzzle, Padlet, Blooket, Baamboole, Mentimeter, iMindmap; Applications that support testing - evaluation such as: Microsoft Form, Google Form, Azota, Exam, have different levels and effectiveness. In which, the Google Meet application is evaluated for performance and highest efficiency ($M = 3.44$, $SD = 0.78$; $M = 3.50$, $SD = 0.78$); following Google Classroom app ($M = 3.38$, $SD = 0.64$; $M = 3.42$, $SD = 0.66$); Microsoft Teams application ($M = 3.35$, $SD = 0.67$; $M = 3.32$, $SD = 0.69$); Zoom Cloud Meeting application ($M = 3.30$, $SD = 0.52$; $M = 3.48$, $SD = 0.71$). ClassDojo application is evaluated as less implemented and less effective ($M = 2.19$, $SD = 0.87$; $M = 2.13$, $SD = 0.54$). Applications that support organization of teaching activities in class and applications that support testing survey – evaluation were Microsoft Forms application ($M = 2.31$, $SD = 0.85$; $M = 2.35$, $SD = 0.65$); Google Forms application ($M = 2.64$, $SD = 0.66$; $M = 2.60$, $SD = 0.79$); Azota ($M = 2.19$, $SD = 0.74$; $M = 2.48$, $SD = 0.86$); Exam ($M = 1.98$, $SD = 0.69$; $M = 1.80$, $SD = 0.72$). Application to support the organization of teaching activities in the classroom, specifically, the statistics of usage of applications



show that Edpuzzle ($M = 1.08, SD = 0.84$; $M = 1.21, SD = 0.76$); Mentimeter ($M = 1.05, SD = 0.72$; $M = 1.32, SD = 0.95$); Padlet ($M = 1.43, SD = 0.75$; $M = 1.65, SD = 0.60$); Imindmap ($M = 1.23, SD = 0.90$; $M = 1.44, SD = 0.75$); Quizizz ($M = 2.00, SD = 0.76$; $M = 2.30, SD = 0.82$); Kahoot ($M = 1.97, SD = 0.70$; $M = 1.88, SD = 0.75$).

3.4 FACTORS AFFECTING THE APPLYING ONLINE APPLICATIONS IN THE ORGANIZATION OF TEACHING ACTIVITIES

Table 2. Factors affecting the applying online applications in the organization of teaching activities

No	Factor	<i>M</i>	<i>SD</i>
1	Awareness of management staff, teachers about the need to apply online applications in teaching	3.60	0.89
2	Management capacity of technology application in teaching of management staff and teachers (planning, organizing implementation, checking and evaluating teaching activities)	3.38	0.84
3	The ability of teachers to apply technology in teaching	4.37	0.87
4	The capacity of family-teacher coordination in online teaching activities	3.34	0.88
5	Conditions of facilities, technological means of the school, teachers	3.85	0.93
6	Conditions on time to organize the teaching activity	3.62	0.96
7	Requirements to ensure teaching content according to the program	4.20	
8	The spirit and attitude of students to study	4.00	1.20
9	Students' skills in using technology for learning	3.62	0.90
10	Student's technology equipment	3.85	0.94

Source: Prepared by the authors (2023)

Teachers of high schools in Hue City have assessed the influence of factors on the effectiveness of applying online applications in teaching activities, the survey results are shown in Table 2.

The statistical analysis of teachers' opinions on the influence of factors affecting the actual application of online applications in the organization of teaching activities in Table 2 shows that the factor evaluated by the teacher with the greatest influence, ranked 1, 2, 3, respectively, belongs to teachers, programs and students, namely: "The ability of teachers to apply technology in teaching" ($M = 4.37, SD = 0.87$); "The spirit and attitude of students to study" ($M = 4.00, SD = 1.20$). There are factors ranked at the same 4th rank in terms of the level of influence according to the teacher's assessment related to the



conditions of facilities and equipment from both teachers and students, namely “Conditions of facilities, technological means of the school, teachers” ($M = 3.85$, $SD = 0.93$) and “Student's technology equipment” ($M = 3.85$, $SD = 0.94$), in the teacher’s assessment of the level of influence following by “Conditions on time to organize the teaching activity” ($M = 3.62$, $SD = 0.96$) and “Students’ skills in using technology for learning” ($M = 3.62$, $SD = 0.69$). In addition, many other factors have a slightly affected the applying online applications in the organization of teaching activities including: Awareness of management staff, teachers about the need to apply online applications in teaching ($M = 3.60$, $SD = 0.89$); Management capacity of technology application in teaching of management staff and teachers (planning, organizing implementation, checking and evaluating teaching activities) ($M = 3.38$, $SD = 0.84$); The capacity of family-teacher coordination in online teaching activities ($M = 3.34$, $SD = 0.88$).

4 DISCUSSION

The aim of this study was to assess the ability of Hue City high school teachers to incorporate information technology into their classes. Based on the material gathered during the inquiry, the following conclusions were reached: (i) Effectiveness of implementing educational activities in the organization of teaching activities of teachers of high schools in Hue City; and (ii) Factors affecting the applying online applications in the organization of teaching activities.

Teachers at high schools in Hue City, Thua Thien Hue province, have paid great attention to using classroom management and organization applications on a regular and effective basis; however, the actual situation of using applications to support the organization of teaching and learning activities in the classroom is rarely done by teachers and is not effective. Results of in-depth interviews on the actual situation of organizing teaching activities and applying online applications to organizing teaching activities by teachers at high schools in Hue City, synthesizing interview opinions of In the context of the complicated COVID-19 epidemic in the locality, the Department of Education and Training and the Department of Education and Training implemented the official dispatch of the Ministry of Education and Training on strengthening online teaching. online via the Internet, on television during the COVID-19 school break. Therefore, online teaching is a solution that many high schools in Hue City learn to organize online lessons for students of schools. Online teaching requires elaborate preparation and is more detailed



than direct teaching. For each lesson taught online, teachers need 3-4 times more time than face-to-face teaching. In the process of taking classes online, teachers always have to try to shorten the distance by interacting through learning games, surveys, etc. According to research, most students are proficient enough to participate in digital lessons, but creating these lessons by teachers proves to be far more challenging (Aslan & Zhu, 2015). To do that, teachers need to explore, research and make efforts to become proficient in technology, meeting the requirements of a new form of teaching that creates more pressure in the design of classroom teaching plans for teachers. Efforts to learn and use applications to support online teaching to convey lesson content require teachers to work a lot, most teachers only use applications to organize virtual classrooms such as: Zoom, Teams, Google Meet; use Google Classroom or the Azota app for homework assignments; Powerpoint applications in preparing lectures are popular. Teachers play a crucial part in implementing technology in the classroom successfully (Albugami & Ahmed, 2015; Glassett & Schrum, 2009; Tiba et al., 2016). Research by Tallent-Runnels et al. (2006) also shows that online training programs also have difficulty in finding teachers who know how to modify teaching methods and pedagogical techniques used in the environment directly to the online environment. Technology can provide instructors with real-time data on pupil performance, enabling them to identify teaching methods' strengths and weaknesses (Graham & Valsamidis, 2006). Practice shows that online teaching in the current period for teachers in Hue City is a big paradigm shift in which online teachers have had to learn how to use technology, one of the most important competencies. necessity of teachers in today's digital age. Even if the majority of teachers in today's world are computer literate, it's still crucial to understand how to integrate ICT in the classroom in a useful and successful way (Angeli & Valanides, 2009; Ertmer & Ottenbreit-Leftwich, 2010). The majority of teachers say they feel unprepared to use digital teaching methods in their curricula (Coyle et al., 2010).

Teachers evaluate the factors affecting the effectiveness of the application of IT in teaching by students from many factors, both in terms of awareness, attitude, capacity, time, funding, and physical conditions from the subjects of teaching and learning activities: administrators, teachers, students, and parents. Prensky (2005) asserts that every aspect of education must change to accommodate students who are living in the twenty-first century. By immersing students in practical, technologically assisted projects, the teacher's role must change from that of an information transmitter to that of



a learning facilitator (Prensky, 2010; Prensky, 2011). Thus, the application of information literacy in organizing teaching activities at high schools in Hue city has not been carried out regularly and effectively due to the objective and subjective aspects mentioned above. From this result, the authors believe that, in order to apply the tools and methods of teaching and learning to take place in a scientific and effective manner, it is necessary to have a synchronous agreement on awareness, capacity and method conditions technology facilities and equipment to support teaching activities. Online instruction offered by professors over the Internet is how Feldman and Zucker (2002) characterize online teaching and learning. They claim that asynchronous and synchronous interactions are both possible during online training (Khoshsima et al., 2018). They also think that in an online setting, there are two concurrent processes going on. Khoshsima et al. (2018) also reported that students first develop into more engaged and reflective learners. Second, by employing technology, both students and teachers engage in learning activities and learn more about it. Teachers who are experts in their fields can provide a productive online learning environment and curriculum. Making the link between online education and the ideals of traditional education requires making sure that online learning is "delivered" by instructors who are fully competent and enthusiastic about instructing online in a web-based setting (Khoshsima et al., 2018). When the subjects who organize teaching activities at schools are aware of the importance and necessity of applying informational methods in teaching organizational innovation, the training to improve the capacity of the staff who apply technology in teaching school will be interested in planning, scientific and synchronous implementation for high school teachers in the area. From the results of the fostering activities, when the teachers have the necessary competencies to organize the application of technology in teaching in the spirit of innovative teaching activities to meet the new general education program; If teachers have sufficient capacity and practical experience, the construction of a learning plan that integrates the use of technology, coordinates with digital media, digital learning materials and scientific methods and techniques of teaching, suitable towards achieving the defined teaching goals; ensure the innovation of content - form - organization of teaching activities in the spirit of innovation of teaching activities and education in the new context. According to Biasutti (2011), online education is a segment of the education market that is expanding quickly because it offers a variety of benefits to educational institutions. Educational institutions are continuously seeking for new ways to enter this market due



to the advantages and benefits that e-learning training offers as well as the fact that it will likely become more popular in the future (Singh et al., 2005). In addition, the assurance of physical facilities and technological means for teachers and students is an important condition for teachers to innovate teaching methods and forms. In addition, to create efficiency in teaching also needs the cooperation from the students' families, the educational force has a close coordination in creating conditions for time and means for students to participate in learning.

5 CONCLUSION

Teaching activities in our country in the current period, for the first time, online teaching is concretized with specific regulations on conditions and responsibilities of stakeholders. Not only creating a legal corridor for schools to be proactive and ready to respond in all situations, this regulation also encourages and increases opportunities for students to study anywhere, anytime. The purpose of online teaching is to support or replace face-to-face teaching at general education institutions to help educational institutions improve teaching quality and complete educational programs. Online teaching activities also aim to develop the capacity to use ICT in teaching and promote digital transformation in the education sector. The results of the survey on the application of IT in the organization of teaching activities according to the promotion process for high school students in Hue City, Thua Thien Hue Province show that there are many objective and subjective factors affecting the effectiveness of teaching activities. activities of applying technology in teaching organizations for students. The practical application of information literacy in the organization of teaching activities in high schools has not been given adequate attention. Indicators on the level and effectiveness of using information aids according to the steps in the process of organizing teaching activities are only statistically popular at the level of “less implemented” and “less effective”. Therefore, we think that this is a situation worthy of attention, and it is necessary to focus on practical application of technology in teaching and learning activities in high schools to meet the innovative spirit of enhancing the application of technology. technological equipment towards meeting the requirements of the new general education program at general education institutions in Hue City, Thua Thien Hue Province. Based on the above research results, we believe that, in order to improve the effectiveness of applying online applications in teaching organization, high schools in



Hue city need to implement a system synchronous measures from raising awareness to fostering application capacity in harmony with the environment, organizational conditions for applying technology in teaching with close cooperation between family - school.



REFERENCES

- Albugami, S., & Ahmed, V. (2015). Success factors for ICT implementation in Saudi secondary schools: From the perspective of ICT directors, head teachers, teachers and students. *International Journal of education and development using ICT*, 11(1).
- Ally, M. (2004). Foundations of educational theory for online learning. *Theory and practice of online learning*, 2, 15-44.
- Anderson, T., Liam, R., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context.
- Angeli, C., & Valanides, N. (2009). Epistemological and methodological issues for the conceptualization, development, and assessment of ICT-TPCK: Advances in technological pedagogical content knowledge (TPCK). *Computers & Education*, 52(1), 154-168.
- Aslan, A., & Zhu, C. (2015). Pre-Service Teachers' Perceptions of ICT Integration in Teacher Education in Turkey. *Turkish Online Journal of Educational Technology-TOJET*, 14(3), 97-110.
- Aydin, C. H. (2005). Turkish mentors' perception of roles, competencies and resources for online teaching. *Turkish Online Journal of Distance Education*, 6(3), 58-80.
- Baran, E., Correia, A.-P., & Thompson, A. (2011). Transforming online teaching practice: Critical analysis of the literature on the roles and competencies of online teachers. *Distance Education*, 32(3), 421-439.
- Baran, E., & Correia, A. P. (2009). Student-led facilitation strategies in online discussions. *Distance Education*, 30(3), 339-361.
- Bawane, J., & Spector, J. M. (2009). Prioritization of online instructor roles: implications for competency-based teacher education programs. *Distance Education*, 30(3), 383-397.
- Bernard, R. M., Abrami, P. C., Lou, Y., Borokhovski, E., Wade, A., Wozney, L., Walset, P. A., Fiset, M., & Huang, B. (2004). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of educational research*, 74(3), 379-439.
- Biasutti, M. (2011). The student experience of a collaborative e-learning university module. *Computers & Education*, 57(3), 1865-1875.
- Cavanaugh, C. S. (2001). The effectiveness of interactive distance education technologies in K-12 learning: A meta-analysis. *International Journal of Educational Telecommunications*, 7(1), 73-88.
- Coyle, Y., Yanez, L., & Verdu, M. (2010). The impact of the interactive whiteboard on the teacher and children's language use in an ESL immersion classroom. *System*, 38(4), 614-625.



Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. *Journal of research on Technology in Education*, 42(3), 255-284.

Feldman, R., & Zucker, D. (2002). Teaching and learning online-communication, community, and assessment. *University of Massachusetts*.

Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough. *The American journal of distance education*, 19(3), 133-148.

Ge, X., Ifenthaler, D., & Spector, J. M. (2015). *Emerging technologies for STEAM education: Full STEAM ahead*. Springer.

Glassett, K., & Schrum, L. (2009). Teacher Beliefs and Student Achievement in Technology-Rich Classroom Environments. *International Journal of Technology in Teaching & Learning*, 5(2).

Goodyear, P., Salmon, G., Spector, J. M., Steeples, C., & Tickner, S. (2001). Competences for online teaching: A special report. *Educational Technology Research and Development*, 65-72.

Gorsky, P., & Blau, I. (2009). Online teaching effectiveness: A tale of two instructors. *International Review of Research in Open and Distributed Learning*, 10(3).

Graham, D., & Valsamidis, T. (2006). A framework for e-learning: a blended solution?: current developments in technology-assisted education.

Huynh, V. S., & Tran-Chi, V. L. (2019). Vietnamese High School Students' Perceptions of Academic Advising. *International Journal of Learning, Teaching and Educational Research*, 18(8), 98-107.

Johnson, S. D., & Aragon, S. R. (2003). An instructional strategy framework for online learning environments. *New directions for adult and continuing education*, 2003(100), 31-43.

Khoshsima, H., Saed, A., & Arbabi, M. A. (2018). Online teachers' attitudes toward using technology in teaching English as a foreign language. *Journal of Applied Linguistics and Language Research*, 5(2), 134-148.

LaPointe*, D. K., & Gunawardena, C. N. (2004). Developing, testing and refining of a model to understand the relationship between peer interaction and learning outcomes in computer-mediated conferencing. *Distance Education*, 25(1), 83-106.

Liaw, S.-S., & Huang, H.-M. (2013). Perceived satisfaction, perceived usefulness and interactive learning environments as predictors to self-regulation in e-learning environments. *Computers & Education*, 60(1), 14-24.



Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies.

Moore, M. G. (1994). Administrative barriers to adoption of distance education. In: Taylor & Francis.

Prensky, M. (2005). Adopt and adapt: Shaping tech for the classroom. *Retrieved October, 15, 2007.*

Prensky, M. (2010). What I learned recently in New York City classrooms: How to keep all kids busily engaged at all times. *On the Horizon, 23(2)*, 127-133.

Prensky, M. (2011). The reformers are leaving our schools in the 20th century. *On the Horizon, 1*, 18.

Russo, T. C., & Benson, S. (2005). Learning with invisible others: Perceptions of online presence and their relationship to cognitive and affective learning.

Singh, G., O'Donoghue, J., & Worton, H. (2005). A study into the effects of elearning on higher education. *Journal of university teaching & learning practice, 2(1)*, 16-27.

Sitzmann, T., Kraiger, K., Stewart, D., & Wisher, R. (2006). The comparative effectiveness of web-based and classroom instruction: A meta-analysis. *Personnel psychology, 59(3)*, 623-664.

Tallent-Runnels, M. K., Thomas, J. A., Lan, W. Y., Cooper, S., Ahern, T. C., Shaw, S. M., & Liu, X. (2006). Teaching courses online: A review of the research. *Review of educational research, 76(1)*, 93-135.

Tiba, C., Condy, J., & Tunjera, N. (2016). Re-examining factors influencing teachers' adoption and use of technology as a pedagogical tool. *Empowering the 21st Century Learner.*

Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times.* John Wiley & Sons.