Application of Information Technology in Teaching in Vietnam

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Abstract:
Information technology is a great achievement of the developing scientific and technological revolution in this day and age. The positive effects that it has on the educational environment. The training of foreign languages supported by information technology has been taking place in almost all universities and colleges nationwide. The paper focuses on analyzing the situation of information technology application in teaching and learning from theory to practice at FPT University, and provides solutions to apply information technology to improve efficiency of teaching foreign languages in schools, creating premises and increasing job opportunities for students after graduation. The paper also discusses the situation of information technology application in foreign language teaching-learning process from the world model to the application situation in Vietnam. The paper analyzes the theoretical application of the introduction of information technology into the classroom, into the teaching process, followed by an analysis of the information technology competencies teachers need to achieve in Vietnam and world. Practical needs and necessity of the application of information technology in the Vietnamese context, accompanied by the current application situation in order to make appropriate recommendations

I. INTRODUCTION

In the era of Information Technology boom, the positive and negative impacts that information technology brings in the educational environment are obviously inevitable. Internet technology has been appearing in universities, colleges, high schools and vocational schools in many countries around the world. Even in Vietnam, the application of technology in teaching in schools is also on the rise, though still in a fragmented stage. Today, learning through computers is a common trend in foreign language training programs. Application of Information Technology in the process of teaching and learning in general and foreign language training in particular has developed widely in countries in the Asian region and in the world. At present, the concern of researchers and educators is no longer whether to introduce and apply Information Technology into the training process, but rather how to improve learning efficiency of students through the application of new achievements of Information Technology [1]. This proves the fact that the journey to bring technology applications into the classroom is a new trend that cannot be reversed. In addition, helping students approach and become familiar with these learning aids is a way to help them prepare their belongings on the path to integration into the modern labor market, where the shadow of Information Technology is everywhere, getting into their work and their lives. This will turn learning processes the classroom not to be a place where has the four silent walls. The application of Information Technology in the teaching will process to enhance the autonomy and motivation of students' learning; and extend more interactivity [2].

The research and application of information technology in teaching process has been strongly implemented in many countries around the world. In developed countries such as the US, Japan, Korea, etc. companies producing teaching equipment on information technology applications have produced many electronic books and modern teaching facilities controlled by machines. Computers, school systems equipped with multifunctional classrooms with computer networks, amplifying projectors, etc. marked a new revolution in teaching technology, bringing the process of teaching from traditional teaching into online teaching, turning the Internet with Websites into a learning environment and document library for students to access.

In fact, the problem of using computers in teaching in Vietnam today is still facing many difficulties and

limitations such as the awareness of teachers and students. Many teachers and students are not interested in applying information technology to the education process because they are familiar with traditional teaching methods. Next is the information technology infrastructure is still low [3]. This is the most difficult problem. Application of information technology in education is associated with investment in computer systems, internal computer networks, Internet for teachers and students, devices such as projectors, power supply systems, rooms standard machine, etc. is not easy to solve on a large scale. Next is the information technology level of teachers and students. There are inadequacies between their levels with specific applications of software. Another factor is that the organization of a traditional class-lesson will make adjustments when introducing information technology into teaching. Changing the form of classroom organization, teaching and learning methods will cause difficulties for both teachers, students and educational administrators. For example, if we want to organize an hour of lessons by electronic lectures, we need to use a projector equipped for the whole school, teachers will have to take time for preparing teaching equipment for that lesson.

II. RESEARCH CONTENT

A. Current education trends in the world

Industry Revolution 4.0 with breakthrough achievements in artificial intelligence, robots, Internet of things, self-driving cars, 3D printing technology, nanotechnology, etc. has brought technology present in all areas of life such as economy, banking, construction, agriculture, transportation, entertainment, home appliances, information and communication technology, etc. And of course, education as a social leader cannot be beyond the waves of the times.

According to the Global Institute of Strategic Consulting Group Kindsley, computers will replace 60% of existing jobs by 2030, that is, about 800 million people will lose their jobs. According to the World Economic Forum, about 60% of workers will do things they have never learned, most of which are related to technology. This practice leads to an inevitable trend which is also an urgent task for every country to apply technology to education [4].

The trend of technology education over time has gradually changed. In recent years, open mass online courses (MOOCs) have exploded with big names like Standford, Udacity, Coursera, edX, Udemy, FutureLearn. Virtual Reality (VR) technology is also applied to education in the US, UK, etc. with great products.

Typically, the application Kahoot has 70 million users per month and 2 billion players since its inception. The most powerful emergence is probably the programming educational trend for children. A series of intelligent robots and programming programs for children in the US were born, such as Cubetto and Ozobot. Technology is applied in teaching almost all subjects. not just programming, etc.

B. Application of technology to education in Vietnam

The implementation of the task of applying technology to education in Vietnam still takes place at a slow pace compared to developed countries in the world [6]. Activities of upgrading facilities, using online software to manage jobs, applying technology to teaching, etc. do not seem to bring about a breakthrough in improving the quality and competitiveness in education. sex. Some typical models such as MOOC of FPT University are still not enough to cover the education market with more than twenty million Vietnamese students.

C. Innovating teaching methods

Teachers need to formulate problematic situations to help students use learning materials effectively. Besides, teachers need to enhance students' exploration activities. Teachers change the form of teaching including classroom teaching, in the lab, discussion, group work, self-study, sightseeing, etc.

One very important thing is to enhance the application of teaching facilities. However, innovating teaching and learning methods does not mean dismissing traditional teaching methods but continually promoting, inheriting the essence of traditional education and selectively acquiring teaching methods [7]. Modern learning from an active teaching perspective combined with modern methods to help students promote positive, self-conscious, proactive, creative, self-study habits and self-improvement activities, skills to apply knowledge in different situations in learning and in practice, creating confidence, joy and interest in learning. To make the learning process constructivist, students need to explore, discover, discover, train, exploit and process information, forming their own knowledge, competencies and qualities. Teachers need to organize awareness activities for students, teach them how to find the truth. Therefore, the innovation of teaching methods can be considered as a creative application of traditional teaching methods with methods, facilities and technologies suitable to the subjects and content of the subject [5].

D. Positive cognitive activities of students

Positive is a human quality in social life. Unlike animals, humans not only consume what is available in nature, but also actively create the material possessions necessary for the life, existence and development of human society. From here, people reveal their creative capacity, the ability to explore and create civilizations in every era, actively changing the natural environment as well as the social environment.

The positive in learning is manifested in the activities of each person, especially the active activities of the subject. In education, learning is the leading activity of the educational subject. The activeness of learning in nature is positive awareness, the desire to understand and the desire to dominate knowledge about the objective world. The human cognitive process is the process of researching and seeking to explore the objective world. The activeness of learning manifests itself in various activities such as enthusiastically expressing constructive ideas, actively presenting raised issues, or asking questions, dissatisfied with the answers of all people, including their own answers, take pains to think about difficult problems, persist in solving assignments in different ways. Positive learning is divided into levels from low to high including copying (trying to act in the form of teachers and friends), exploring (being independent in thinking when solving problems, finding different ways to solve a problem) and creative (finding new, unique workarounds).

Positive teaching methods towards positive cognitive activities of learners in order to promote learners' positive and proactive creativity. With positive teaching methods, teachers play a leading role, learners play an active role in acquiring knowledge [8].

E. Comparing advantages and disadvantages between using teaching methods for electronic lectures with traditional methods

The concept of electronic lecture is not too strange and complicated. It is the specific design of the entire teaching plan of teachers and students during class time, with a strict and logical structure defined by the lesson structure. Electronic lectures are a product of lesson design activities expressed in material before teaching activities are conducted.

Teaching methods for e-lectures are learner-centered, multi-sensory stimulation, multi-dimensional development, collaborative, interactive work, information exchange, active learning, exploration. Students will learn based on critical, creative thinking by making decisions.

Adaptive teaching is based on intentional activities. Contexts and situations are often more realistic [9].

On the contrary, the traditional method is centered on the teacher. This method stimulates single senses, develops one-way, works alone. The transmission of information and learning are rather passive. Learning is often based on the available knowledge. Background and situation are separate.

So, through the above analysis, the effectiveness of teaching methods with the use of electronic lectures is higher than that of traditional teaching methods because electronic lectures are highly interactive based on multimedia technology, create conditions for learners to exchange information more easily, visualize all phenomena and things. Electronic lectures will become an indispensable trend in the knowledge economy. Currently, electronic lectures have been attracting the special attention of education in countries around the world. However, e-lectures are not a substitute for blackboard and white chalk, nor can they replace the role of teachers, but only a guiding role in all classroom activities. to turn passive teaching into active teaching [5].

F. The meaning of electronic lectures

Electronic lectures will create a new learning environment, that is, the current learning environment with the integration of electronic lectures will bring a promising new structure. The organization system is open. The teaching environment is equal, democratic and voluntary.

In addition, this lecture will promote the role and position of teachers and learners, using modern technologies and learners really stand in the center, as the owner or the explorer of learning. In fact, electronic lectures can be packaged and operated in a Web environment for distance learning or online training. In order to design good electronic lectures, teachers must constantly make efforts to find resources to supplement the lesson content, choose new methods and methods for their lectures, the instructor will play a controlling role, directing the learner into the process of finding and processing information [4].

Next is the innovation of teaching methods and forms. The integration of electronic lectures into the current active teaching process is both a goal and a requirement in innovating teaching methods. With the advantage over traditional lesson plans, the application of electronic lectures in the positive teaching process, forcing teachers to change the way of teaching and students must change the way of learning. An electronic lecture will stimulate

attention, attention, and clear direction for issues to be implemented if the teacher knows how to promote and coordinate the strengths of each active teaching method in teaching process. Such as small group teaching, debate, presentation, problem-solving and project teaching.

G. The criteria for evaluating electronic lectures

There are several criteria to evaluate the quality of an electronic lecture. The first is the scientific criteria. The content of electronic lectures must be presented in a scientific manner, easy to understand, meet the rich diversity, ensure scientific accuracy, suitable for the training program, knowledge and ability to acquire of student. The second is the criteria for teaching theory. Electronic lectures must perform the function of teaching theory, fully implement the stages of the teaching process, from consolidating the starting level, forming new knowledge, reviewing, systematizing knowledge to test assess students' knowledge, skills and attitudes. The third is the pedagogical criteria. Electronic lectures must demonstrate superiority in terms of organization of teaching compared to traditional classroom forms. The superiority of electronic lectures compared to other teaching software is to fully exploit the ability to support, transmit diverse information, visualize phenomena, processes, etc. in order to stimulate dynamism of the learners. Last is the technical criterion. The interface on the screen must be simple, friendly, clear slide structure, arranged in a manner consistent with the course of an hour of study.

H. The obstacles when using electronic lectures

Having a lively lecture during theoretical and practical lessons requires a lot of preparation time, which is what teachers often avoid. If using the traditional teaching method with blackboard chalk, the efficiency is only 30%, while the effectiveness of the multimedia method (see - listen) up to 70%. Using the new method requires a new lesson plan. In fact, to "click" the mouse to teach really effective, the teacher has to work many times harder than the traditional way of teaching. In addition to basic knowledge of computers, teachers must have a real passion for designing tasks that require creativity, sensitivity and aesthetics to master proficiency in software such as PowerPoint.

Moreover, during the design process, in order to get a good electronic lecture, each teacher also encountered many difficulties in finding their own illustrations, vibrant sounds, and appropriate documentation. lecturing. This is also one of the reasons that some teachers often give to avoid the implementation of information technology application teaching. If so, they only show the content of the lesson throughout the lesson, causing eyestrain, putting students in a state of fatigue and inactivity. There is some content that does not necessarily show on the screen [6].

Because of these difficulties, teachers only apply information technology when needed. Ie only lectures (lecture), the new use and this is just a deal. This situation is also common in schools. The purpose of using computers for teaching purposes only applies in these situations.

III. SOME RECOMMENDATIONS

Firstly, we need to enhance modern teaching equipment and facilities such as projectors for schools fully and synchronously. Lessons which have practice, students should do in the practice room. We need to raise the awareness of administrators, teachers and students about the application of information technology in teaching and learning.

Secondly, we need measures to encourage teachers to apply modern teaching methods in the teaching process. We also need to foster informatics knowledge regularly for subject teachers so that they can be more confident and apply technology in education in their teaching work. Therefore, to apply information technology effectively in teaching requires teachers to have knowledge of digital devices and information technology applications. The strong development of science and technology has brought foreign language teaching in Vietnam new challenges, requires the best efforts to keep up with the times and to be able to participate in the process of information technology and knowledge economy.

The word "literacy" has also been redefined to include "technology literacy". That has created a huge demand of society for the education sector in which teachers [9]. The word "Literacy" also means how to read technology or to be able to meet the needs of information technology society in transferring knowledge to learners.

Thirdly, we need to build exam bank and build websites. We also need to organize and exchange experiences on the application of information technology between colleges and universities in the country and internationally. The school creates the best conditions for facilities and time for teachers to effectively introduce new applications of information technology into teaching. Besides materials such as books, reference books, newspapers, etc. the school library should also invest in additional computers connected to the Internet so that students can access and search documents for learning , expand knowledge and thus the ability of students to find information will be increased.

Fourthly, for policy-makers, the application of

information technology competence policy to assess information technology capacity of teachers nationwide is necessary. Based on this, they will issue teachers with certificates of the ability to use information technology, as part of the professional standards of language teachers in the 21st century; combining information technology competency with training and learning content. Besides, we also need to build a reward system that is commensurate with the information technology competence of teachers. For teachers, we need to raise their awareness of the benefits of applying information technology to foreign language teaching and learning; conscious of their own level of information technology application; plan to train or attend information technology training courses in foreign language teaching and learning. For information technology professionals, we need to build information technology skills training modules, especially specific applications to the teaching and learning of practical skills.

IV. CONCLUSION

The application of information technology to positively awareness students' activities in teaching to improve the quality of the teaching process, initially affirming the positivity of using electronic lectures with the support aids of computers as teaching aids. At the same time, it has discovered difficulties when applying information technology, to propose solutions to overcome difficulties in order to contribute to improving the quality of teaching and learning in the school. However, computers should not be considered a universal teaching medium that can replace the role of teachers, or negate the role of other traditional teaching media. In order to maximize the strengths of each teaching medium, there should be a coordination between teaching facilities, and at the same time flexible coordination of different forms of classes and teaching methods. Hopefully, the topic will contribute to the innovation of current teaching methods at the University and improve the quality of teaching specialized subjects.

V. CONFLICT OF INTEREST

The author declares no conflict of interest.

VI. ACKNOWLEDGMENT

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