

The impact of digitalization for higher education: A case in Vietnam

Ảnh hưởng của số hóa đến giáo dục đại học: Một điển hình ở Việt Nam

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Abstract

In the era of technology, digital transformation trend has made a great impact on higher education in both international institutes and universities in Vietnam. Especially, recently a few digitalized universities in Vietnam have been acknowledged by the Times Higher Education (THE) Impact Rankings. Among Vietnamese Universities is Duy Tan University ranked in the top 500 with the position 401-500 by THE in 2022, and one of a few world-class universities in Vietnam. The great achievement that DTU has got is due to the flexibility in employing digital transformation to meet the educational requirements during the Covid 19 pandemic. As a result, for the last two school years DTU assured the rate of graduates on schedule despite the severe pandemic. Digitalization is one of many crucial factors that helps Duy Tan University get such a high ranking. In order to help readers comprehend the digitalization for higher education, the study focuses on the benefits and challenges that digital transformation has brought in higher education through the survey of 154 English-majored students and 30 lecturers at Faculty of English, Duy Tan University. In addition, possible solutions to challenges are suggested so that other higher education institutes can get valuable lessons in digital transformation. It is hoped that digitalization for higher education becomes more and more popular and learners can get its benefits more easily.

Keywords: Digitalization; digital transformation; benefits; challenges; higher education.

Tóm tắt

Trong thời đại công nghệ, xu hướng chuyển đổi số đã tạo ra một ảnh hưởng rất lớn đến nền giáo dục đại học không chỉ ở các nước mà còn ngay cả ở Việt Nam. Đặc biệt gần đây một vài trường đại học số hóa tại Việt Nam đã đạt được những thứ hạng cao trong các xếp hạng đại học thế giới. Trong số đó phải kể đến Trường Đại học Duy Tân, Đà Nẵng. Trường này vừa được tổ chức xếp hạng đại học thế giới, THE xếp hạng vị thứ 401-500 trong top 500 đại học hàng đầu thế giới năm 2022, là một trong số ít trường đại học ở Việt Nam được lọt vào top cao như vậy. Thành tích to lớn mà Duy Tân đạt được là do sự linh hoạt trong việc áp dụng sự chuyển đổi số để đáp ứng nhu cầu giáo dục trong suốt thời gian đại dịch đang hoành hành. Kết quả trong hai năm học vừa qua, Trường Đại học Duy Tân luôn đảm bảo tỷ lệ sinh viên tốt nghiệp đúng thời hạn cho dù đại dịch diễn ra nghiêm trọng. Việc chuyển đổi số chính là một trong những yếu tố góp phần cho Trường Đại học Duy Tân đạt được thứ hạng cao như vậy. Để giúp người đọc hiểu rõ hơn về việc áp dụng chuyển đổi số trong giáo dục đại học, bài báo này nhằm tập trung vào những thuận lợi và khó khăn khi áp dụng việc chuyển đổi số trong dạy và học thông qua việc khảo sát 154 sinh viên chuyên ngữ và 30 giảng viên tại khoa Tiếng Anh,

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Trường Đại học Duy Tân. Thêm vào đó những giải pháp khả thi được đề xuất để các trường đại học khác có thể tham khảo trong việc chuyển đổi số tại trường mình. Hy vọng rằng việc số hóa trong giáo dục đại học trở nên ngày càng phổ biến hơn và nhiều người học có thể tận dụng được những tiện ích trong việc số hóa một cách dễ dàng hơn.

Từ khóa: Số hóa; việc chuyển đổi số; thuận lợi; thử thách; giáo dục đại học.

1. Introduction

Nowadays in the era of digital technology, new technologies play an important part in higher education because how universities can manage to face with many changes such as new technologies, software, and hardware solutions in higher education. Especially, since the appearance of the Covid-19 pandemic, digital transformation has been an urgent requirement for most higher education institutes. The pandemic has posed not only challenges but also opportunities for all universities to change and adapt to present circumstances while meeting the requirements of today's digital society. In Vietnam, some higher education institutes have identified benefits in the application of information technology (IT) for recent years. In fact, since 2009, Duy Tan University, a private university in the centre of Vietnam has employed SAKAI, a free community source, educational software platform designed mainly to support teaching for distance educational programs to meet the requirements of learners living in remote areas (70% online learning). The Covid-19 pandemic in 2020 forced DTU to apply online education in some semesters with certain periods. At that time DTU was one of the best four universities in Vietnam which have the standard of online education. As a result, all students at DTU could finish their study as well as last year students could graduate on schedule. Through DTU's initial achievements in applying online education, it is necessary to conduct the study focusing on the impact of digitalization for higher education to find out benefits, challenges and possible solutions to improve the quality of online teaching and learning.

This study is intended to achieve the following objectives:

- To show the impact of digital transformation on higher education in Vietnam, especially at DTU.
- To show benefits and challenges in using digital transformation in teaching and learning at DTU.
- To suggest possible solutions to challenges of using digital transformation to meet learners' requirements in the era of technology at DTU.

The research questions are formed as follows:

- What is the impact of digital transformation on higher education in the era of technology?
- What are benefits and challenges of the digital transformation at Duy Tan University?
- What are possible solutions to challenges of using the digital transformation at DTU?

2. Literature review

Since 1990s the appearance of E-learning has firstly made a great impact on education, especially higher education. According to Seng [3], at first E-learning only developed in distance learning because E-learning focuses on the integration through software, hardware, and learning tools. Since then E-learning has been applied toward the integration with Classroom learning. Gradually many advances in technology appear, importantly digital technology has made a great impact on the direct learning environment because it can meet learners' requirements. In the study by Graham et.al [1] & [2], thanks to synchronized technologies with the support of electronic devices such as computers, messaging, virtual communities and so on, the interactions

between teachers and learners were improved better and the form of blended learning appeared. In fact, in Vietnam since the early 21st century technology has been applied in training activities with the terms: Distance learning or E-learning. Recently there have been a lot of conferences on the positive impact of E-learning in higher education; However, in reality online education is not estimated as high as offline education and the blended learning appeared to meet the social requirements flexibly. In fact, Duy Tan university has employed digital technology in higher education since 2009, especially for Distance learning. Until 2020 when the Covid 19 pandemic happened, E-learning could show its power greatly. At first it was a great honour that DTU was among only 4 higher education institutes in Vietnam with the best condition of online education approved by Ministry of Education and Training because of the good preparation for changes in higher education during the pandemic. The achievements DTU got last school year have surely confirmed the great usefulness of E-learning. Consequently, the study focuses on the impact of digitalization

for higher education at DTU and it is hoped that the findings in the study will be useful experiences for other higher education institutes in digitalization in higher education.

3. Methods

The study was conducted with 154 English-majored students from four classes at Duy Tan University in Da Nang, Viet Nam (two English-majored classes for tourism and two for translation-interpretation). Among them are male: 7.1 % and female: 92.9% in the school year 2020-2021. They all are the third-year and fourth-year students whose age ranged from twenty-one to twenty-two (91.6%) and over twenty-two (8.4%) (see Table 1 below). Most of them spend all their time on English to develop their English skills because they specialize in two majors: English for translation-interpretation and English for tourism. Besides, thirty lecturers of English from faculty of English were invited to take part in focus group interviews. Using questionnaires (Appendix B) and focus group interviews (Appendix A) with lecturers and students were applied in the study.

Table 1. Students' age and gender in four English-majored classes

Classes	Female	Male	Age (21-22)	Age (over 22)	Total number
K23 NAB 1	37	1	34	4	38
K23 NAD 1	36	4	36	4	40
K24 NAB 1	35	1	33	3	36
K24 NAD 1	35	5	38	2	40
Total	143	11	141	13	154
Percentage	92.9	7.1	91.6	8.4	100

4. Results and discussion

4.1. Impact of digital transformation

Since the Covid-19 - pandemic happened in 2020, digitalization transformation has played an important part in higher education. The digital outbreak in teaching and learning at DTU nearly depends on digital transformation. It took DTU a lot of time and effort to finish the

digitalization of the courseware and DTU was chosen one of the best four universities in Viet Nam applying digitalization transformation flexibly during the pandemic. Duy Tan University, a private university with the best standard of digital system like SAKAI, a free community source, educational software platform always guarantees to give all students

online classes on schedule and especially DTU held online final examinations successfully. More importantly, all final-year students participated in online thesis defences so that they could graduate on time. In fact, thanks to proper digital transformation, DTU has got great achievements despite the serious pandemic. In spite of getting great achievements in digital transformation, DTU has encountered a lot of challenges in the

digitalization transformation. The next part will show both benefits and challenges in using the digitalization at DTU.

4.2. Benefits and challenges of using digitalization transformation

The survey conducted among 154 English-majored students received a lot of various opinions about digitalization transformation. Look at the following table

Table 2. The survey of English-majored students' interest in online classes

Students' interest in online classes	No	%
Yes	135	87.66
A little	15	9.74
No	4	2.6
Total	154	100

Table 3. The survey on the helpfulness of online education to English-majored students

Level of helpfulness	No	%
High	57	37
Medium	82	53.3
Low	15	9.7
Total	154	100

Most of them liked online classes because they felt the convenience of online learning with 87.66%, whereas 9.74% students liked it a little and only 2.6% did not like it. However, the survey on the helpfulness of online learning shows the students' different views. For example, 53.3% considered online learning medium, 37% is high and 9.7% is low. It means that most students have suspicions about online learning because it is rather difficult for them to get used to online learning.

After participating in focus group interviews, 30 lecturers of English at Faculty of English, Duy Tan University provided their own ideas on advantages and disadvantages of giving online lectures. The following are some representative lecturers' excerpts during the interviews

L1: Well, most of my students are interested in participating in my online lectures. Yet, some students have difficulties in entering the

online classes at first. I think it is very convenient for all students, especially those living in remote areas. They needn't come to the classroom and only participate in virtual classes.

L2: It seems to me that it's very important for all lecturers to learn how to use online teaching techniques in their lectures. Of course, it takes us a lot of time to get used to giving online lectures.

L3: To me, it is very difficult for lecturers to give exact assessment to their students in online tests. Some students may cheat during the test and lecturers cannot control them strictly.

L4: Well, as you know the main concern that all students are required to have their modern equipment and good internet network to get access to online lectures easily. However, some poor students cannot possess expensive devices and online learning becomes very difficult to them.

L5: In my opinion, it is difficult to control students during the online class and it will make lecturers angry easily. As you know, sometimes I used to call some students but there was no reply from them and it took me a lot of time to wait for their answers with various reasons such as bad network, low battery, broken microphones... and even going to the toilet.

All lecturers' main opinions can be arranged in two aspects: benefits and challenges of using digitalization in online education as follows.

4.2.1. Benefits of using digital transformation

- First of all, we can see that all students feel more comfortable in virtual classes. Especially in the pandemic, it is safe for both lecturers and students to work with together in virtual classes. It is easy for them to join their online classes only by clicking the mouse. Even they needn't prepare their clothes before the class carefully as usual, for example they merely wear a neat shirt during the class.

- Next, students living in remote areas can take part in their online classes easily with their electronic devices and good internet network. They don't have to leave their houses for their classes. All materials can be sent to all students quickly and conveniently.

- Moreover lecturers will feel more comfortable in giving their online lectures if they know new techniques in giving online lectures such as using white board, giving a test scored automatically, giving assignments, breaking out the class and so on.

4.2.2. Challenges of using digitalization transformation

- Firstly, poor students encounter a lot of difficulties in online learning because they cannot buy modern electronic devices to get access to their online lectures. In addition, the network services with low price often prevent

students from participating in their online classes, especially in remote areas.

- Secondly, lecturers have troubles giving their students exact scores, especially giving scores for small parts in a test such as short answers, essay questions and assignments makes them tired because it takes them a lot of time to give scores.

- Thirdly, controlling the whole class is really a difficult task for lecturers because of various reasons from their students. It takes them a lot of time to manage crowded classes during online classes.

- Fourthly, it is really impossible for all practical classes such as medical classes, engineering classes, physical education classes or chemical classes to use digitalization transformation. Some students encounter a lot of difficulties to meet the requirements for their practical credits.

- Finally, cheating in online tests happens very often and lecturers cannot manage to control cheaters, so lecturers need to use suitable measurers to prevent cheating during online tests.

4.3. Possible solutions to challenges of using digitalization transformation

- Firstly, to poor students, it is very difficult to possess modern devices. However, the library at Duy Tan university equipped with hundreds of modern electronic devices and the good network of internet is the ideal place for students to study.

- Secondly, at first, lecturers cannot get used to giving scores yet, but later technicians will show them how to give scores more easily and exactly. Surely, gradually lecturers will find it more convenient in giving online scores.

- Thirdly, it is better for lecturers to give the discipline for the online classes before the class. For example, all students have to turn on their cameras during the class. Students can

give their opinions by clicking the button “raise hand”. Students must ask the lecturer for permission before leaving out.

- Fourthly, it is important to continue practical classes for students to finish their task; however, DTU has to delay all of them until the pandemic stops because digitalization cannot be applied in practical classes.

- Finally, in order to prevent from cheating in online tests, lecturers have to take stricter disciplines with heavy punishment. Especially, cameras should be turned on to watch students during the examination.

5. Limitations

Due to the limitation of the article, it is very difficult to conduct the survey with all students in Faculty of English, therefore 4 English-majored classes with 154 students are chosen to participate in the survey. However, the results obtained can show both common benefits and challenges in online teaching and learning. In addition, the group interviews were only conducted with thirty lecturers of English in Faculty of English; however, it will be better and more objective if group interviews are implemented with lecturers of other faculties at DTU. It is hoped that in the near future, there will be another study with the larger numbers of students and teachers from not only Faculty of English but also other faculties at DTU in the survey.

6. Conclusion

The Covid-19 pandemic has made a great impact on our lives. It is one of the main reasons for the appearance of digitalization transformation which has brought changes in education in general and higher education in particular. Thanks to the flexible digitalization transformation, Duy Tan university has obtained great achievements for the past two years in spite of the serious pandemic. In addition, through the study, the findings show

the benefits and challenges in using digitalization transformation in details. Besides, possible solutions are suggested to solve these challenges in order to upgrade the quality of online teaching and learning. Hope that the findings of the study will be useful for learners and teachers in online education and digital transformation will become more and more popular in education in Viet Nam.

References

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Appendixes

A. Questions used in the focus group interviews for thirty lecturers of English

1. What are benefits and challenges of using digital transformation in online education?
2. What are possible solutions to these challenges in order to improve the quality of online teaching and learning ?

B. Questions for students’ survey questionnaire

1. What is your age?
2. What is your sex?

21	
22	
Over 22	

Male	
Female	

3. Are you interested in online classes?

No	
A little	
Yes	

4. How helpful are online classes to you?

High	
Middle	
Low	