

# THE IMPACT OF INTERACTIVE ONLINE TEACHING AND LEARNING VIA “ZOOM” ON STUDENT’S PERFORMANCE AT HUBT DURING THE COVID-19 PANDEMIC

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**Abstract:** *The study aimed to find out the impact of Interactive Online Teaching and Learning (IOTL) on students’ performance. For that purpose, the researcher selected the sample of a total of about 6,300 non-English major freshmen and 94 teachers of English teaching those students at Hanoi University of Business and Technology (HUBT) to experiment with the teaching and learning activities via an online software called ZOOM in a 6-week period, from 16 March to 28 April 2020, the time for “social distance” because of the Covid 19 Pandemic. The quantitative and qualitative approaches were applied to collect the data. Statistical techniques and synthesis of narrative data were used to analyze the data gathered from a semi-structured questionnaire, online teacher interviews, achievement test results and the researcher’s class observation. The findings of the study revealed that IOTL can prove to be an efficient and convenient methodology in terms of: 1. enhancing students’ performance; 2. promoting student motivation and inspiration in learning; 3. strengthening students’ learning engagement 4. improving the students’ achievement test results; 4. indicating the students’ English learning preference; 5. quickly adapting to the modern learning mode; 6. bettering the relationship between students and teachers. However, the findings also indicated two main shortcomings of IOTL: the lack of face-to-face meetings and social interactions, and Learning Management System (LMS). In the light of the findings, it is recommended that blended learning which combines online and on-campus should be implemented in the coming time because of its great benefits, the software must be an LMS, and facilities for teaching and learning online should be well equipped to fulfil the education tasks.*

**Keywords:** Covid 19; Interactive Online Teaching and Learning; Students’ performance

## Introduction

Little (1995) suggested that all learning is likely to become successful when learners are autonomous. Learners become more autonomous when they get motivation and inspiration from their learning. Autonomy is one of the most important factors of self-study, and self-study is vital for distance education students. Self-study is considered to

potentially allow the “critical examination of one’s actions and the context of those actions in order to achieve a more conscious mode of professional activity, in contrast to action based on habit, tradition, and impulse” (Samaras, 2002, p. 24). Jijun Yao, et al (2020) indicated that learners who play the active role in their learning are known as autonomous learners. Learner autonomy is a dynamic

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process where learners are expected to have greater responsibility and “the ability to take charge of their own learning” (Holece 1981, cited in Bashir, 2014, p.172). Han, Ligang (2020) indicated that language teachers should change their traditional roles to ones catering and facilitating the development of learner autonomy. Viewing from another aspect of engaging students in learning process, Graddol (2012) stated that “Technology lies at the heart of the globalization process, affecting work, education and culture” (p.18). This is especially true in current time due to the fact that technology is reshaping the world through every aspect of individuals’ lives that the application of Information Technology (IT) in teaching may help students become more involved in their learning. Xu, Di; Xu, Ying (2019) found that students enjoy learning on a computer because it is convenient for their work schedule. Honarзад and Rassaei (2019) indicated that there is a strong positive correlation between technology-based out-of-class language learning activities, autonomy and self-efficacy. Ba (2018) revealed the

learners’ positive attitudes and awareness of their learning autonomy thanks to the widespread of using the Internet in education. Hoa (2013) suggested the application of IT in English learning be considered one of the efficient methods to improve students’ learning.

### OITL adopted

Due to the outbreak of the COVID-19 pandemic happening in the early 2020, schools and universities in Vietnam were required to comply with the requirements of the Vietnamese Prime Minister for “social distance” as well as the Vietnamese Minister of Education for “School’s Out, but Class’s On”. Since March, 2020, online education practice has been unprecedentedly implemented nationwide in Vietnam. In fact, two emerging online teaching and learning methods have been applied: **Interactive Online Teaching and Learning (IOTL)**, known as live broadcasting teaching, and **non-Interactive Online Teaching and Learning (non-IOTL)**, known as recorded video teaching. The comparison between OITL and Non-OITL is demonstrated in Table 1.

Table 1. Comparison between OITL and Non-OITL

Factors compared between IOTL and Non- IOTL		IOTL known as “Live Broadcasting”	Non- IOTL known as “Recorded Video”
From teachers’ perspective	Type of teaching modes	The teacher <b>uses teaching software</b> to teach online. Every learning activity is carried out in the virtual class.	The teacher <b>records the class contents</b> in advance and the students watch them online themselves.
	Roles of the teacher	<b>Multi-roles</b> as a facilitator, a guide, a helper, etc.	Only one <b>role</b> as a person who shares knowledge.
	Teaching method	Student - centered	Teacher - centered
	Students’ attendance controlling	The teacher can control the students’ class participation and their learning activities during the lessons.	The teacher cannot be sure whether students are watching the recorded lessons or not.

<b>From students' perspective</b>	The transfer of contents	<b>Interactive direction:</b> Students can complete learning tasks with the <b>guidance and assistance</b> of their teacher and receive the immediate feedback from the teacher.	<b>One-way direction:</b> Students passively listens to the teacher and receive <b>no instant assistance</b> or <b>immediate feedback</b> from the teacher.
<b>The class operation itself</b>	Type of communication	<b>Back-and-forth communication</b> between the teacher and the students	<b>One-way communication:</b> the teacher talks to the students only.
	The time of the class	Must be under the <b>fixed schedule</b> .	Can be <b>flexible</b> .
	The number of students	Limited	Unlimited
	Class atmosphere	Active, interactive, fun	Passive, non-interactive, boring

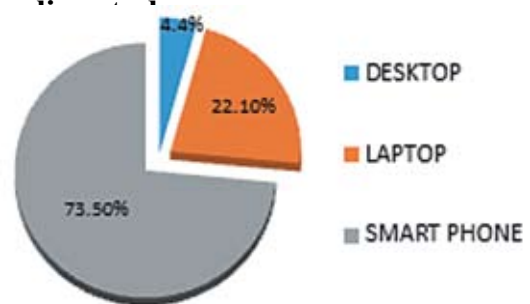
**Benefits of IOTL:** It is apparent that IOTL has overwhelming features compared to non-IOTL as mentioned above, which can involve more students in the learning process. That is why it was chosen to be the teaching and learning mode during the “social distance” for non-English major freshmen at HUBT.

**Surveys and data collection**

All the surveys and data were collected and synthesized by the Assistants of the Faculty of English A, and then analyzed by the researcher. First of all, the researcher wanted to know if the application of OITL was feasible, so a survey on the number of students who had electronic equipment for their online study was conducted. The questionnaire was sent to every non-English major freshman at HUBT: **“Do you have a digital device for your online study, and if ‘Yes’, what kind of digital device do you have?”**. As a result, 5796/6300 respondents took part in the

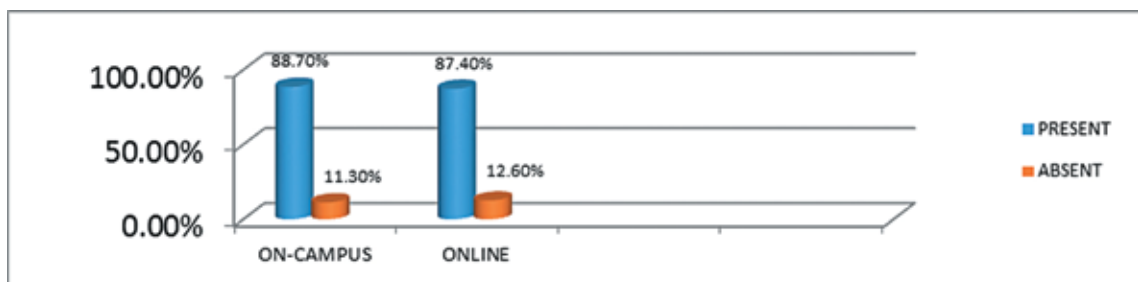
survey, and all of them (100%) gave the answer **“Yes”**. The percentage of students who possessed different types of digital devices was demonstrated in Figure 1:

*Figure 1: The percentage of students using digital devices for their*



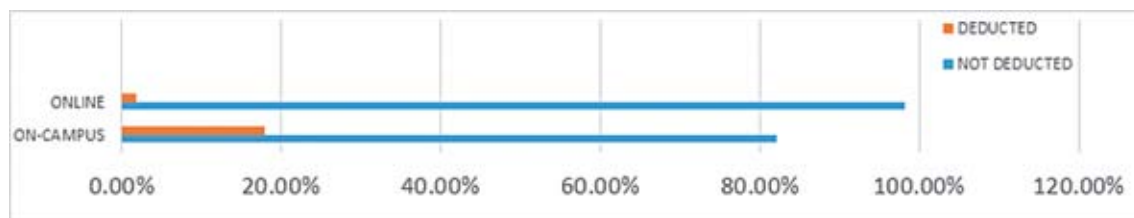
Next, for the purpose of knowing the difference between the number of students attending the two modes of learning: on-campus and online learning, the researcher had the students’ class attendance collected, and it was presented in Figure 2.

*Figure 2. The percentage of the student’s class attendance of on-campus and the online learning*



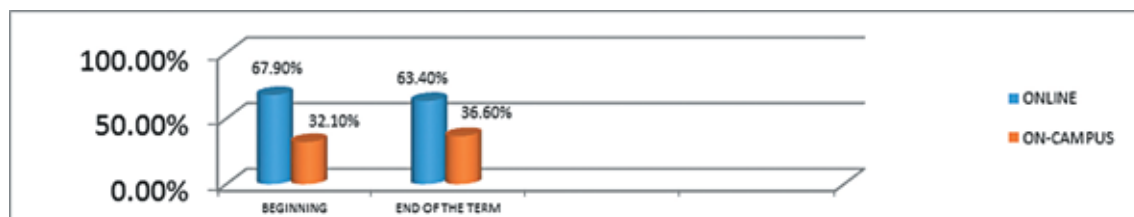
Then, in order to make the comparison between the number of students whose grades were deducted because of breaking the class rules such as class disturbance, lacking the lecture’s attention of the Online and On-campus learning terms, the researcher had the statistics gathered, and presented in Figure 3.

**Figure 3: The percentage of the student’s who were deducted grades because of breaking the class rules of Online and On-campus learning**



To make the comparison between students’ preference of on-campus and online learning modes, another survey at the beginning and at the end of the online learning term was carried out: “Which learning mode do you prefer: On-campus or Online?”, and the results were shown in Figure 4.

**Figure 4: The student’s preference of on-campus and online learning at the beginning and at the end of the online learning term**



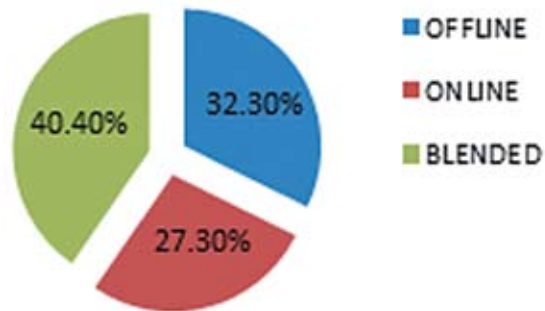
To discover the impact of IOTL on students’ test performance, the achievement test results of the two terms of On-campus and Online were synthesized and compared in Table 2 (The achievement test of the same students in the online learning term was conducted in the same condition as that of the on-campus learning).

**Table 2: The student’s test results between On-campus and Online learning terms**

	Table of the test results of term 2 (on-campus learning)				Table of the test results of term 3 (online learning)			
	≥9	9<7	5≥7	<5	≥9	9<7	5≥7	<5
Grades	8.9%	47.2%	33.9%	10%	9.2%	49.1%	34.8%	6.9%
Passed	5614/6238 ≈ 90%				5801/6231 ≈ 93.1%			
Failed	624/6238 ≈ 10%				433/6231 ≈ 6.9%			

Finally, for the purpose of tailoring the modes of learning based on the students’ preference in the coming time, another survey was sent to the students, and the respondents’ answers were shown in Figure 5.

**Figure 5: The percentage of the students' preference for the alternatives of learning modes**



**Findings and Discussion**

Statistics in Figure 1 reveal that online learning is feasible when applied to non-English major students at HUBT because at least 92% of the students have digital devices (5796/6300 students took part in the survey and 100% responded “Yes” to the question). However, the fact that the majority of students (73.5%) use smart phones for their online learning is one of the main factors affecting the quality of the learning process. Most of them complained that apart from the weak internet connection, the small screen of the smart phone made them feel tired and lack of concentration for the lesson. Another 4.4% of students using desktops, most of which had no webcams confessed that they sometimes lost learning interest because their teacher and classmates could not see them, and they could hardly interact with them.

Figure 2 shows there was very little decrease in the percentage of the students' class attendance (by 1.3%) when shifting from on-campus to online learning. Some of them may have no digital devices for their online study, or they might have been dropped out because of their personal reasons. However, it can be seen that there was a considerable progress among students in terms of learning involvement as the

number of students whose grades were deducted because of breaking class rules such as making noise, not paying attention to the lessons and so on reduced remarkably, from 17.9% to 1.8% (Figure 3).

The number of students who liked learning online at the beginning went down slightly by 4.5% at the end of the IOTL term. According to the open-ended question of the survey, the respondents stated the main reason that some of them did not like online learning was the weak internet connection and unsuitable digital devices used for learning. However, the percentage of students preferring Online to On-campus learning nearly doubled, with 63.4% and 36.6% respectively at the end of the Online learning term (Figure 4).

Table 2 of the final test results demonstrated the positive output of online learning as the percentage of students passing the exam went up to 93.1% compared to around 90% when studying on- campus. Besides, the rate of students who got 7 points or more increased (Table 2).

Even though students revealed they preferred online learning to on-campus learning, more than half of them shifted their choice to blended learning when being asked for alternative learning modes in the coming time. Specifically, the percentage of choices for On-campus, Online and Blended learning was 32.3%, 27.3% and 40.4% respectively (Figure 5).

The combination of the researcher's observation when visiting almost every online class and opinions collected from the interviews of 10 English teachers randomly selected, the relationship between the teacher and the students improved since students got more assistance and feedback from the teacher, and teachers could remember their students' names easily thanks to

their names stated in front of them. In addition, both teachers and students could quickly approach the modern teaching and learning methodology because after a week applying IOTL, every class activity seemed smoothly implemented in virtual online classes. The roles of teachers and students in the learning process were almost changed: the teacher became the facilitator, the guide, the helper, whereas the students become the center of learning process, and that is why they became more active and involved in the class activities. However, Zoom is an online software program designed for a conference, so it does not totally support a classroom because of the lack of LMS. Additionally, during the Covid 19 pandemic, almost everyone used the Internet, as a result, the weak Internet connection was unavoidable, which considerably affected the quality of teaching and learning process.

### **Recommendations**

In the lights of the findings of the study, it is strongly recommended that blended learning be applied in the long term in the coming time. While nobody can deny the efficiency of on-campus learning standouts with face-to-face interaction, OITL is a modern learning mode which provides students with the more efficient and exciting lessons. For the board of directors, they should consider investing in the infrastructure and facilities for teaching and learning in synchrony such as LMS software, 4G wifi, computers with webcams, and headphones. For educators, they should tailor the curricula to meet the learners' need. For teachers, they should adopt to the modern co-constructive teaching model instead of applying the old transmission model in order to promote students to active learning. In addition, teachers

should regularly attend professional development and Information Technology (IT) training courses, conferences and workshops to catch up with the modern teaching methodologies and know how to apply IT to their teaching effectively.

### **Conclusions and Implications**

Interactive Online Teaching and Learning is a modern learning mode, and is a tendency in education of today in the world. The results of the study proved that to some extent, IOTL has some great effects on students' performance. In addition, it showed the positive impact on students' achievement test results. However, IOTL has some shortcomings such as the lack of face-to-face interaction, and the poor facilities for online learning. It is therefore strongly recommended that blended learning should be implemented in the coming time. Moreover, the software applied must be an LMS and the facilities for teaching and learning online should be well equipped to fulfil the education tasks. Hopefully that blended learning will be applied widespread in other major faculties at HUBT.

### **Limitation of the study and further study recommendation**

The samples of the study were only the non-English major freshmen at HUBT whereas others were not included. Another limitation of the study is that the assessment of the research results mainly based on the achievement test results and semi-structured surveys, and the face-to-face interviews were conducted with a small number of teachers. In addition, the focal point of the research was just English subject, excluding other majors. Finally, the time conducted for the study was 6 weeks, which is not long enough for the validity. Further study is therefore strongly suggested./.

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## Appendix:

### Questionnaires for freshmen Course 24

**Question 1:** Do you have a digital device for online learning?

Yes  No

If the answer is "Yes", what kind of digital device do you use?

Desktop  Laptop  Smartphone

**Question 2:** Do you like Online Interaction Learning?

Yes  No

If the answer is "Yes", why?

If the answer is "No", why not?

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**Question 3:** What type of class do you prefer?

Online class  On- campus class

**Question 4:** If you can chose the learning mode in the future, which one would you choose?

Online learning  On- campus learning  Blended learning

*Thank you for your cooperation!*