

Teachers' Training Course Using Synchronous Conferencing Tools for Hospitality and Tourism Education in Vietnam: A Constructivist Approach

Thanh-Thao Luong and Eunyoung Kim

Abstract—Despite its significant damage to the hospitality and tourism industry, the pandemic of COVID-19 indeed has reinforced the needs for not only the hospitality and tourism education, but also the whole educational system of Vietnam, to make use of technological innovations in education, among which synchronous conferencing tools are currently utilized for changing their mode from physical classroom to online learning. This study adopts the constructivist approaches to propose a training course designed to enhance the skills needed for teaching with synchronous conferencing technology for teachers in Vietnam's hospitality and tourism institutions. We based on the current literature to identify the necessary skills to implement classes via synchronous conferencing environments. We also selected and designed learning activities to translate constructivist teaching theory into online pedagogies. Although it needs to be evaluated in further studies, this course design is expected to contribute to the growing literature on methods to improve instructors' readiness to teach in virtual classrooms.

Index Terms—Constructivist approach, teacher training, web-based synchronous conferencing.

I. INTRODUCTION

Since the COVID-19 pandemic forced schools in Vietnam to move their classes online to avoid spreading the virus, the use of remote conferencing platforms has soared in popularity. Nevertheless, research and current reports indicate that the use of information-communication technology in teaching is still limited and varied among institutions in Vietnam [1]. Therefore, teachers are facing challenges in moving their work from traditional face-to-face classrooms to virtual ones. These challenges are referred to not only as the technical restrictions such as the quality of internet connection required for the online learning system but also as instructors' readiness in teaching via online learning environments. This situation is consistent with the literature about the needs to provide teacher training in using a technological tool to deliver lessons in a virtual learning environment.

II. RESEARCH OBJECTIVES

In this paper, we adopt the three aspects of constructivism discussed by [2] to propose a training program for Hospitality

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and Tourism instructors working in institutions in Vietnam. These aspects are "knowledge is constructed by learners, knowledge is experience-based, and a strong class community is essential". The course aims at enhancing the level of participants' self-evaluation in using synchronous conferencing tools for teaching.

III. RELATED WORKS

A. Skills Needed for Online Teaching

Current literature indicates that instructors need to be provided with sufficient training and resources to be confident in teaching in synchronous conferencing environments [3]–[6]. K. Kear [4] also stress that even teachers who are experienced in distance teaching still need to be equipped with adaptive pedagogies. Also, to make such training more productive, identifying which parts of knowledge are in the training gaps becomes essential. Numerous researchers have outlined different skill sets required for teachers to perform effectively in online synchronous classes. These skills are listed in Table I.

TABLE I: SKILL COMPLEXES REQUIRED FOR TEACHING IN SYNCHRONOUS CONFERENCING CLASSES

Skills	Description
Developing Online Presence	Recognizing the importance of online presence [4], [5], [7]–[14] and strategies to enhance social, teaching, and cognitive presence in virtual classrooms [8], [15], [16].
Planning Lessons	Preparing learners before the course starts and designing learning activities [4], [5], [8], [17], [18].
Handling Technology	Using different functionality of synchronous conferencing platforms to achieve learning outcomes [3], [5], [11], [19].
Adapting to Learners' Preferences	Recognizing varied learning preferences and learners' diverse backgrounds [8], [12], [20], [21] to identify supportive technological resources and tools [8], [20], [21].
Classroom Management	Developing strategies to respond to learners' behaviors and manage virtual classrooms [5], [8], [22], [23].

Nonetheless, current literature on this topic has indeed focused more on the field of language training than any other professional areas. Therefore, more research is needed to instruct teachers in other disciplines in making use of synchronous conferencing tools.

B. Constructivist Approaches to Online Teacher Training in Using Technology

According to cognitive constructivists, knowledge is

constructed via the interweaving processes of assimilation and accommodation occurring during an individual's development. While the former process refers to the addition of new information, the latter is defined as how a learner restructures his or her prior knowledge so that new knowledge can be established appropriately [24]. These dual processes stem from environmental problems that do not fit in an individual's accumulated knowledge [25]. When discussing the cognitive constructivist views in teacher education, C. Kosnik [2] suggests that if teachers experience constructivist approaches as students, there is a possibility that they will adopt this approach in their teaching. These teachers will later attempt to replace lecture-driven classes with a more learner-centered atmosphere. Unlike the cognitive constructivist approach, social constructivism focuses on the influence of cultural and environmental settings on how individuals construct their new knowledge [24]. In other words, knowledge construction takes place when an individual communicates with others, such as instructors, experts, or peers, in an authentic environment that may be simulated from reality. Despite their differences, both cognitive and social constructivism has been adopted and recommended by numerous researchers in the field of teacher education, e.g., [2], [24]. Current literature highlights that studies should investigate the interactions between social environment and individual knowledge construction rather than focusing on determining which theory should be given more preference in the field of learning analysis [24], [26]. What is genuinely associated with "a strong class community", according to [2], is to strengthen the professional relationships among class participants through activities such as open discussions, collaboration, working together, experiencing each other's work, and offering constructive and supportive feedback to each other. Such a safe and supportive learning community has been proved in numerous studies to enhance teachers' confidence in teaching with new technology [2], [24], [27], [28].

Constructivism is also widely adopted in studies about online training programs for teachers. For example, [9] refer to the implementation of the social constructivist approach in designing their online workshop for pre-service teachers as a success story. Similarly, S. Cornelius [5] highlights that constructivism, when practiced in a virtual classroom, may offer more interaction among participants and thus generate more student engagement and ownership. S. B. Eom [12] also assert that "the defining characteristics of e-learning are derived from the constructivist model of learning". These authors cited [29] to endorse the view that constructivism has been a sound theoretical framework for research on virtual learning settings.

C. Teachers' Training Programs Using Synchronous Conferencing Technology

There have been few studies in which teachers' training programs in teaching via synchronous conferencing environments were conducted and reported in detail. Most research on training for teaching with technology generally focuses on both asynchronous and synchronous tools. However, the latter is claimed to provide more meaningful communication and interaction conducive to online learning.

Table II lists studies that focus on teachers' training in using synchronous technology and their limitations.

TABLE II: LIMITATIONS OF STUDIES FOCUSING ON TEACHERS' TRAINING IN USING SYNCHRONOUS TECHNOLOGY

Content	Limitations
Theoretical Framework	Lack of details on theoretical background [9], [18], [30].
Synchronous Platform	Few details and explanation on why and how the platform chosen for the studies [9], [10], [17], [18], [30].
Course content	Lack of details about course objectives, structure, and content [17], [18], [31].
Implementation of the Programs	Scarcity of details on how the training program was implemented and how synchronous conferencing technology contributes to the success of the training [9], [17], [31].
Evaluation of the Program	Most studies claimed programs' success, yet there were few details on how evaluation methods were designed for the studies [9], [10].

IV. COURSE DESIGN

A. Course Design Framework

We adopt the three aspects of constructivism discussed by [2] as "knowledge is constructed by learners", "knowledge is experience-based", and "a strong class community is essential" to design the training program for this study. Table III shows the course learning activities, which are expected to improve participants' self-evaluation in skill complexes required for teaching with synchronous conferencing technology. These skills include those mentioned in Table I.

TABLE III: DESCRIPTION OF THE COURSE'S LEARNING ACTIVITIES

Learning Activities	How to Conduct
Online Icebreaker	An online icebreaker is conducted in the first session to get participants to know each other and stimulate conversations.
Collaborative Brainstorming	Participants are required to generate new ideas and solutions around a specific issue.
Group Discussions	Each group discussion takes 10-15 minutes and is designed to exchange ideas.
Teaching Practice	Each participant practices designing learning activities and teaching.
Self-Reflection	After teaching-practice sessions, participants collect information for reviewing. A self-reflective journal template is provided for participants to note down their feelings, observations, and questions.
Inquiry-based Instruction	Participants' questions or problems drive the discussion to develop solutions.
Modeling and Unpacking	The facilitator models a designed activity to assist learning, then makes this activity explicit by letting participants discuss the activity afterward.
Educational games	Online interactive quizzes, puzzles, and games are designed to help participants learn about concepts.
Role-play	Before role-playing, participants are required to research the topic, study roles in the situation presented. Hence, group discussions are held to consolidate learning.
Peer feedback	During teaching-practice sessions, peer observations are facilitated with the rubric.

We also created Fig. 1 below to integrate the learning activities in Table III with these skills. This integration helps characterize the course design framework.

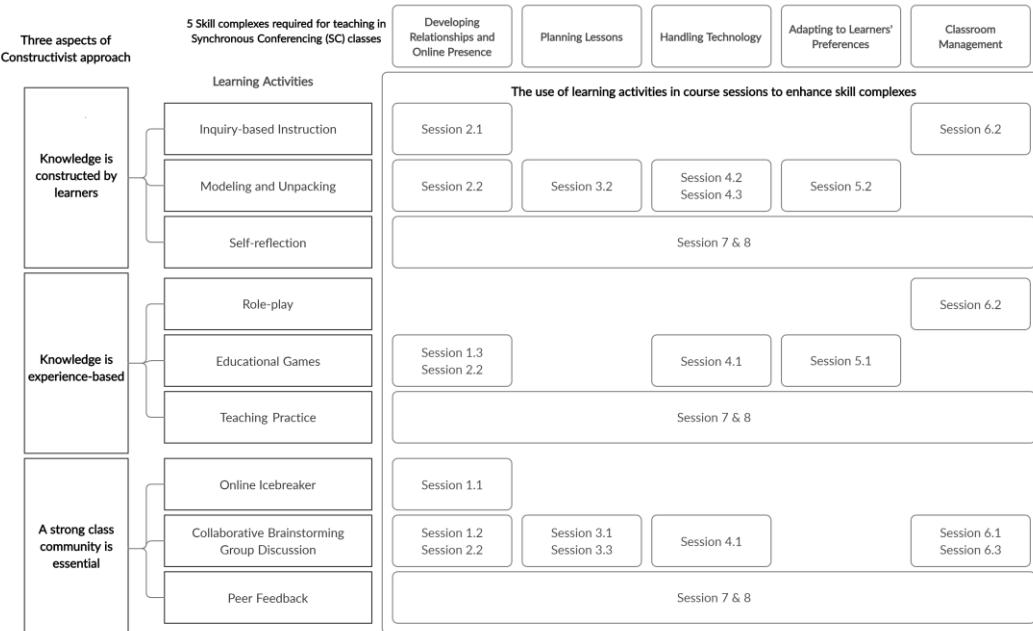


Fig. 1. Course design framework based on three constructivist aspects.

TABLE IV: COURSE STRUCTURE AND DESCRIPTION

Session	Learning Outcomes (What participants can do after each session)		Learning Activities	Duration (minutes)
Course Introduction	1.1 Get to know each other and have an open atmosphere for learning and collaborating.		Online Icebreaker	40
	1.2 Discuss course structure and objectives.		Group Discussion	20
	1.3 Compare asynchronous with synchronous online learning.		Educational Game (Kahoot)	30
Developing Online Presence	2.1 Define three types of online presence: social, teaching, cognitive presence.		Inquiry-based instruction Educational game (Kahoot)	45
	2.2 Develop methods to enhance online presence.		Collaborative Brainstorming Modeling and Unpacking	45
Planning Lessons	3.1 Describe what constructs quality educational experience in online learning.		Group Discussion Collaborative Brainstorming	20
	3.2 Create steps to prepare learners before launching online courses.		Modeling and Unpacking	30
	3.3 Design synchronous learning activities.		Group Discussion Collaborative Brainstorming	40
Handling Technology	4.1 List factors to consider when selecting a learning platform.		Collaborative Brainstorming Group Discussion	20
	4.2 Use softwares, applications for real-time teaching.		Modeling and Unpacking	45
	4.3 Use different synchronous features to implement learning activities.		Modeling and Unpacking Peer feedback	45
Adapting to Learners' Preferences	5.1 Address varied learning styles.		Educational quizzes (Google form)	30
	5.2 Identify resources and tools for matching with different learning styles.		Modeling and Unpacking Teaching practice	60
Classroom Management	6.1 Compare online and offline classroom management.		Group Discussion	20
	6.2 Apply techniques to give constructive and corrective feedback to online learners.		Inquiry-based instruction, Role-play	30
	6.3 Develop strategies to respond to learners' behaviors or misbehaviors.		Group discussion Collaborative brainstorming	40
Teaching Practice	Participants practice teaching, self-reflection, and peer-feedback.		Teaching practice, Self Reflection Peer feedback	15 minutes/participant

B. Selecting a Platform

To choose an appropriate platform, the authors of this study propose two dimensions for categorizing online classrooms, which can be conducted via currently available platforms. The first dimension is the epistemological approaches in education, referring to the teacher-centered or the learner-centered approach. Whether a platform becomes more supplements to the former or the latter approach depends on their currently built-in features. If such features could enable instructors to play the following critical roles

mentioned by [32], they might be promising for a student-centered classroom.

- keeping records of what each student has mastered, what is within reach to work on next, and what characteristics each student has that should influence instruction;
- helping to create each student's personal learning plan;
- providing an immerse, authentic project environment with just-in-time instructional support; formatively and summatively assessing mastery of each student's learning goals.

The second dimension for the classification of online classes to be supported by synchronous conferencing platforms is classroom size, which is defined as the number of students in a course. L. Jones [33] highlights that the optimum number of students in a student-centered language training class is 12 and the maximum size for such a class is 30. In this study, we consider a classroom size ranging from 12 to 30 learners a small-size one, and a large one could range from more than 30 to 100 students.

We created Fig. 2 to demonstrate different types of classrooms to be conducted with video conferencing platforms and which platforms are most suitable for different types of these online classes. As shown in Fig. 2, synchronous classes under the teacher-centered approach are named "Live University Lectures", indicating that instructors in these classes tend to deliver lectures or presentations merely. Large-size classes that adopt the learner-centered approach are "Independent Learning Groups"; this title was mentioned by [34] to refer to large class settings under the student-centered paradigm. Courses with a smaller number of students where instructors tend to have students listen passively to obtain knowledge are entitled "Online Seminars". Small-size classes, if conducted with students actively engaged in knowledge construction, are named "Online Student-Centered Classrooms". Although this categorization is based only on our experiences of these platforms, it shows an example of how administrators or instructors can make a decision on which platform can be used for learning. Noticeably, some platforms have numerous features that may enable instructors to work either under a teacher-centered or a learner-center paradigm, e.g., Coursesites, Cisco Webex, Zoom, or Microsoft Teams.

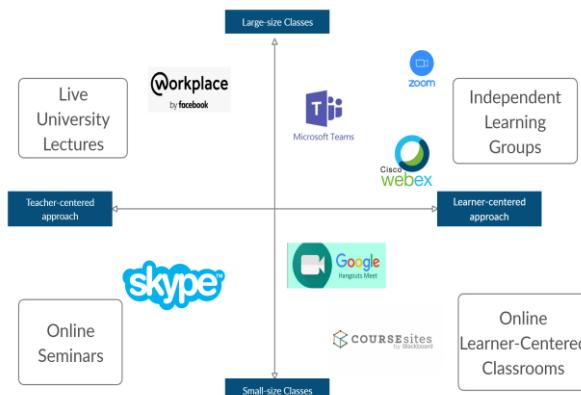


Fig. 2. Synchronous platforms matched with types of online classes.

As the proposed course is designed under the constructivist approaches and the class's intended size is less than 10, an "Online Students-Centered Classroom" model appears to best match with the purpose of the study. Thus, the authors of this study decided to use the classroom version of Blackboard Collaborate since it has all the built-in features designed to best support this type of online class. We also used the free version of Blackboard Coursesites as a Learning Management System (LMS) to provide course materials, communicate with participants, encourage collaboration, monitor performance, and manage attendance or performance. While the Vietnamese Ministry of Education and Training (MOET) has not yet issued legal documents

instructing schools on integrating online teaching technology into educational curricula, a free course management service designed mainly for teaching appears to be the optimum choice.

C. Course Structure

The course consists of 8 online synchronous sessions; each lasts 90 minutes. The first session introduces the course and its objectives. The next five sessions aim to improve participants' levels of knowledge and skills in teaching via a synchronous conferencing environment. In session 7 and 8, participants are required to design learning outcomes and activities to practice teaching using different real-time technological tools. Details on the learning outcomes and activities are listed in Table IV below.

V. CONCLUSION

As this proposed course was built upon the currently urgent needs raised by most teachers in Vietnam, it will soon be implemented to improve teachers' readiness in teaching with synchronous technological tools in online learning environments. 100 participants, who are in-service teachers working at various hospitality and tourism institutions in Vietnam, will be recruited for course implementation and evaluation.

Since the current study lacks empirical evidence, the authors will adopt qualitative and quantitative analysis in their further study to assess the impact of the proposed course. It is expected that our proposal in the course design will contribute to the growing literature on methods to utilize constructivist teaching theory in online pedagogies and accordingly improve instructors' readiness to teach in virtual classrooms.

CONFLICT OF INTEREST

The authors declare no conflict of interest in carrying out this research.

AUTHOR CONTRIBUTIONS

Thanh-Thao Luong carried out the literature review, course design, and manuscript drafting. Eunyoung Kim was involved in revising it critically and giving final approval of the version to be submitted. All authors read and approved the final manuscript.

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