

## Chapter 8

# Integrating Collaborative ICT Tools in Higher Education for Teaching and Learning: A Modest Proposal for Innovation in Digital Instructions

**Niroj Dahal**

*Kathmandu University School of Education, Nepal*

### **ABSTRACT**

*In this chapter, the author will discuss his experiences working collaboratively to teach and learn in order to create an engaged pedagogy by subscribing action research methodologies in various semesters that involves his (PGD, Master, and MPhil) students of 2019-2021 batches in techno-pedagogy and its trend in learning. This chapter presents the ongoing learning of research conducted within the context of the researcher's teaching practice. The author will provide examples of some of his PGD, Master, and MPhil students' technological learning collaborative activities (i.e., LMS, Google Apps, and other open sources), including forum discussions, choices, managing quizzes, lesson study, workshops, and Google Docs activities (Doc, PowerPoints, and Jamboard), which are created for on-campus, online, and distance teaching and learning in Nepali universities (namely, Kathmandu University and Nepal Open University).*

### **INTRODUCTION**

The revolution in information and communication technologies has made the world a small, interconnected community (Can & Bardakci, 2022; Lavidas et al., 2022). Higher education is increasingly dependent on digital platforms and tools. In Nepal, where online courses are common, facilitators use collaborative tools for course delivery and evaluation. Jamboard, Google Apps Documents, workshops, chat rooms, comment sections, wikis, and the forum discussion are frequently being used in the teaching and learning

DOI: 10.4018/978-1-6684-7015-2.ch008

activities. Due to the prevalent use of ICT tools in online education can now support collaborative and cooperative learning. Although each student is responsible for his or her own learning, that aligned with the knowledge is socially constructed forms the basis of collaborative learning (Alafodimos et al., 2009). In this line, Vygotsky argued that social interaction can increase a person's learning capacity. Motivating and maintaining effective student interactions is possible, but not straightforward. So, curriculum, teaching methods, and technology need to be planned, coordinated, and put into action in teaching and learning processes. On the contrary, the university with the most course options, teachers who have too many assignments, and big class sizes could all be to blame (Kikilias et al., 2009). This chapter aims to reduce the amount of time needed to evaluate students' submission on a given assignment(s) by integrating collaboration tools in Moodle, Google docs and other applications.

Next, by valuing autonomy and engagement over technology, this chapter further aims to advance pedagogy, learning, and learner empowerment. The purpose of this chapter is to compel higher education instructors to support their students' quality engagement even when they are teaching on-campus and/or remotely. This chapter serves as one of the teachers' (though not the only ones') guiding principles when managing the material online or in any other format. This circumstance has provided teachers with several opportunities while also posing a number of challenges when integrating ICT tools (Dahal & Dahal, 2015; Cassibba et al., 2021). The strategy presents opportunities for educators to hone their skills, knowledge, and competencies.

This philosophy asserts that cooperative learning activities should be incorporated into the curriculum and pedagogy to facilitate the completion and evaluation of student assignments (Katsaris & Vidakis, 2021). The collaborative tools, specific to teaching and learning, are investigated through action research in this chapter (Dahal & Pangeeni, 2019; McNiff, 2013). Based on the author's prior integrating collaborative assessment strategies, this chapter showcase and examine the collaborative tools that are most useful (Dahal, 2022; Dahal & Pangeeni, 2019). One of the chapter's other key strengths is how well collaborative teaching scenarios can help with learning and assignments. The learning opportunities in higher education could be improved with the aid of innovative ICT tools and techniques by creating numerous collaborative tasks using various tools. Facilitators with the knowledge and skills to develop a unique, innovative online program are unquestionably required to efficiently use collaborative tools. In this perspective, the capacity of collaborative teaching scenarios to facilitate student activities and assessments is highlighted along with other crucial features. After taking into account how the group effort reduces the amount of time required for manual evaluation by course facilitators. This innovation enhances learning opportunities in higher education by enabling and designing numerous collaborative projects for learning and assessment using various collaboration tools. In many other learning activities as well, integrating technology is seen as a motivating strategy for students (Kim & Park, 2012).

As so many people use ICT, there are many ways for online education to support collaborative and cooperative learning. On the other hand, it can be hard, but not impossible, to get and keep students interacting in a good way. Increased technological integration and student-centered instructional strategies are positively correlated with higher education (Kim et al., 2013). Additionally, the ICT revolution has made the world a small, interconnected village. The digital learning platforms and tools are important parts of higher education. Course facilitators have used a range of collaborative tools to deliver and evaluate courses in developing nations like Nepal. A few of the resources and/or ICT tools included were wikis, Google Apps (docs, slides, and Jamboard), workshops, chat rooms, and comment sections (Dahal, 2022). The researcher decided to utilize the aforementioned tools, including Moodle and Google apps. These materials and/or tools assist facilitators in creating and evaluating student work (Alafodimos

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/integrating-collaborative-ict-tools-in-higher-education-for-teaching-and-learning/322614](http://www.igi-global.com/chapter/integrating-collaborative-ict-tools-in-higher-education-for-teaching-and-learning/322614)

## Related Content

---

### Autopoietic Machines and Alopoeitic Machines: The Structural Coupling

(2015). *Learning in Metaverses: Co-Existing in Real Virtuality* (pp. 145-163).

[www.irma-international.org/chapter/autopoietic-machines-and-alopoeitic-machines/119769](http://www.irma-international.org/chapter/autopoietic-machines-and-alopoeitic-machines/119769)

### Improvement of the Transmission of Information for ICT Techniques Through CBEDE

#### Methodology

Reinaldo Padilha França, Yuzo Iano, Ana Carolina Borges Monteiro and Rangel Arthur (2020). *Utilizing Educational Data Mining Techniques for Improved Learning: Emerging Research and Opportunities* (pp. 13-34).

[www.irma-international.org/chapter/improvement-of-the-transmission-of-information-for-ict-techniques-through-cbede-methodology/235880](http://www.irma-international.org/chapter/improvement-of-the-transmission-of-information-for-ict-techniques-through-cbede-methodology/235880)

### Development of an Interactive Virtual 3-D Model of the Human Testis Using the Second Life Platform

Douglas R. Danforth (2010). *International Journal of Virtual and Personal Learning Environments* (pp. 45-58).

[www.irma-international.org/article/development-interactive-virtual-model-human/43577](http://www.irma-international.org/article/development-interactive-virtual-model-human/43577)

### The Creation of a Theoretical Framework for Avatar Creation and Revision

Dennis Beck and Cheryl Murphy (2014). *International Journal of Virtual and Personal Learning Environments* (pp. 1-17).

[www.irma-international.org/article/the-creation-of-a-theoretical-framework-for-avatar-creation-and-revision/132854](http://www.irma-international.org/article/the-creation-of-a-theoretical-framework-for-avatar-creation-and-revision/132854)

### ICT Integration in Second Language Writing: A Malay Language Case Study

Christina Gitsaki, Abduyah Ya'akub and Eileen Honan (2010). *Multiliteracies and Technology Enhanced Education: Social Practice and the Global Classroom* (pp. 167-185).

[www.irma-international.org/chapter/ict-integration-second-language-writing/36129](http://www.irma-international.org/chapter/ict-integration-second-language-writing/36129)