

Chapter 6

Using the Technology Integration Planning Cycle to Select Digital Tools for Virtual Instruction

Lindsay Woodward

Drake University, USA

Beth Beschorner

Minnesota State University, Mankato, USA

ABSTRACT

This chapter explores the use of the Technology Integration Planning Cycle (TIPC) for supporting teachers' decision-making as they plan virtual instruction. The TIPC is designed to support teachers in evaluating the possible contributions of digital tools to instruction that facilitates meeting specific learning goals. The use of the TIPC to support pre-service teachers, in-service teachers, and in professional development settings is discussed. Then, examples of a teacher using the TIPC as she plans virtual reading and writing instruction illustrate the potential of the TIPC to support effective virtual instruction. Finally, issues of access, equity, and safety related to use the TIPC are discussed.

INTRODUCTION

Recent changes in global education have not only foregrounded virtual learning for a broader group of teachers and students but have also afforded the opportunity to revisit what is known about learning in digital spaces and the digital tools that are effective in virtual teaching and learning environments. While many elements of effective virtual instruction are similar to effective face to face instruction, such as establishing relationships, clarity of instruction, student engagement, and assessment practices (Fisher et al., 2021), the way in which these elements are enacted can be quite different in virtual environments. Therefore, it is critical that teachers are supported in how to organize all of the elements of

DOI: 10.4018/978-1-7998-7222-1.ch006

virtual learning through high quality instructional planning. While teachers' instructional planning can be supported through a number of different approaches (Kozak & Martin-Chang, 2019; Lowrey et al., 2019; Woodward & Hutchison, 2018), this chapter focuses on the possibilities of using a planning cycle to consider how digital tools can contribute to specific instructional goals.

The Technology Integration Planning Cycle (TIPC; Hutchison & Woodward, 2014) was originally developed to support in-service English Language Arts and Literacy teachers as they sought to integrate digital tools into their in-person instruction. However, follow up studies have indicated that the TIPC can be used to support a wide range of teachers, both pre-service and in-service, and in multiple grade levels and disciplines (e.g. Beschorner & Kruse, 2016; Ciampa, 2017; Hutchison & Colwell, 2016; Hutchison & Woodward, 2018). Thus, there is much potential for how the TIPC can support teachers' pedagogical decision-making as they select digital tools in a virtual learning environment as well. This chapter will describe the TIPC, how it can be used to support pre-service and in-service teachers' pedagogical reasoning, and provide examples of how the TIPC supports instructional planning in virtual learning environments.

BACKGROUND

The TIPC was created to provide a clear decision-making process for teachers who are planning instruction during which students utilize digital tools to meet instructional goals. The TIPC synthesizes best practices in effective instruction and technology integration and provides a process for teachers to prepare them to consider critical elements of using a particular digital tool to meet specific instructional goals. While teachers are often prepared to utilize technology in their instruction and are familiar with a variety of digital tools, a recent study of teacher educators (Carpenter et al., 2020) noted a lack of expectations regarding preparing teachers to evaluate technology for specific instructional purposes. This disconnection between using technology and evaluating the potential of digital tools for instruction continues once teachers are in the field. For practicing teachers, the professional development they receive is often digital tool based and foregrounds a particular type of technology (Colwell et al., 2020; Hillmayr et al., 2020; Panero & Aldon, 2016), rather than how that tool can be used to meet specific curricular goals. Utilizing the TIPC as an approach to integrating technology aims to re-focus technology use on facilitating learning of specific instructional goals.

The TIPC provides a foundation for teachers to consider new and existing digital tools and how they can align with specific, discipline-based instructional objectives. The TIPC provides an opportunity for teachers to focus on their instructional standards, learning objectives, and the overall instructional approach best suited to their learning goals for students, prior to the integration of a digital tool. It also foregrounds the unique contributions that digital tools can make to instruction and provides teachers with a reflective process in which to consider the affordances of a digital tool for student learning, as well as possible constraints that may need to be addressed through instruction.

THE TECHNOLOGY INTEGRATION PLANNING CYCLE

The TIPC emerged from the increased attention to digital and multimodal learning in the Common Core State Standards (CCSSI, 2010) and the struggles that many teachers were experiencing as they sought

15 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/using-the-technology-integration-planning-cycle-to-select-digital-tools-for-virtual-instruction/284520

Related Content

An Analysis of European Megaproviders of E-Learning: Recommendations for Robustness and Sustainability

Morten Flate Paulsen (2009). *Institutional Transformation through Best Practices in Virtual Campus Development: Advancing E-Learning Policies* (pp. 127-146).

www.irma-international.org/chapter/analysis-european-megaproviders-learning/23887

Training Academicians to Develop Personalized Learning Environment and Students Engagement (PLEaSE)

Raja Maznah Raja Hussain and Huey Zher Ng (2013). *International Journal of Virtual and Personal Learning Environments* (pp. 16-30).

www.irma-international.org/article/training-academicians-to-develop-personalized-learning-environment-and-students-engagement-please/102955

Malaysian University Students' Preferences of Social Media and LMS in Academia

Shaidatul Akma Adi Kasuma, Mohamad Saifudin Mohamad Saleh, Ayuni Akhbar and Yanny Marlina Baba Ismail (2018). *International Journal of Virtual and Personal Learning Environments* (pp. 51-67).

www.irma-international.org/article/malaysian-university-students-preferences-of-social-media-and-lms-in-academia/210435

Motivational and Ethical Issues in Seamless Learning: Use of Tablet PCs in a Mobile and Ubiquitous Technology-Enhanced Learning Context

Pelin Yüksel, Süleyman Nihat Adan and Soner Yıldırım (2020). *Mobile Devices in Education: Breakthroughs in Research and Practice* (pp. 681-696).

www.irma-international.org/chapter/motivational-and-ethical-issues-in-seamless-learning/242640

Group Work Using Active Learning: A Comparison of Students' Evaluations of Face-to-Face and Online Lessons

Ryo Sugawara and Shun Okuhara (2022). *International Journal of Virtual and Personal Learning Environments* (pp. 1-15).

www.irma-international.org/article/group-work-using-active-learning/313412