

## Chapter 14

# Exploring Pre-Service Teachers' Developmental Trajectories of Digital Literacies

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### ABSTRACT

*Digital literacies are gaining popularity in teacher education over the past decade, but little research has been conducted on the developmental trajectories of pre-service teachers' digital literacies. Adopting a case study, four L2 Chinese pre-service teachers were examined during the spring semester of 2016 when they assisted teaching in a wiki writing classroom. Data was collected through semi-structured interviews and observation diaries. Drawing upon the framework of digital literacies, this chapter identifies the core components of digital literacies in a wiki-based collaborative writing context: attitudes towards technology and application (Thinking), task organization and feedback provision (Doing), modes and genres (Meaning), teacher-student relations (Relating), and roles and responsibilities (Being), and further explores pre-service teachers' developmental trajectories of digital literacies before concluding with a discussion of implications for instruction and teacher education.*

### INTRODUCTION

Literacy, known as the skills and abilities to read and write, has long been considered an indispensable component in language education. Under the trend of the digital technology revolution, digital literacies emerged in response to digital tools that facilitate interaction between people and the world through the

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practices of reading, writing and communication (Hafner, Chik, & Jones, 2015). In Australia, Britain and the United States, the national education offices have incorporated digital literacies into their curricula and emphasized the importance of digital technology in school education practice (Pullen & Cole, 2010). They have noted that literacy focusing solely on reading and writing has been no longer able to meet social and pedagogical needs, and that digital technology should be incorporated in schooling as a form of mediation.

From the 1990s onwards, digital technology has been gaining widespread popularity in higher education because of the growing digitalization (Kirkwood & Price, 2013). Pre-service teachers, growing up in a digital era, have more access to digital technology and are more comfortable with its use, and their own digital literacies are becoming a vital issue in determining what and how they will do in their future teaching practice. According to Raith & Hegelheimer (2010), the application of digital technology has been identified as a basic skill for teacher education, and teachers are expected to embrace relevant technologies and apply them to their literacy teaching practices. However, there are different requirements of digital literacies in and out of educational contexts. Pre-service teachers' digital practices in informal context cannot necessarily be transformed into digital literacies in the educational setting. It is suggested that pedagogical use of digital technology should be embedded in education programs to improve current teaching and develop new approaches (Kirschner et al, 2008). In the global context, UNESCO's *ICT Competency Standards for Teachers* (2008) called on educational faculties to combine literacy education and digital technology in teacher education and preparation. Although wiki-based collaborative writing (WCW) has been gaining increasing popularity in literacy education, the use of wikis in Chinese writing in Mainland China is only at an early stage (Li et al., 2014).

Previous literatures examine pre-service teachers' beliefs about digital literacies development (e.g., Güneş & Bahçivan, 2018; List, 2019), while no research has ever focused on the development process in the WCW context. Therefore, there is a need to trace the developmental trajectories of pre-service teachers' digital literacies by comparing their past learning experiences with current teaching reflections within the digital literacies framework proposed by Jones & Hafner (2012), which serves as the analytic lens to show the complex nature of literacy development. Adopting a case study approach, this study explores how pre-service teachers develop their digital literacies through a wiki-based writing class and attempts to answer the following research questions:

1. What are the core components of pre-service teachers' digital literacies in the WCW context?
2. What developmental trajectories of pre-service teachers' digital literacies can be traced in a WCW context?

## **THEORETICAL FRAMEWORK**

### **Digital Literacies**

Gilster (1997) was among the first to define digital literacies, which means "the ability to understand and use information in multiple formats from a wide variety of sources when it is presented via computers." According to Dudency et al. (2013), it refers to "the individual and social skills needed to effectively interpret, manage, share and create meaning in the growing range of digital communication channels." From the definitions, it is evident that digital literacies are meaning-making skills that can be identified

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