Chapter 7
A Qualitative Case Study on Changes in a Five-Year One-To-One Laptop Initiative

Güliz Turgut Dost
Adnan Menderes University, Turkey

ABSTRACT
The goal of this qualitative case study is to understand the changes that happened to a laptop initiative implemented at an urban middle school with diverse student population. Different from existing studies, this study investigated the changes in the initiative beyond its establishment phase and focused specifically on English Language Learners (ELLs). Data is collected through semi-structured interviews and classroom observations. Three main changes were identified: teachers’ attitudes towards and students’ proficiencies in use of laptops, the nature and amount of laptops’ use, and the consideration given to English Language Learners. Implications of the findings could inform national educational policies and school leaderships.

INTRODUCTION
In technology- and information-rich 21st century, the focus of teaching and learning in schools is no longer to educate solely book-literate individuals, but to raise citizens who can determine the extent of information needed, access it effectively and efficiently, evaluate it critically, and incorporate it into their knowledge base (American Library Association, 2000). A way to prepare such information- and technology-literate individuals is using the 21st century tools- technology. Two major and indispensible 21st century tools are computers and the Internet, and over the years they have become smaller, faster, and more affordable. These enhancements in access, quality, and speed led to changes in educational technologies as well. Schools began to invest in laptop computers with wireless Internet connection (Greaves, 2008) and saved students from being restricted to computer labs (Gulek & Demirtas, 2005; Russell, Bebell, & Higgins, 2004).

Currently, one of the most popular educational technology initiatives is one-to-one laptop
programs, also known as ubiquitous computing. In one-to-one laptop programs, all students in a class or school receive laptop computers to use throughout a school day, and in most programs laptops can be taken home (Grimes & Warschauer, 2008). The goal of one-to-one laptop programs is to improve achievement among all student groups by providing equal access to technology-rich environments in which technology is no longer shared within groups (Gulek & Demirtas, 2005). Laptop programs are believed to provide opportunities to integrate technology more naturally into instruction by eliminating computer sharing, computer lab scheduling, student transitioning, and unequal computer access (Sandholtz, Ringstaff, & Dwyer, 1997; Warschauer, Knobel, & Stone, 2004).

One of the earliest one-to-one laptop programs began in 2006 in Australia and is named ‘One Laptop Per Child’ (OLCP). Some early adopters of laptop programs in the U.S. are Beaufort County in South Carolina, Clovis Unified School District in California, and New York City Community School District Six. Some states, such as Maine, Virginia, Texas, South Dakota, and Pennsylvania, are implementing laptop programs statewide (Gulek & Demirtas, 2005).

Despite the current changes happening in the U.S. in relation to laptop programs, one long-term and stable change happening in the U.S. schools is in student demographics. There has been a continuous increase in the number of English Language Learners (ELLs) (Goldenberg, 2008; Ruiz, 1995) and, along with this increase, debates emerged about how best to serve these students. Some researchers propose that using educational technologies might be helpful in meeting the needs of ELLs and increasing their academic and social achievement (Chang & Kim, 2009; Dalton, Proctor, Uccelli, Mo, & Snow, 2011; Kim & Chang, 2010; Proctor, Dalton, Uccelli, Biancarosa, Mo, & Snow, 2011; Soska, 1993; Wetzel & Chisholm, 1998; White & Purdom, 1996). Despite the potential benefits of educational technologies in general, very limited studies have investigated the impact of one-to-one laptop programs on learning and achievement of ELLs. Since laptop programs eliminate computer sharing and unequal computer access, they could be used to meet individual needs of ELLs and increase their academic achievement. However, prior to investigating the impact of laptop programs on ELL’s, a crucial step is to understand integration and implementation of such programs in English as a Second Language (ESL) classrooms. Statham and Torell (1996) stated, “when properly implemented, the use of computer technology in education has a significant positive effect on student achievement as measured by test scores across subject areas and with all levels of students” (p. 42). Therefore, the initial question to ask is not whether laptop programs impact ELLs’ learning and achievement, but whether these programs are integrated and implemented in ESL classrooms properly or not. In order to evaluate the proper integration and implementation of laptop programs in ESL classrooms, such programs should be examined from the beginning of their establishment to observe their evolution in meeting the needs of ELLs.

This chapter discusses findings of a qualitative case study, which investigated evolution of a one-to-one laptop program implemented for over five years in an urban middle school, with a focus on ESL classrooms and ELLs. The chapter has two objectives; draw attention to the need for investigating one-to-one laptop programs in ESL classrooms, and enlighten urban schools that are planning to implement similar programs by sharing the experiences of the urban school in the study.

BACKGROUND

The increasing popularity of and heavy investment in one-to-one laptop programs created a diverse research agenda. For instance, some studies examined factors that limit the integration of one-to-one laptops (Garthwait & Weller, 2005; Lowther, Ross, & Morrison, 2003; Silvernail & Lane, 2004).