Chapter 11
Mixed Reality Environments in Teaching and Learning English

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ABSTRACT

The purpose of this chapter is to familiarize readers with various forms of mixed reality environments that are used in different countries in the field of education including teaching and learning English. MiRTLE, The MARVEL Project, TIWE Linguistico, SMALLab, Virtual Touch Toolkit, SimSchool®, Second Life, and TLE TeachLivE™ are some of these technological advances that will be discussed in detail. Further explanation about the current and future use of TLE TeachLivE™ as well as other possible forms of mixed reality environments is also provided. The chapter concludes with current limitations of mixed reality environments and potential future research and applications.

INTRODUCTION

Globalization in the 21st century has been the subject of debates in numerous fields of study including but not limited to politics, economics, sociology, linguistics, and education. Various definitions and explanations have been provided to unravel the meaning, effects, and consequences of moving towards a globalized world. Blommaert (2010) defines globalization as “shorthand for the intensified flows of capital, goods, people, images and discourses around the globe, driven by technological innovations mainly in the field of media and information and communication technology, and resulting in new patterns of global activity, community organization and culture” (p. 13).

The invention of new technologies such as computers and Internet has also been a major contributing factor to the phenomenon of globalization. Invented in the 1970s mainly as a governmental instrument for the purpose of controlled communication; the internet soon developed into a tool for researchers and scientists to share data among a limited number of computers. Consequently, the creation of the World Wide Web led to precisely what it was intended to do: to capture a wide audience from around the globe in its web. The 1990s brought in the commercialization of the Internet with people from around the world sharing their ideas, businesses, and interests with others. Subsequently, the 2000s witnessed...
the formation of social networks, thus adding a significant layer to the interconnectedness of the global
users from a wide range of ages and backgrounds (Ulmer, 2003).

One of the main influences of globalization and the rapid development of technology with its ever-
growing applications has been in the areas of communication and language use. Even though users of
such technologies can easily communicate with their peers who share their first language across various
domains of the World Wide Web, in order to interact with those who do not share the same first language
they needed to be able to utilize a common language. English as the Lingua Franca of the current era has
created a common ground for Internet users to connect and share a plethora of information. Therefore,
learning and teaching English has become a major area of focus in the pursuit of a globalized world
(Mirsky, 1991; Doris, 2007).

The unprecedented integration of virtual communities has also been accompanied by a physical one.
The 21st century has brought forward several routes for people around the world to travel to other countries
and make real-life connections with other communities either temporarily or permanently. Immigration
has become the hallmark of modern societies, which in turn opens the door to a number of other factors
that contribute to and affect this global phenomenon.

IMMIGRATION AND LANGUAGE

Even though immigration in its many forms has played a key role throughout human history, the Great
Depression of the 1930s and the aftermath of the World Wars brought forth new waves of immigrants
toward different countries around the globe (Pedraza, 1995; Chiesa, Scott, & Hinton, 2002). The 1960s
also saw a great shift in large-scale immigration as the global market started flourishing, transportation
became easier, and new technologies facilitated the interconnectedness of the world (Reimers & Troper,

According to the data from the International Migration Report of the United Nations (2016), the
number of immigrants worldwide has increased from 173 million in 2000, to 222 million in 2010, and
244 million in 2015 respectively. Additionally, this rapid growth of international immigrants may be
doubled by 2050 (Süssmuth, 2007). It is predicted that by the year 2040 in the United States alone, im-
migrant children will make up at least one-third of the overall student population in schools (Meyers,
2004; Suarez-Orozco, Suarez-Orozco & Todorova, 2010). The majority of the newcomers do not speak
the main language of the new country, thus making their integration in the dominant society more chal-
lenging. In the case of English speaking countries with large-scale immigration annually such as the
United States, policy makers and teachers seek different ways to make learning and teaching the target
language easier for the learners.

LANGUAGE LEARNING AND TEACHING

Many theories have been formed throughout the years to explain the process of second language learning.
One of the most prominent of such theories has been the Sociocultural Theory or SCT. Pioneered by
Vygotsky (1978) SCT claims that language learning is the result of both cognitive processes and social
interactions with more emphasis being placed on the latter. In other words, according to SCT learners
of a language make progress in their learning via social interactions they have with others such as their
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