Chapter 12

Development of an Interactive Narrative for Adult Literacy Learners

Amy M. Johnson
Arizona State University, USA

Elizabeth L. Tighe
Georgia State University, USA

Matthew E. Jacovina
Arizona State University, USA

G. Tanner Jackson
Educational Testing Service, USA

Danielle S. McNamara
Arizona State University, USA

ABSTRACT

This chapter describes development efforts that build upon the Interactive Strategy Trainer for Active Reading and Thinking-2 (iSTART-2), an intelligent tutoring system that provides self-explanation strategy instruction to improve reading comprehension. The chapter reflects on considerations of the unique needs of adult literacy learners, and outlines the specific guidelines followed to adapt the system to these learners. Several modifications have been made to adapt iSTART to adult learners, including the following: 1) two additional strategy instructional modules for summarization and deep question asking, 2) a text library with life-relevant texts for adult learners, and 3) an interactive narrative which allows instantiated practice of reading strategies using life-relevant artifacts. The authors also describe results from two attitudinal studies examining learners’ perceptions of the interactive narrative.

INTRODUCTION

Approximately one in six, or 36 million adults, in the United States struggle with basic literacy skills (NCES, 2016). However, little research focuses on the educational needs of adult literacy learners and few educational technologies exist to meet those needs. The project described in this chapter seeks to contribute to the understanding of the educational needs of adult literacy learners and investigate the
Development of an Interactive Narrative for Adult Literacy Learners

The primary objectives of this chapter are to examine the unique educational needs of adult literacy learners and describe specific modifications made to iSTART-2 to address those needs. The chapter describes several system adaptations made to suit the characteristics of this population. One of the central foci of the chapter is on the design and development of a newly instantiated practice module, an interactive narrative, *Lost in Springdale*, and results from two attitudinal studies to assess college students’ and adult learners’ perceptions of this interactive narrative. The chapter begins with a look at the limited research available on adult literacy learners and educational programs.

**BACKGROUND ON ADULT LITERACY**

According to the National Assessment of Adult Literacy (NAAL; http://nces.ed.gov/naal), which surveyed 19,000 adults in the United States, 14% scored below the basic level, demonstrating an inability...