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## DEDICATION

In memoria di mio nonno, Quinto, e per la mia cara nonna, Effie. Vita bella.

Questa dissertazione e' dedicata ai miei genitori, Roberto e Maria, che mi hanno incoraggiato e sostenuto durante questi anni di studio. Senza la pazienza che mi ha insegnato mio padre e la passione che mia madre ha saputo infondermi, non avrei mai avuto la saggezza di perseverare.

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**ABSTRACT**

The use of pre-drawn fill-in concept maps for assessing adult learning in training situations was investigated. A 40-hour training course called Hazardous Waste Operations and Emergency Response (HAZWOPER) was taught to personnel working with hazardous waste and offered in various sites across the U.S. Two types of testing were used, a multiple-choice format and three pre-drawn fill-in concept maps. To identify differences among trainees that might affect concept map scores, the relationship of ethnicity, administration order of the posttests, a repeated measure of time, and their interactions with concept map test scores were investigated.

For traditional testing, a 23-question multiple-choice format was used. For the alternative measure, three pre-drawn concept maps required trainees to fill in 30 map nodes. These maps were developed using a unique, rigorous, and systematic procedural framework. The instructors offering the training used the multiple-choice test. Reliability for the multiple-choice test was moderate; reliability for the concept map measure was high. There was a positive, moderate correlation between concept map posttest scores and multiple-choice posttest scores.

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Chapter 1

Introduction

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