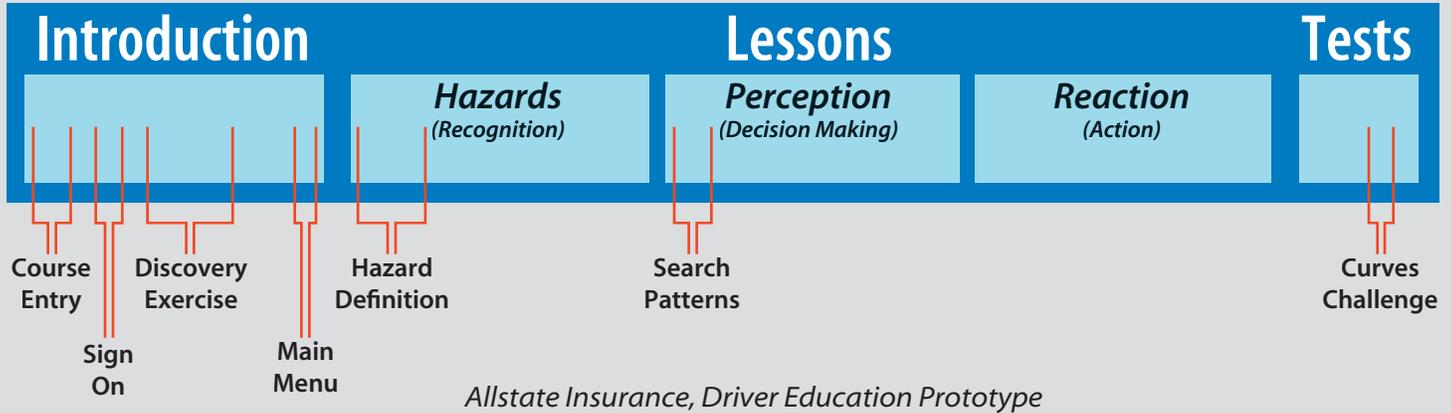


“Curves” Module

Areas developed within the *Driving* prototype



Project Overview

The Problem

Kids who take driver education programs today die in collisions more frequently than kids who don't.

Project Objectives

1. Find out why today's driver education programs are ineffective.
2. Develop more effective instructional approaches for teaching driver education.
3. Build prototype to demonstrate new instructional designs and approaches.

Research Revealed:

- The driving task is 90% mental, and only 10% physical (indicating that driving simulators are not the solution—students should learn “physical” tasks in the vehicle they will drive every day).
- Driving is a *risk management* task—requiring the ability to recognize risk factors, make intelligent decisions about those factors, and successfully put those decisions into action—what we call the RDA Process.
- The design objective for current driver education programs is to get kids to pass state-mandated tests—these programs primarily “teach to the test.”
- Today's programs organize content in a way that is difficult for the target audience to synthesize and put into useful form.
- Due to physiological conditions, the worst time for teaching the driving process is from 16-17 years of age (e.g. visual focusing less than 100 feet).
- The current system rewards new drivers with an adult license *before* gaining real-world experience—a situation partially addressed by Graduated Licensing.

Objectives: Curves Discovery Exercise

- Get 16-17 year old kids to admit there are things about driving a car around a curve they don't already know (removing objections and preparing the learners for learning).
- Introduce the variety of “hazards” along a simple road and the relative levels of risk associated with them.
- Introduce the concepts of Risk and Risk Management as keys to successful driving.
- Condition students to focus further down the road (from 100 feet to 400-500 feet).
- Begin incorporating real-world experience into the driving curricula (experiential learning).

Results

Usability Tests

Tests at four high schools in Michigan and Illinois demonstrated that this new instructional approach:

- Positively impacted driving perceptions and attitudes.
- Positively impacted driving behaviors (test subjects stated one year later this program had the greatest impact on their driving behavior than any other training intervention.)
- Successfully conditioned visual focus to 400-500 feet.
- Conditioning for properly searching curves and accurately identifying risk factors maintained past one year.

Decision Sciences Laboratory Carnegie-Mellon University

Found prototype effective at both teaching and testing student decision-making skills and abilities. Highly recommended continued development of the curricula.