

Crash Courses



Fender Bender Training for New Drivers

Presented to:



American International Group

**Instructional Design Document
EDIT 705, Spring 2013**

Team Members:
Linda Ingram
Patricia Lucas
Katherine Maye
Jeanne Stanford

Contents

Background	3
Learning Problem and Need	3
Objectives	4
Terminal Objective	4
Learner and Contextual Analysis.....	5
Learner Analysis	5
Contextual analysis	8
Data Collection.....	9
Task Analysis	10
Procedural Task Analysis.....	10
Gap Analysis.....	13
Instructional Approach	14
Content Sequencing.....	14
Design Strategy	14
Course Materials.....	18
Constraints and Limitations	18
Evaluation	19
Formative Evaluation	19
Summative Evaluation	20
Bibliography	22

Background

Crash Courses is micro corporation composed of four women with unique backgrounds in information technology and education. The mission of Crash Courses is to design effective, efficient, high quality training solutions for a variety of industries including: insurance, federal government, public education, financial institutions and healthcare. Crash Courses has been engaged by American International Group (AIG) to design an online module for new drivers.

Learning Problem and Need

Many factors including immaturity and lack of experience behind the wheel make teen drivers more prone to being involved in motor vehicle accidents. Studies by the AAA Foundation for Traffic Safety indicate that teen drivers are overrepresented in road crashes, with a higher per-mile collision rate than older drivers (American Automobile Association, 2006). This issue is especially acute during the first year of driving with an unrestricted license. A survey of 900 teens by telephone examined the teenagers' first year of driving and further included the first 3500 miles driven. The results showed that the risk of a first crash is substantially higher in the first month and this is also true for the first 500 miles driven after receiving their license. (McCartt et al)

Although teens are required to pass a written test and must have supervised driving instruction, many do not know how to respond when an accident happens. This course is designed as a consumer outreach program from Auto Insurance Group to ensure that new teenage drivers are prepared, and know the steps which should be taken after a minor automobile accident where no one is injured and both cars are still drivable. In these low priority situations, police may not respond quickly so it is especially important that the new driver know how to conduct him/herself, whom to call, and what information must be collected at the scene before leaving.

Objectives

Terminal Objective

This course is designed to reinforce previously learned material at the point of becoming a fully licensed unsupervised teenage driver. The goal of this instruction is to teach teenagers the behaviors and the steps they should follow in the event of a minor car accident, a fender bender, in which there are no injuries and cars are drivable.

Enabling Objectives

After completing this course, the learner will:

1. List the steps necessary for ensuring the safety of all involved in the accident.
2. Identify his or her own emotions and respond with several calming breaths.
3. Describe how to assess the situation and list whom to call.
4. List the documents the student will need to share with the driver of the other vehicle(s) and/or police and where each document should be kept. List the information that is necessary to collect from the other driver.
5. Describe the information necessary to document the scene of the accident and what methods might be used to achieve this.

Learner and Contextual Analysis

Learner Analysis

The learner analysis phase of instructional design defines the characteristics of the target learner. An accurate picture of the learner allows the designer to choose the most effective methods and materials for the task. Further, good design based on thorough analysis yields a course that engages and holds the learner's attention. The results of our analysis will direct the production of our design, i.e., to guide the motivational strategy for the instruction, to indicate various types of relevant illustrative examples, and to influence the delivery.

Anecdotal evidence from new drivers and their parents, as well as information from AIG's data base and the state of Virginia has allowed us to create the following picture of our target learner.

Primary Audience

The learners are teenagers residing in the state of Virginia who are fully-licensed automobile drivers in the process of being added to their parents' car insurance policy. Excluded are motorcycle drivers.

Personal and Social Characteristics	
Characteristics:	- Age: The targeted age is between 16 years, 3 months and 19 years. According to Virginia DMV, the earliest that a teenager can transition from learner's permit to fully licensed driver is at age 16 years, 3 months. - Gender: Both male and female are included. - Ethnic/cultural: Cultural differences are noted but not substantially significant for the design of the training,
Implications:	The target audience is narrowed to a specific demographic that needs the training.

Prior Knowledge of the Topic	
Characteristics:	Learners have basic knowledge of cars and of fender benders (they may have actually experienced one) and understand that it can be a complicated and difficult situation. However, they have little or no knowledge of the preparation for and actions to take following an accident.
Implications:	Because of the learner's basic knowledge of road safety acquired in Driver's Education to obtain a license, the design does not have to offer much background information. The course will present the knowledge and behaviors that will help new young drivers understand and cope with the eventuality of a minor accident and prepare them to take the proper steps.

Group characteristics	
Characteristics:	Teenagers comprise a distinct demographic group in their preferences, culture, relationship to technology, and world view. They are not children but their maturity level, judgment, and focus are not as developed as adults even though that is how they may see themselves.
Implications:	Instructional design must use the most suitable approach to developing the content, interaction and presentation to provide variety, be in sync with young learner preferences, and be relevant to cultural milieu.

Specific Entry Characteristics	
Characteristics:	Learners must have: - Completed driver education, both classroom and behind the wheel components - Recently have been granted a fully-valid driver's license permitting them to drive alone without supervision. - Been added to their parents' car insurance policy
Implications:	Instructional content does not need to address the basics of car operation, only the elements that result from a learner being involved in a minor accident. The trigger for the educational experience is the addition to the insurance policy. At this point, the new driver is vulnerable to the possibilities of facing the consequences of a fender bender without the support of a parent or another adult.

General Learning Preferences	
Characteristics:	Learners are knowledgeable about computers and have had experience with online learning. In Virginia, high school students are required to complete one online course in order to graduate. (VDOE)
Implications:	The planning for Instructional design can and should incorporate a variety of advanced technology elements, such as videos, games, interactivity, mobile devices, and animations. (Blunt, 2007)

Attitudes Toward Content and Potential Delivery System	
Characteristics:	Topic: Results of the gap analysis performed determined that young drivers feel that this topic is one that is likely to be helpful to them. They do not feel confident that they are prepared for a fender bender and the training will help them build this confidence. Discussions with teenagers, AIG SMEs, and a Fairfax County Police Officer during the task analysis substantiated the findings.

	Delivery method: The requirement by the VDOE for high school graduates to take an online course will ensure that most learners will have a positive attitude for delivery of the learning via an online module.
Implications:	Instructional design should incorporate the most germane content and deliver it on the web in a concise, relevant and engaging way so that it meets the expectations of the interested learners and overcomes the resistance of the indifferent learners to grab and retain their interest throughout and ensure absorption and retention of the learning material.

Motivation to learn

Characteristics:	A need and desire to know the content may not translate into the discipline needed to complete the training module. An added financial incentive of a lower rate will be offered by the client to provide encouragement for the policy holders (parents) to motivate the teen drivers to complete the training.
Implications:	Assume that personal motivation is not too high and will have to be engendered through a highly-engaging and interactive learning experience in addition to the financial incentive offered to parents.

Common Errors by Novices

Characteristics:	According to information gathered in interviews with AIG SMEs, teenagers may make the following mistakes: • Leave the accident without collecting proper information including photos about the accident and the other driver • Forget about calling the police when appropriate • Neglect to contact their insurance company
Implications:	• Problems or delays with receiving reimbursement for damage from either insurance company involved could result. • In a case of dispute, the incident could result in litigation which might be avoided by proper documentation at the scene. • Personal problems could arise between involved parties if proper protocol is not followed.

Contextual analysis

The contextual analysis defines the conditions that are necessary for successful implementation of the completed course. It contributes to building the design strategy by providing realistic information for instructional examples. In addition, evaluation of the setting where the actual instruction will take place helps make the best use of the instructional environment and fosters the transfer of the new skills. (Morrison, et al)

Orienting Context	
Orienting context comprises organization and learner environments. Understanding what the organization is attempting to achieve leads the design strategy to deliver what the client wants and surfaces any capabilities and limitations that might affect the project. Understanding the learner context including the learner's motivation goals and learning environment, helps designers to prepare effective and individualized training.	<u>Organization Context</u> The Fender Bender Course is commissioned by AIG and hosted on their web site. Our research on AIG's web site technological environment indicates that the site contains all the tools, applications necessary for development and support of the instructional requirements. The site currently hosts other learning modules and the Fender Bender course will conform to the same site specifications without any special adaptations in the design. <u>Learner context</u> In the state of Virginia teens are stepped through a graduated licensing system designed to give them nine months of practice behind the wheel with a parent or guardian in the car to guide them and correct their mistakes. The learner will expect to learn the actions a driver should take following a fender bender. Interviews with teenage SMEs show that the learners perceive a value to the training to help them know what information to have and what to gather, as well as to promote the proper behavior and confidence in the driver. Since the course is self-paced, learners will be expected to take the course independently. As elective training, the learner is not formally evaluated on retaining the information; however, to best serve the client's goal of ensuring the drivers know what to do, the design incorporates follow-on support to encourage retention.

Instructional Context	
The instructional context describes the course design methods and how it will be delivered. These important considerations help designers define the learning and technological needs to plan the course design.	The customer has determined that the course will be delivered online through the company web site as an addition to other online courses they already house to provide a wide geographic reach throughout their market area in the state of Virginia. To complete the course, learners can use a desktop, laptop, tablet or mobile smartphone to connect to the Internet to get to the training. Any computer – at home, at school, at the library, or at an AIG office can be used.

	Delivering the course on line will make taking it convenient, simple and relevant to technology-immersed teenagers. Teenagers in the defined demographic have access to a computer and the technological knowledge to take an online course. (Katz, 2005) The course will include step by step procedures that the learners will follow and a high level of interactivity both to engage the teenage learner and to provide relatable, real-world situations/scenarios where learning can be applied. In order to be relevant and appealing to learner, the module will include teen actors and currently popular music. For easy development and deployment by the design team and easy use by learners, the course and any related learning support tools will be developed within the framework and hosted on the Auto Insurance Group's web site. The customer has also stipulated that the course duration be no longer than one hour in alignment with training courses currently on their site. This duration is fitting for holding the interest of the teenage demographic. Encouragement will be provided to ensure that learners schedule time to take the course. To confirm that they complete the course in a timely manner, a limit of one month is set for completion. If this deadline is not met, the financial incentive will be forfeited.
--	---

Transfer Context	
The transfer context encompasses the methods, incentives, opportunities and motivation for learners to apply the learning from the course in order to retain and use what they have learned.	Knowledge checks and hands-on demonstrations across a diverse range of simulated scenarios reflecting exact real-world situations will assess and promote tangible comprehension of content by learners. Since this content is not of the type that will be used regularly, transfer to daily activities for constant reinforcement is not possible; therefore, other means are essential for recall when the information needed. For example, a smartphone app and a decision tree as a printed memory tool will give the learners immediate access to the information just-in-time.

Data Collection

Data collection methods included interviewing teenagers in the targeted demographic; researching insurance and Virginia state law web sites and publications; and interviewing insurance company SMEs via email and conversation. Questions, whether in written or oral form, were predominately open-ended to obtain insight on the factors affecting the course design. Data gathered reinforced the strategy and team-devised concepts on content and delivery.

Task Analysis

A core of common threads of behaviors that the newly, fully licensed Virginian teenager should perform will be demonstrated using a simulation of a fender bender accident. Several interviews were conducted with SMEs: Fairfax County Police Crime Prevention Officer Richard Twombly and the AIG insurance company that hired Crash Courses. Three new fully licensed Virginia teenage drivers were interviewed about their experiences in the Prince William County Public School system Driver's Education course. The information gathered from them assisted with our Gap Analysis. Crash Courses accomplished a critical analysis and determined the following:

Procedural Task Analysis

The AIG SME briefed the Crash Courses Team on the processing a fender bender claim and the vision of the workflow of processing a fender bender. The second SME the Crash Courses Team worked with was the AIG website manager. She assisted with the deployment of the module on the AIG's website and clarified the operations and maintenance standard operating procedures for future fender bender module upgrades. The website manager will assign a web developer with the day-to-day technical maintenance and the AIG Service Desk will perform the end-user support.

Initial Vehicle Accident Assessment Procedural Steps:

The Task Analysis reflects the actions to take at the scene of an accident. The procedures have a logical progression. The steps are as follows:

Think safety

- Pull out of the driving lane, if possible.

- Motion to other vehicles involved to follow suit

Stay calm, be confident and limit the conversation during the assessment of the accident.

- Take a couple of deep breaths

Assess the situation:

Is anyone injured or need medical assistance?

- Yes

 - This vehicle accident is not a Fender Bender accident and is not covered in the Fender Bender Module

- No

 - Proceed to the next question

Can the cars drive away from the accident scene?

- No

 - This vehicle accident is not a Fender Bender accident and is not covered in this module

- Yes

 - This is a Fender Bender accident, which is covered in the Fender Bender Module

Call 9-1-1

- Notify the Emergency Dispatcher of the fender bender accident
- Answer the Dispatcher's questions
- Stay on the line until the Dispatcher tells you to hang up
- Wait for the Emergency Responders, if their help is expected.

Notify Parents or Guardians, after you finish with the 9-1-1 Dispatcher:

- Contact your parents or guardian or an emergency contact
- Advise them of the vehicle accident.

Gather Your Driving Documentation:

- Locate the following documentation for the other driver to use:
 - Your Insurance card
 - Your car's vehicle registration
 - Your Virginia driver's license
- Locate a Pen and Paper

Collect the Other Driver's Information:

- Note the following information, (take pictures with a camera, if possible):

The collect other Driver's license information

- Name
- Address
- Driver's License Number
- Expiration Date
- State

Ask the other drivers for the following information

- Name
- Phone Number
- Email, if possible

The Vehicle Registration, if information not listed, discuss with driver

- Name(s)
- Vehicle Make
- Vehicle Model
- Vehicle Model Year
- Vehicle Color
- License plate
- Vehicle Identification Number, (VIN number)
- Expiration Date

Insurance Company(ies)

- Name
- Address
- Phone Number
- Website
- Policy Number

Gather the Fender Bender Accident Information, as applicable:

- Date
- Day of the week
- Time
- Location
 - Street Names
 - Intersection
 - Mile Marker
 - Highway Exit
 - Road Signage
 - Speed Limits
 - Merge Information
 - Warnings
- Construction
 - Road Management Signs
- Weather Condition
- Traffic Condition
- Road Conditions
 - Potholes
 - Skid marks
 - Foreign objects

Gather the Information from each witness of the fender bender

- Witnesses Names
- Witnesses contact information
- Witness location at time of accident
- Witnesses include:
 - Vehicle Drivers who were not directly involved in the fender bender
 - Pedestrians
 - On-lookers

Gather the Information from the Police:

- Request Business Cards
- If the Officer(s) do not have business cards
 - Note their Names and Phone Numbers
- Police Report? (Typically written if the Officer believes the damage exceeds \$1,000)
 - Yes
 - Ask the Officer when the report will be available, (it may take a few days)
 - No
 - Ask the Police Officer to explain why a report will not be written

Take pictures to document the accident with a camera:

- Damage caused by the Fender Bender accident
 - Property
 - Minor Personal Injuries
 - Skid Marks and Tire Track Impressions on the ground
 - Existed before the Fender Bender

- Dents
- Scrapes
- Rusted areas
- Broken and Missing car parts
- Vehicle License Plates

Create a story of the accident in pictures

- Where were the vehicles?
- What conditions surround the accident scene?
- Where did the accident occur?
- Where did the vehicles come to rest?
- Where did the vehicles park?
- Vehicle debris caused by accident.
- Vehicle debris that may have caused the accident.
- The notes you took concerning the accident.

Contact your insurance company to report the fender bender:

- Call your insurance company and speak to an agent
- Call from the scene of the accident, from a safe location or from an alternate location
- Answer the insurance agent's questions
- Provide an accident narrative
- Follow the insurance agent's recommendations and requests
- Provide digital evidence, if asked
- Contact the other driver(s) insurance company, if directed to do so
- Request that the insurance company liaison between you and their client

If you experience pain or sickness after leaving the scene of the Fender Bender:

- Seek Medical Assistance
- Consider visiting your primary care physician
- Or the nearest Emergency Room

Did the responding Police Officer(s) write an Accident Report?

- Yes
 - Follow up with the appropriate police department who responded to the fender bender
 - Request a copy of the accident report
 - Provide it to the insurance company, if they request it
- No
 - An accident report is not available for the fender bender accident

Gap Analysis

Our analysis showed that that the Fender Bender material was covered in the classroom portion of driver's education in Virginia, but that nearly a year will have elapsed by the time a teenager received their full Virginia driver's license. Statistics have demonstrated that new teenage drivers are likely to get into an accident during their first few months of driving.

Instructional Approach

Fender Bender is a self-paced online training program that can be taken at any time and any place as long as the student has access to a computer connected to the internet. It will be hosted on the AIG company site. This course is a five-part module designed to reinforce material previously presented in the Virginia State Driver Education Course. The course is delivered online via the insurance company's website. It is intended to be completed in approximately one hour.

Content Sequencing

The course sequencing allows students to choose the modules in any order after completing the introduction. Once a module is chosen, the students must complete the learning exercises in the module to receive a token. As tokens are collected, they appear at the bottom of the page to indicate the learner's progress. Each stand-alone section addresses a topic area from the Task Analysis and ties into the enabling objectives for the course. The final logical path of procedures will be reinforced in three ways. First, the short introductory video for each module is part of a complete video that will run after the completion of all of the modules. The mnemonic for remembering the steps is built as the modules are completed and reinforced at the end of the course. The job aid presents the essential information in order using the pictures as visual aids.

Design Strategy

The course will contain a story-telling graphic novel and/or video; imbedded questions and active game segments will be used to present the content. Like the beginning of the course, each section opens with a video clip or graphic novel to present the topic addressed in the module. The lessons are game-like in that they require the participant to search for information and often organize it in order to gain a token. The keywords that are arranged in a mnemonic at the end are introduced in each module. The first letters of the words spell "scared."

If the course is interrupted, the work completed is saved, and the course can be continued at a later time. The window for completing the course with the premium discount is one month from the date that the teenager is added to the parent's insurance policy.

Content	Objective	Annotated Strategies
Introduction		Initial Presentation Video of a distressed teenager on the phone with a parent. Audio stops and a word splash of key words and phrases appear. What would you do? Recall Learner uses click and drag to create an ordered list. This serves as a pretest for the student's own benefit and leads to the statement of the objectives. Overview and Directions The student is introduced to the job aid with only section headings filled in and the process of collecting all of the pieces to complete the job aid is explained. Collecting the tokens is the prize for proceeding to another module and the keyword presentation in each module is explained as the words in a mnemonic. The requirements for completing the course for the insurance benefit are explained along with the time constraints.
Content	Objective	Annotated Strategies
Module One: Safe	List the steps necessary for ensuring the safety of all involved in the accident.	Initial Presentation Video clip with the same situation and character as the introduction shows the scene of a two car accident with minor damage to both cars. Neither person is injured. Both cars can be moved. The narration explains that if these conditions are present, then both cars should be moved to a safe location before proceeding. Recall A picture-sort appears depicting various accident scenes. The student chooses to place the pictures in one of two columns, fender bender or not fender bender. When the pictures are sorted correctly, a number of scenarios appear with cars located on the side of the road, in a parking lot, and other options. The student is instructed to choose which locations are safe for the drivers. When only the safe pictures have been shown, the fender bender road sign covers the screen and a token is awarded to indicate that the module has been successfully completed. Mnemonic The word "safe" appears. The "S" is a larger text size. Transformation Small pictures from the game and text for each step are added to the job aid.

Content	Objective	Annotated Strategies
Module Two: Behavior	Identify his or her own emotions and respond with several calming breaths.	Initial Presentation Video clip shows the point just after the cars have been moved. The close-up of the teenage driver and the description of her reaction follow. Instruction Short graphic novel segment of the same character and situation with thought bubbles read aloud when the cursor moves over them, showing what happens to a person physically, emotionally, and mentally when an accident occurs. It demonstrates and explains the need to pause briefly before taking any action. Practice This leads to a still shot of a calm ocean scene and an audio guide demonstrating how to bring oneself to a calmer state. The student is instructed to practice by repeating the audio guide. The token is granted when the three minute audio sequence is viewed three times. Mnemonic A keyword, “calm” appears on the screen. The “C” enlarged and in bold type. Each keyword for the mnemonic will have the same graphic design. Transformation The picture along with the script from the audio is placed in the job aid.
Content	Objective	Annotated Strategies
Module Three: Assess	Describe how to assess the situation and list whom to call.	Initial Presentation Video clip continues as the drivers once again emerge from their cars in the new location. As they appear to be looking at the damage and talking, the narration explains what to do next in the correct order. Recall Game with the graphic novel scene of the accident requires the student to choose the next steps from several possibilities. The options of calling 9-1-1 and calling parents are emphasized. The screen character acts out the chosen step and explains it in addition to telling where it goes in the sequence of events. When all of the steps are chosen, the incorrect choices disappear. The correct steps are placed in order by the student. When the final step is placed, the token appears. Mnemonic A keyword, “Assess” appears on the screen. Transformation Small pictures from the game and text for each step are added to the job aid.

Content	Objective	Annotated Strategies
Module Four: Record Exchanged Documents	List and state the location of the documents the students will need to share with the drivers of the other vehicle(s) and/or police; list the information that is necessary to collect from the other driver.	Initial Presentation Video shows the driver receiving the other driver's documents and beginning to record the information. Instruction Pictures of a teenager's driver's license, the car registration, AIG insurance card, a glove box with a pen and pad of paper appear on the page. The narration explains that these are the items that she will need for the document exchange. Pictures of a driver's license, an insurance card, and car registration are pictured on the next three screens respectively. The narration and the graphics explain what to record from each of the exchanged documents. Recall Pictures of the documents and the phone, pad of paper and pen, along with other random items are on the screen. Student chooses the items that are needed and is rewarded with a check mark on the correct items. When all the correct documents are checked, the next screen, a picture of the driver's license appears. The student indicates what information to record by dragging it from the license to a pad of paper. The successive screens provide the same click and drag format for the insurance card and the car registration. A "Congratulations" appears and a token is awarded. Mnemonic The final three letters, "R-E-D" of the mnemonic word appear with the previous letters to spell "scared" as follows: Safe Calm Assess Record Exchanged Documents Transformation Small picture of the exchanged license appears on the job aid.

Content	Objective	Annotated Strategies
Module Five: Document and Report	Describe the information necessary to document the scene of the accident and what methods might be used to achieve this.	Initial Presentation A short video that shows a person getting still pictures of the damage to the cars and making notes about what happened before leaving the scene. There is a caution about videotaping people at the scene, and a reminder to follow the directions of any police officer or other responders on the scene who may want to see the two parties safely on the way before departing the scene. Recall As the learner chooses the pictures and information that the insurance company will want to have recorded from a still shot of the scene, there is a brief explanation, and a list is created. When the list is completed, a token is awarded. Transformation The picture reminder, along with the insurance company's logo and a phone number are added to the job aid.
Content	Objective	Annotated Strategies
Completion	Print or save a copy of the job aid and exit the course.	When the final token is found, the entire video runs. The next screen is the completed job aid in the form of a storyboard with pictures and text to remind the user of each step.

Course Materials

The main course materials are web pages. Throughout the course, all the pages will maintain a consistent typographical style, layout, and appearance to present the message. Each page will have a heading and each module will have an introductory landing page. Simple drawings in graphic novel style and a video of a “real” accident situation will be used for instruction. These pictures (or similar ones) will be used as the pictures that accompany the text that are printed in the job aid.

The final material is the job aid which serves as a checklist in the event of an accident. An app for a smart phone or tablet is also provided. An added benefit to the app is that once it is engaged and the driver begins to enter information and photographs, it generates a report to AIG in real time and a contact is initiated with the user.

Constraints and Limitations

- Students must have the use of a computer with internet access.
- Students must have a smart phone in order to take advantage of the automatic reporting feature of the app.
- The insurance company must provide website hosting and technology support.
- The insurance company must be responsible for ongoing course maintenance.
- The insurance company requires that the course be no more than an hour.

Evaluation

Formative Evaluation

During the development stage of the new instructional program, two types of formative evaluation will be employed. Following the methodology in Morrison et al and based on the learner analysis, decision-oriented studies analyze the effectiveness of the design and delivery in order to improve usability. Objectives-based studies analyze student comprehension and engagement to assess the extent to which the instruction successfully meets the objectives of the training program.

Small Group

A small group of 8 - 12 teenagers will complete the module together in the same location. Observation by the instructional design team and verbal feedback will appraise how engaged the teenagers are by the games, their level of motivation in completing the modules, and their interaction with the technology and design heuristics. The evaluators will record their comments in order to capture their reaction.

Data Gathering Techniques

To accomplish the Decision-Oriented evaluation, members of the instructional design team, using checklists, will observe the group as they complete the training to assess overall structure and organization, completion time, navigation and adequacy of exercise instructions. The group will be randomly divided into two sub-groups. One sub-group will only be given the choice to complete the module in a linear fashion; the remaining students may navigate to any module of their choice. The time it takes each group to complete the training and the successful first time completion rate of each group will be compared.

To accomplish the Objectives-based evaluation, the teenagers will meet with the instructional design representative to discuss the following open-ended questions after completing the module.

Was the navigation easy to understand and follow? If not, why not?

What did you like about the course?

What confused you about the course?

Would you find the mobile application useful and remember to use it at the scene of an accident?

If not, why not?

What questions do you still have after completing the module?

Resources Required

One computer work station per participant will be required for two hours. Materials include the prototype Fender Bender course, observer's checklists, a conference room, and computers for conducting analysis.

Analysis

The instructional design team will assemble and analyze the notes of the observers and feedback from students to ensure that the sequencing of the content augments learning, and that the learning goals are appropriate and complete.

Descriptive analysis will be applied to learner comprehension of content and motivation in completing the modules to include the actual comments from the students. Statistics will be gathered on quantitative data such as usability, functioning, and engagement of the technology; and design and suitability for the target audience of teenagers. Revisions will take place on any part of the course which is identified as difficult to navigate, or does not help the students meeting the enabling objectives. A final round of formative evaluation will be conducted following any revisions.

Reporting

The instructional design team will compile the analysis data and statistics into a report for the insurance company stakeholders. The report will demonstrate how effective the course delivery method and materials are and indicate how successful the students were in attaining the learning objectives.

Summative Evaluation

This phase of the evaluation process will focus on the success of the learners in achieving the goals of the instruction after the course is published to the insurance company web site.

Data Gathering Techniques

Data will be collected at two points in time for the summative evaluation: immediately after course completion and after filing a claim following an accident.

After course completion:

Data will be collected continuously via the software tool hosted on the insurance company web site as students interact with and complete the online course. This will include the time it takes the learner to complete the module, the number of attempts needed to complete each component correctly, and the overall successful completion rate. Also included are any comments from students.

Following an accident:

Teenagers who are in an accident and must file a claim with AIG will be asked the following questions by the claims agent to gauge the effectiveness of the module:

Did you use the smartphone mobile application or the laminated reminder card to assist you in remembering the steps in the process?

What was most helpful?

Resources Required

The team will need access to the course data from AIG company web site as well as information collected by claims agents and will need resources for analyzing the data collected.

Analysis

Data collected via the software tool during the summative analysis phase will be computer analyzed to confirm learner comprehension as reflected in the successful completion of knowledge checks embedded throughout the course, and overall course completion. Success will be defined as 80% of the students completing the course within the one month window and in under an hour.

Reporting

The instructional design team will compile the analysis data and statistics into a report for the insurance company stakeholders.

Confirmative Evaluation

According to Morrison et al, the confirmative evaluation is used to determine whether a course is still effective over time and continues to attain its original objectives. The confirmative evaluation will assess, after a time lapse, if the training is positively impacting not only new drivers but also the insurance company's processing practices.

Follow up will be conducted 6 months and 12 months following the launch of the course. The AIG claims department will correlate any data on teenage drivers who may have taken the training and subsequently had a claim with the company via an indicator on their policy record. The insurance claim software will record data on a driver using the smartphone mobile application to evaluate the successful resolution of an accident using skills and knowledge from the course as well as the overall efficiency of claims processing. Data on any complaints concerning the functionality of the smartphone mobile application or the web hosted training module which may have triggered a service desk trouble ticket will be noted and addressed.

Resources Required

The team will need access to the claim data from the insurance company.

Analysis

Statistical data for students who used the smartphone will be compared with data for drivers who did not have the training. Data will also be compared between students who took the training and used the mobile application and those who did not use the mobile application. The evaluation should determine if claims were processed more efficiently as a result of the training.

Benefits to the Organization

The final stage of the assessment will gauge how effectively the course achieved gains in efficiency of the accident claim resolution process which will help the insurance company avoid improperly reported accident claims that result in higher expense to the company, causing the claims agent to invest more time in following up and gathering missing information from either the teen driver or the insurance company representing the other drivers involved.

Bibliography

American Automobile Association. Teen crashes—Everyone is at risk. AAA Office of Government Relations. 2006. [accessed 3/1/2013]. Available:
<http://www.aaaexchange.com/Assets/Files/200611814220.TeenDriversRisk2.pdf>

Richard Blunt, Ph.D., Does Game-Based Learning Work? Results from Three Recent Studies, Advanced Distributed Learning, 2007.
https://docs.google.com/gview?url=http://patrickdunn.squarespace.com/storage/blunt_game_studies.pdf&chrome=true

McCartt, A.T., Shabanova, V.I. & Leaf, W.A. (2003). Driving experience, crashes and traffic citations of teenage beginning drivers. *Accid Anal Prevention*. 35(3), 311-20. PMID: 12643948

Morrison, G. R., Ross, S. M., Kalman, H. K. & Kemp, J. E. (2011). *Designing effective instruction* (6th ed.). Hoboken, NJ: John Wiley & Sons, Inc.

Katz, R. (2005). Foreword: Growing up digital. In J. B. Caruso & R. Kvavik (Eds), ECAR study of students and information technology, 2005: Convenience, connection, control, and learning. EDUCAUSE.
<http://connect.educause.edu/Library/ECAR/ECARStudyofStudentsandInf/41159>

Virginia Department of Education (VDOE), Standard Diploma: Minimum Course & Credit Requirements,
<http://www.doe.virginia.gov/instruction/graduation/standard.shtml>

Richard Twombly, Fairfax County District Crime Prevention Officer, Fairfax County, Virginia

Insurance web sites for corroborating data:

- https://www.usaa.com/inet/pages/advice_what_to_do_after_accident?SearchRanking=1&SearchLinkPhrase=accident%20information%20gathering
- <http://www.libertymutual.com/auto-insurance/teen-driving/car-basics-and-safety/teen-driving-accidents>
- <http://www.allstate.com/auto-insurance/auto-insurance-for-teens.aspx?lid=INSURANCE|TeenDriverProgram>

Virginia state and federal statutes and codes:

http://www.dmv.virginia.gov/webdoc/citizen/drivers/ed_reqs.asp

Virginia state brochures on teenage driving:

http://www.doe.virginia.gov/instruction/driver_education/Parent_Teen_driving_guide.pdf