

Part III: Teaching and Learning Theories for Behind-the-Wheel Course



Participant Workbook

Developed By:

The Association of National Stakeholders in Traffic Safety
Education

ANSTSE

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2017 Driver Education Instructor Training

Part III: Teaching and Learning Theories for Behind-the-Wheel Course



Course Syllabus

Developed By:

The Association of National Stakeholders in Traffic Safety
Education

ANSTSE

Part III: Teaching and Learning Theories for Behind-the-Wheel Course

Course Description:

This course will help prepare you to become a behind-the-wheel instructor and to help the novice driver to develop vehicle operational skills. The purpose of the Behind-the-Wheel Teaching and Learning Theory Course is to train individuals to conduct in-vehicle driver education. The course is designed to provide learning activities that focus on preparing the prospective driver instructor to conduct activities, which will develop vehicle operational skills for the novice driver. Emphasis is placed on laboratory organization and administration, maintaining a learning environment, developing laboratory instructional modules, and the conduct of learning experiences.

Course Objectives:

- Develop and conduct learning activities to meet objectives for developing performances and behavior as identified in an approved Driver Education Curriculum.
- Identify resource materials for use in the driver education laboratory setting.
- Utilize and edit lesson plans for on-street instruction.
- Utilize or modify a route plan based on a behind-the-wheel lesson plan.
- Describe how to give directions that are simple and understandable.
- Describe when it may be necessary for the instructor to manage and take control of the vehicle.
- Demonstrate command and control of the vehicle.
- Understand and demonstrate in-vehicle teaching techniques.
- Demonstrate the various coaching techniques.
- Identify and describe the various types of in-vehicle evaluations.
- Demonstrate the methods for communicating and connecting with the classroom teacher, BTW teacher, teen, and parents.

Course Topics:

- **Lesson plans for in-vehicle instruction**
 - Lesson plan format
 - Different driving situations
 - On-street route development
 - BTW Activity
- **Managing the mobile classroom**
 - Preparing to drive
 - Giving directions
 - How to use mirrors during in- vehicle instruction
 - Challenges to in-vehicle training
 - Changing drivers and observer responsibilities
 - BTW Activity
- **In-vehicle teaching techniques**
 - Commentary teaching
 - Coaching the driver
 - In- vehicle instruction techniques
 - Evaluating and summarizing an in- vehicle lesson
 - BTW Activity
- **Driver evaluation**
 - Types and characteristics of in- vehicle evaluation
 - How to evaluate the driver
 - Providing feedback to the driver
 - BTW Activity
- **Command and Control of the Mobile Classroom**
 - Managing and Taking Control of the Vehicle
 - Utilizing a dual brake in the Vehicle
 - What to do in an emergency or collision
 - BTW Activity
- **Putting it All Together and Practice Teaching**
 - Overview of Part III
 - Peer Teaching Assignments
 - Lesson Plan Format
 - BTW Activity
- **Peer teaching driving route demonstrations**
 - Conducting a practice driving route
- **Coordination between classroom and behind-the-wheel instruction**
 - Coordinating and communicating with the classroom instructor
 - Transitioning and relating classroom content to classroom content

- **On-board technologies**
 - The role and use of on-board technologies
- **Optional –driving ranges and driving simulators**
 - The role and use of driving simulators
 - The role and use of driving ranges

Required Resources:

- ANSTSE Driver Education Instructor Training Curriculum Participant Workbook
- Approved driver education curricula
- Approved driver education textbook(s)
- State driver manual
- State traffic code
- State parent guide

Instructor Candidate/Participant Assignments and Grading:

- Full attendance of the course is mandatory for successful completion.
- During this course you will be required to participate in:
 - Planned activities
 - Group discussions
 - Questions and answers
- There will be a quiz at the end of every module, which you must complete with at least 80% accuracy. One retake is permissible.
- You must successfully deliver at least two on-road evaluations:
 - Each instructor candidate will deliver at least two on-road evaluations. Each evaluation will be assigned points.
 - You will be required to turn in lesson plans for each driving situation lesson being taught. Lesson plans must be typed.
- You must pass the end of course knowledge test with at least 80% accuracy.

Duration of Course: 35 hours (5 days in length)

Orientation

Behind-the-Wheel Theories Course Introduction and Overview



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Welcome and Purpose of the Behind-the-Wheel Theory Course

Welcome Welcome to the Behind-the-Wheel Theory course. We are pleased to be a part of this important course and look forward to working with all of you.

This course will help prepare you to become a behind-the-wheel instructor and to help the novice driver to develop vehicle operational skills.

Review of Part I In Part I Fundamental Concepts of Teaching and Learning you gained an understanding of the teaching and learning process and the knowledge, skills and attitudes necessary to teach driver education. The four steps of teaching and learning and the domains of learning were introduced. In this part, you learned how to use and modify a lesson plan, different types of questioning techniques and how to handle student responses and interact with students.

Review of Part II, if applicable In Part II Teaching and Learning Theories for Classroom you became a classroom instructor and practiced presenting content from a lesson plan. This part introduced strategies for classroom and time management and how to assess and evaluate students.

The purpose and importance of the Behind-the-Wheel Theory Course The purpose of the Behind-the-Wheel Theory Course is to train individuals to become professional instructors in driver education.

The course is designed to provide learning activities that focus on preparing the prospective driver educator to conduct activities, which will develop vehicle operational skills for the novice driver.

Emphasis is placed on laboratory organization and administration, maintaining a positive learning environment, developing laboratory instructional modules, and the conduct of learning experiences.

Objectives of the Behind-the-Wheel Theory Course

Objectives of the Behind-the-Wheel Theory Course

Upon successful completion of this **course**, the IC will be able to:

- Develop and conduct learning activities to meet objectives for developing performances and behavior as identified in an approved Driver Education Curriculum.
- Identify resource materials for use in the driver education laboratory setting.
- Utilize and edit lesson plans for on-street instruction.
- Utilize or modify a route plan based on a behind-the-wheel lesson plan.
- Describe how to give directions that are simple and understandable.
- Describe when it may be necessary for the instructor to manage and take control of the vehicle.
- Demonstrate command and control.
- Understand and demonstrate in-vehicle teaching techniques.
- Demonstrate the various coaching techniques.
- Identify and describe the various types of in-vehicle evaluations.
- Demonstrate the methods for communicating and connecting with the classroom instructor, BTW instructor, teen, and parents.

Course Completion Requirements

Course completion requirements

1. Full attendance of the course is mandatory for successful completion of the course.
2. Indicate how to make up missed time/work, if applicable.
3. During this course you will be required to participate in:
 - Planned activities
 - Group discussions
 - Questions and answers
4. There will be a quiz at the end of every module, which you must complete with at least 80% accuracy. One retake is permissible.
5. You will be required to turn in lesson plans for each driving environment lesson being taught. Lesson plans must be typed.
 - Must follow the Standard Lesson Plan Format.
6. You will be evaluated at least two times. These will be on-road evaluations. Please note that class size will determine if a third evaluation will be used.
 - Evaluations will be worth 75% of your grade.
7. You will be administered a final exam at the end of course. You must pass the end of course (multiple choice) knowledge test with at least 80% accuracy.
 - The final exam will be worth 25% of your grade.

Course Agenda

Course agenda The instructor will handout a course agenda.

- **Module 1** – Lesson Plans for In-Vehicle Instruction
- **Module 2** – Managing the Mobile Classroom
- **Module 3** – In-Vehicle Teaching Techniques
- **Module 4** – Driver Evaluation
- **Module 5** –Command and Control of the Mobile Classroom
- **Module 6** – Putting it All Together and Practice Teaching
- **Module 7** – Peer Teaching Driving Route Demonstrations
- **Module 8** – Coordination Between BTW and Classroom
- **Module 9** –On-Board Technologies
- **Module 10** – BTW Course Wrap-Up
- **Module 11** – BTW Knowledge Test
- **Addendum Module C** – Driving Ranges and Driving Simulators

Module Summary

Module Summary

The purpose of the Behind-the-Wheel Theory Course is to train individuals to become professional instructors in driver education. The course is designed to provide learning activities that focus on preparing the prospective driver educator to conduct activities, which will develop vehicle operational skills for the novice driver. Emphasis is placed on laboratory organization and administration, maintaining a positive learning environment, developing laboratory instructional modules, and the conduct of learning experiences.

This module covered four topics:

- Purpose and objectives of the course.
- Course completion requirements.
- Course agenda.
- Ground rules.

The information that was presented in this module is essential for understanding the purpose and objectives of the behind-the-wheel theory course and the course requirements.

Transition

The next module will cover lesson plans for in-vehicle instruction.

Module 1

Lesson Plans for In- Vehicle Instruction



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Module Overview

Module Overview

1. Prior to this module, you were provided with the Behind-the-Wheel Theory Introduction and Overview.
2. This module is titled “Lesson Plans for In-Vehicle Instruction.”
3. The purpose of this module is to give you an understanding of the in-vehicle instruction lesson plan structure.
4. This module will cover three topics:
 - Lesson plan format
 - Different driving environments
 - On-street route development
5. By the end of this module, you will be able to:
 - Modify and utilize lesson plans for on-street instruction, based on lesson plan objectives.
 - Describe the five different driving environments.
 - Modify and utilize on-street driving routes for all environments and for evaluation.
 - Describe the importance of planning for night driving in driver education.
6. During the module, you will be required to participate in group discussion and activities lead by the instructor. At the end of the module you will participate in a BTW activity to demonstrate your understanding of the content.
7. During the module, you will be evaluated through questions and answers. There will be a 10-point quiz at the end of the module which you must complete with at least 80% accuracy.
8. This module will last approximately 2 hours in the classroom and 3 hours behind-the-wheel.
9. This module will help you to modify and utilize BTW lesson plans and driving routes, understand the different driving environments, and the importance of night driving in driver education.

Key Words:

You will learn the following key words and their meaning as you proceed through this module:

Expressway	Off-street lessons	Open highway/rural
Residential	Night driving	Suburban, Urban/business district

Section 1: Lesson Plan Format

Introduction Section 1 will discuss the in-vehicle lesson plan format and its various components, the definition of off-street lessons and the various off-street tasks that can be performed.

The in-vehicle lesson plan format and its various components

The cover page of each lesson plan shall include:

- Overall goals or objectives will be listed first for the lesson.
- The required entry level for the lesson will be described.
- Any resources that are needed to teach the lesson.
- Assignments or reading for the lesson.

Each page following the cover page will include one instructional objective. Each instructional objective shall include:

- The instructional objective shall be written out in sentence form.
- Content for the instructional objective.
- Learning activities, which will help support the objective.
- Learning activities for observers, if applicable.
- Anticipated problems, which may arise during the teaching of the objective.
- Method of evaluation. How are the students going to be evaluated on that particular objective?
- Materials, equipment and resources needed.

A copy of the route should be attached to the lesson plan as well. This should be typed and written in manner that is easy to follow.

Activity

Activity #1: BTW Lesson Plan

Your instructor will provide you with a sample BTW lesson plan to review in detail.

Section 1: Lesson Plan Format

Off-street lessons

Those driving skills needed before driving in the various on-street environments.

- Parking lots
- Multiple-car driving ranges

Activity

Activity #2: Off-Street Parking or Driving Range Diagram

Your instructor will show and describe an off-street parking or multiple-car driving range facility diagram to practice driving tasks.

Section 1: Lesson Plan Format

- Off-street tasks that can-be performed outside the vehicle
- Pre-start procedures.
 - Outside vehicle checks
 - Tires
 - Lights
 - Debris
 - Damage
 - Fluids

-
- Off-street tasks that can-be performed inside the vehicle
- Inside vehicle checks and adjustments
 - Items secured
 - Phone off
 - Adjust head restraint and seat position
 - Adjust mirrors
 - Gas gauge
 - Lock doors

Example of vehicle checks

LSMILE

L – lock doors
S – seat belt, seat, steering wheel
M – mirrors
I – ignition
L – lights
E – e-brake or parking brake

Section 1: Lesson Plan Format

Off-street tasks
that can-be
performed

- Ignition procedures.
- Preparing to move.
- Stopping procedures.
- Tracking forward and backwards.
- Lane change procedures.
- Left turn procedures.
- Right turn procedures.
- Three-point turnabouts.
- Angle and perpendicular parking.
- Parallel parking.
- Responding to driver errors and vehicle failures.

Section 1
Summary

This section covered the lesson plan format, definition of off-street lessons and the various off-street tasks that can be performed.

Section 2: Different Driving Environments

Introduction Section 2 will discuss the five different driving environments and their components.

The five different driving environments The five driving environments are:

1. Low-speed, light traffic (i.e. residential)
2. Moderate speed, light traffic (i.e. open highway/rural)
3. Moderate speed, dense traffic (i.e. suburban/urban/ business district)
4. High speed, moderate and heavy traffic (i.e. expressway)
5. Night driving

- Low-speed, light traffic (residential) environment
- Low-speed, light traffic (residential) environment description.
 - Minimal traffic.
 - Low speeds (5-25mph)
 - Traffic controls consist mainly of pavement markings and signs.
 - Two-way and one-way streets.
 - Open and blind intersections.
 - Low-speed, light traffic (residential) objectives. Suggested maneuvers or skills include:
 - Entering/leaving the flow of traffic.
 - Negotiation intersections.
 - Identifying traffic controls.
 - Eye habits and practices (eye searching, checking mirrors, checking over shoulder, looking left, right, left for traffic, looking through turns)
 - Interacting with other users.
 - Negotiating turnabouts
 - Negotiating roundabouts/traffic circles
 - Parking on uphill/downhill grades.
 - Yielding/right-of-way
 - Low-speed, light traffic (residential) learning sets.
 - Lane change maneuvers (entering/leaving traffic)
 - Negotiating intersections
 - Single stops/double stops or safety stop/blind intersections
 - Two-way/one-way streets
 - Left and right turns
 - Negotiating two-point turnabouts
 - Negotiating three-point turnabouts

Section 2: Different Driving Environments

The low-speed, light traffic (i.e. residential) environment

- Anticipated problems and common errors that may occur in the low-speed, light traffic (i.e. residential) environment.
 - Failing to check blind spot on lane changes.
 - Failing to check mirror at least once each block.
 - Improper lane position for intersection maneuvers (one-way and two-way streets).
 - Failing to stop properly.
 - Failing to stop for pedestrians.
 - Waiting to turn left with wheels pointed left.
 - Failing to search two-three times properly.
 - Failing to sight through turns.
 - Failing to follow curb radius on right turns.
 - Dry steering turnabouts.
 - Failing to recognize and obey signs, signals and pavement markings.

- Low-speed, light traffic (i.e. residential) learning activities.
 - Check licenses or permits, as applicable.
 - Introduction to the lesson. Describe the environment and objective that needs accomplished.
 - Introduce learning activities for observers. This may include the checklist for basic maneuvers or observation check sheet for eye habits (from the approved curricula).
 - End of lesson summarize students strong/weak points.

Activity

Activity #3: Components of Low Speed, Light Traffic (Residential Driving)

Your instructor will lead a discussion on the main components of residential driving. You will then view a video on driving in a residential environment and relate your previous discussion on the main components of residential driving to what was shown in the video.

Section 2: Different Driving Environments

Moderate speed, light traffic (i.e. Open highway/rural)

- Moderate speed, light traffic (Open highway) description.
 - Variable speeds (35-55).
 - Moderate traffic.
 - Variable sight distance.
 - Various traffic controls.
 - Multiple lanes.
 - Shopping centers.

- Moderate speed, light traffic (Rural) description.
 - Variable speeds (35-55).
 - Moderate traffic.
 - Variable lane widths.
 - Hill and curves.
 - Limited space.
 - Limited sight distance.
 - Limited pavement markings and traffic controls.

- Moderate speed, light traffic (Open highway/rural) objectives.
Suggested maneuvers or skills include:
 - Vehicle control.
 - Sight distance.
 - Identifying traffic controls.
 - Lane selections and positioning
 - Gap selection.
 - Communicating
 - Moving lane changes.
 - Negotiating shopping centers.

- Anticipated problems and common errors that may occur in the moderate speed, light traffic (open highway/rural) environment.
 - Improper speed control.
 - Entering curves too fast.
 - Failing to scan ahead.
 - Dropping off the roadway and onto the shoulder.
 - Failing to use mirrors.
 - Failing to identify traffic controls.
 - Improper lane positioning.

Activity

Activity #4: Components of Moderate Speed, Light Traffic (Open Highway/Rural)

You will view a video on driving in an open highway environment and relate your previous discussion on the main components of open highway driving to what was shown in the video.

Section 2: Different Driving Environments

Moderate speed, dense traffic (i.e. Suburban/Urban/business district)

- Moderate speed, dense traffic (i.e. Suburban /Urban/business district) description.
 - Maximum number of users.
 - Reduced speeds (25-35mph).
 - Multiple traffic lanes and intersections.
 - Complex intersections.
 - Limited space and visibility.
 - One-way/two-way streets.
 - Alleyways.
 - Multiple traffic control devices.
 - Parking garages.

- Moderate speed, dense traffic (i.e. Suburban /Urban/business district) objectives.

Suggested maneuvers or skills include:

 - Systematic search patterns.
 - Visual search and identification.
 - Interacting with a large number of users.
 - Negotiating a variety of intersections.
 - Designated turn lanes.
 - Roundabouts.
 - Using parking garages.
 - Maintaining space.
 - Timing.
 - Selecting path of travel.
 - Communicating.
 - Parallel parking/Angle parking/Perpendicular parking.
 - Backing.
 - Responding to traffic control devices.

- Anticipated problems and common errors that may occur in the moderate speed, dense traffic (i.e. Suburban /Urban/business district).
 - Improper lane change procedures.
 - Improper lane selection or path of travel.
 - Failing to search ahead and at intersections.
 - Failing to scan through turns.
 - Speed control.
 - Not communicating.
 - Failure to respond to traffic control devices.
 - Failing to stop for pedestrians.
 - Improper lane changes procedures.

Section 2: Different Driving Environments

Activity

Activity #5: Components of a Moderate Speed, Dense Traffic (Suburban/Urban/Business District) Environment

Your instructor will lead a discussion on the main components of a suburban/urban environment. You will then view a video on driving in a suburban/urban environment and relate your previous discussion on the main components of suburban/urban driving to what was shown in the video.

Section 2: Different Driving Environments

High speed, moderate and heavy traffic (i.e. Expressway) environment

- High speed, moderate and heavy traffic (i.e. Expressway) description.
 - High speeds (55-70mph)
 - Divided by some barrier.
 - Moderate to high volume of traffic
 - Variety of exchanges.
 - Limited access.
- High speed, moderate and heavy traffic (i.e. Expressway) objectives.
Suggested maneuvers or skills include:
 - Entering and exiting.
 - Interacting with other users.
 - Identifying critical areas.
 - Sign usage.
 - Speed control.
 - Steering control.
 - Passing without exceeding the speed limit.
- Anticipated problems and common errors that may occur in the high speed, moderate and heavy traffic (i.e. Expressway).
 - Fluctuation in speed.
 - Poorly paced lane changes.
 - Improper use of exit and entrance ramps.
 - Improper lane change procedures.
 - Failure to scan well in advance.

Activity

Activity #6: Components of High speed, moderate and heavy traffic (i.e. Expressway)

Your instructor will lead a discussion on the main components of an expressway environment. You will then view a video on driving in an expressway environment and relate your previous discussion on the main components of expressway driving to what was shown in the video.

Section 2: Different Driving Environments

Night driving Night driving is one driving condition that should be included in driver education instruction if possible. Characteristics are the same as those with other routes, but with significantly reduced visibility.

Objectives for night driving:

- Preparing to drive (clean windshield).
- Searching and evaluating with the use of headlights.
- Speed control and tracking
- Reducing the risks at night with high/low beam use and speed control.

Night driving environments should progress from lighter to heavier traffic areas.

Activity

Activity #7: Components of Night Driving

Your instructor will lead a discussion on the main components of night driving. You will then view a video on driving at night and relate your previous discussion on the main components of night driving to what was shown in the video.

Section 2
Summary

This section covered the five different driving environments and their components.

Section 3: On-Street Route Development

Introduction

Section 3 will discuss how to develop on-street routes.

Guidelines for on-street route development

1. Always work from the simple to the more complex environments.
2. All lessons must start and end at a set location, preferably the driving school.
3. The characteristics of the environment must match with the objectives in the lesson plan.
4. Every on-street route must allow for:
 - An introduction.
 - A demonstration of skills.
 - Repetitious practice.
 - Assessments.
5. The instructor must be very familiar with the routes. The routes will be pre-planned and utilized for all courses.
6. Each route must contain:
 - Ideally twenty to thirty instructional minutes per student, but no more than ninety minutes per student.
 - Time for directions.
 - Static and dynamic situations.
 - Simple to complex situations

Section 3: On-Street Route Development

Steps for setting up a route

1. Get a large map that shows streets and secondary roads in the area you want the route(s). (Note: You should have a pre-planned back-up route to use in case your normal route becomes blocked.)
2. If you are not familiar with the area, try to enlist the assistance of someone who is.
3. Lay out a route on the map (or a copy of the map).
 - Start at the driving school.
 - Then begin to fill in the places for the desired maneuvers.
4. Drive the potential route several times to see if the maneuvers will meet the requirements.
 - Look for locations for the maneuvers you could not locate on a map.
5. Repeat steps 3 and 4 until you are satisfied that you have a complete route.
6. Make a final tour of the route and note where you would give the driver directions for each maneuver and for general travel.

Section 3: On-Street Route Development

Steps for setting up a route

7. Make a list of the environments on the route.
 - For each environment give:
 - the type of maneuver
 - the location
 - the point at which the directions are to be given; and
 - the directions to be given to the driver
 - Depending on how familiar you are with the area, it often takes one to two days to set up a good route.
 - There is no minimum or maximum length for the route.
 - The route is adequate when it allows the driver to meet the objectives of the behind-the-wheel lesson plan.
 - You can modify the route to make it more efficient.
 - You should have an alternate route in case of construction or traffic jams.
 8. As you become an established instructor you may need to pick students up at their home or other designated points. You will need to be completely familiar with the local area and lesson plan objectives. Considerable planning and preparation will be required.
-

Activity

Activity #8: Developing Routes

Your instructor will assist you in using a local map or google map to practice designing a route.

Identify general areas that will help to meet the in-vehicle lesson plan objectives.

Identify your starting and ending point as well as locations to change drivers.

Section 3
Summary

This section covered the guidelines for how to develop on-street routes.

Section 4: Behind-the-Wheel Activity

Introduction Section 4 will give you practice learning the driving routes for your teaching assignments.

Note: Take this section with you to the vehicle.

Purpose The purpose of the behind-the-wheel activity is to give you practice learning the driving routes for your teaching assignments.

Objectives By the end of this activity, you will be able to:

- Utilize pre-planned on-street driving route(s) to conduct behind-the-wheel lesson (s).
- Utilize sample in-vehicle lesson plan(s) to conduct behind-the-wheel lesson(s).
- Describe the different driving environments.

BTW Activity You will perform the following activities in the vehicle:

Practice driving pre-planned routes for your teaching assignments in this course.

Materials Needed

- Clipboard
- Pens / pencils
- Pre-planned driving route(s)
- Sample lesson plan(s)
- This page

Section 4 Summary This section provided practice driving pre-planned driving routes for your teaching assignments.

Module Summary

Module Summary

The purpose of this module was to give you an understanding of the in-vehicle instruction lesson plan structure.

By the end of this module, you will be able to:

- Modify and utilize lesson plans for on-street instruction, based on lesson plan objectives.
- Describe the five different driving environments.
- Modify and utilize on-street driving routes for all environments and for evaluation.
- Describe the importance of planning for night driving in driver education.

The information presented in this module is essential for helping you modify and utilize BTW lesson plans and driving routes, understand the different driving environments, and the importance of night driving in driver education.

Key Words

The following “Key Words” were introduced and defined during the lesson.

Expressway	Off-street lessons	Open highway/rural
Residential	Night driving	Suburban, Urban/business district

Module Review Activity

Module Review Activity **Key Words Matchup**

On the line below, write the letter of the associated key word.

A. Expressway	B. Off-street lessons	C. Open highway/ rural
D. Residential	E. Night driving	F. Suburban/urban/ business district

1. _____ Driving skills needed before driving in the various on-street environments.
2. _____ Driving environment with minimal traffic and speeds of 5-25 mph.
3. _____ Driving environment with light traffic and speeds of 35-50 mph.
4. _____ Driving environment with maximum number of users and speeds of 25-35 mph.
5. _____ Driving environment with moderate to high volume of traffic and speeds 55-70 mph.
6. _____ Driving condition with significantly reduced visibility with the same characteristics as those with other routes.

Summary Sheet

Summary Sheet

Lesson Plan Format

The cover page of each lesson plan shall include overall goals or objectives, the required entry level for the lesson will be described, any resources that are needed to teach the lesson and assignments or reading for the lesson.

Each instructional objective shall include content for the instructional objective, learning activities, anticipated problems and method of evaluation. After the instructional objectives a copy of the route will be attached to the lesson plan.

Off-street lessons are driving skills needed before driving in the various on-street environments (parking lots and multiple-car driving ranges).

Different Driving Environments

The five driving environments are:

1. Low-speed, light traffic (i.e. residential) – speeds of 5-25 mph, few traffic controls
2. Moderate speed, light traffic (i.e. open highway/rural) - speeds of 35-50 mph, variable sight distance, multiple lanes
3. Moderate speed, dense traffic (i.e. suburban/urban/ business district) – speeds of 25-35 mph, maximum number of users, multiple traffic lanes and intersections
4. High speed, moderate and heavy traffic (i.e. expressway) – speeds of 55 – 70 mph, variety of exchanges, limited access
5. Night driving - provides significantly reduced visibility.

On-Street Route Development

- Always work from the simple to the more complex environments.
- The characteristics of the environment should match with the objectives in the lesson plan.
- Every on-street route should allow for:
 - An introduction.
 - A demonstration of skills.
 - Repetitious practice.
 - Assessments.
- The instructor should be very familiar with the routes.
- Each route should contain:
 - Twenty to thirty instructional minutes per student.
 - Time for directions.
 - Static and dynamic situations.
 - Simple to complex situations

Module 2

Managing the Mobile Classroom



Module Contents

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Module Overview

Module Overview

1. Prior to this module, we discussed in-vehicle lesson plans.
2. This module is titled “Managing the Mobile Classroom.”
3. The purpose of this module is to teach you how to manage the BTW portion of a driver education class through proper procedures for giving directions, using instructor mirrors, dealing with challenges during in-vehicle instruction, when to change drivers and observer responsibilities.
4. This module will cover five topics:
 - Preparing to drive
 - Giving directions
 - How to use instructor mirrors
 - Challenges to in-vehicle training
 - Changing drivers and observer responsibilities
5. By the end of this module, you will be able to:
 - Describe the vehicle and occupant safety checks necessary in preparing for a lesson.
 - Describe how to give directions that are understandable.
 - Demonstrate how to utilize instructor mirrors.
 - Address learning/physical challenges during in-vehicle training.
 - Explain how to manage multiple tasks while conducting BTW instruction and manage distractions.
 - Describe proper locations to change drivers on street.
 - Describe the proper driver rotation process.
6. During the module, you will be required to participate in group discussion and activities. At the end of the module you will participate in a BTW activity to demonstrate your understanding of the content.
7. During the module, you will be evaluated through questions and answers. There will be a 10-question quiz at the end of the module which you must complete with at least 80% accuracy.
8. This module will last approximately 2 hours in the classroom and 2 hours behind-the-wheel.
9. This module will teach you the proper procedures for giving directions, using instructor mirrors, challenges, changing drivers and observer responsibilities while teaching in-vehicle instruction.

Key Words:

You will learn the following key words and their meaning as you proceed through this module:

Driver rotation	Multiple tasks	Observers
Distractions	Instructor eye mirror	Instructor rearview mirror

Section 1: Preparing to Drive

Introduction Section 1 will discuss the procedures that must be followed when getting ready to teach an in-vehicle lesson.

- Procedures for Teaching an In-Vehicle Lesson
1. Check the student's permit/license, if required.
 - Is the license/permit valid?
 - What are the restrictions?
 - When does it expire?
 - Address issues on student health/medical form.
 2. Select a first driver based either on skill level or student rotation, if applicable. May not be feasible if provided a driving schedule.
 - Is the student capable of driving the vehicle to the desired environment?
 - If the student drivers are not competent to drive to the environment the instructor shall drive the vehicle to the desired environment.
 3. Always begin the lesson with a lesson overview while standing outside the driver education vehicle.
 - Provide a quick review of the preceding session.
 - State the lesson objectives (relate to classroom lesson). Make sure the student driver and observer understand the objectives of the lesson.
 - Type of traffic environment.
 - General description of route.
 - Explain the benefits of the lesson.
 - Explain observer activity sheets.
 4. Instructor must be seated in the proper position to instruct the lesson.
 - Body should be positioned towards driver.
 - Right leg should be able to reach instructors pedal.
 - Left hand should be used as a brace or to take emergency action.

Section 1: Preparing to Drive

Procedures for Teaching an In-Vehicle Lesson

5. Check the dual instructor brake before beginning the lesson.
 - Is the safety pin disengaged?
 - Is the cable in good condition?
 - When the vehicle is moving will it stop the vehicle?
6. If the vehicle has a center pull emergency brake does it work?
 - Used only as a back up to the instructor's brake.
 - Can cause rear wheel lock if used improperly.
7. Setting of the instructor's mirrors before beginning the lesson.
 - Make sure they will not block driver's vision.
 - Eye check mirror should be placed on the windshield where the instructor can see the student's eye movements.

Section 1 Summary

This section covered the procedures that must be followed when getting ready to teach an in-vehicle lesson.

Section 2: Giving Directions

Introduction

Section 2 will discuss the guidelines for giving directions.

The guidelines for giving directions

1. Always begin the lesson with a lesson overview and provide a general description of the route.
2. Directions influence the driver's performance and evaluation results by:
 - What is said to the driver.
 - How it is said.
 - Where or when it is used.
3. The main objectives that must be remembered when giving directions by the instructor are:
 - Write out the directions to negotiate a route, which will minimize misunderstanding.
 - Verbalize directions slowly in order to maximize hearing and understanding of the direction.
 - Talk loudly so the student can clearly hear the directions.
 - Identify where/when directions should be given that minimize driver overload.
4. If directions are to be followed they must be:
 - Short and concise.
 - As few as possible.
 - When possible, avoid giving directions for two maneuvers at the same time.
 - Easy to state and remember.
 - In a way that is natural for you.
 - Easy for you and the driver to remember.
 - Easy to understand and follow.
 - Stated as commands, not requests.
 - Precisely what the driver is to do.
 - In common language, avoid slang terms.
 - Directions must be consistent.
 - Don't change style to avoid repetition
 - Directions for similar situations should be stated in the same form.

Section 2: Giving Directions

The guidelines for giving directions – continued

5. Various methods of giving directions must be followed.
 - Consciously plan the terminology and specific directions.
 - Select the time and location where you can safely obtain the driver's attention.
 - Get the drivers attention before giving the direction.
 - Check for understanding once the directions are given.
 - Where/when to begin the direction.
 - Redirect when necessary.
 - Ask student to verbalize directions.

6. Techniques to ensure the driver will follow the directions properly.
 - Anticipate which drivers may have or are going to have problems. Such as:
 - Searching
 - Steering too much or too little
 - Braking too much or not enough
 - Accelerating too much or not enough
 - Prematurely performing the directions
 - Delaying in performing the direction

 - Remind the students to listen carefully to the directions.
 - Repeat the directions.
 - Students may be nervous and may have difficulties in determining left from right when receiving directions.
 - When giving direction, you can also point in the direction you want the student to turn.

7. Never give more than two directions at one time. Some student drivers may become confused with multiple directions. Break it down in one to two segments as you drive.
 - Directions should be stated in two parts.
 - First, say "**Where**" you want the maneuver done, then, say "**What**" you want the driver to do.

Section 2: Giving Directions

The guidelines
for giving
directions –
continued

8. Use specific terms when giving directions.
 - Avoid using street names
 - The location of street names will vary.
 - Street signs may not be there at all.
 - Street signs are small and hard to identify.
 - You can use well-marked highway or interstate route markers.
 - State the route number.
 - State the direction of travel (North, South, West, East) only if needed.
 - State the major city in either direction.
 - Use designations such as:
 - Next intersection
 - Next major intersection
 - Next controlled intersection
 - First crossroad
 - Next stop sign
 - Next traffic signal
 - Second traffic signal
 - Following street
 - End of road
 - Directions should be started with a prepositional phrase such as:
 - “At the...” (Where the location is visible)
 - “Go to the ...” (When the location is visible)
 - “Continue to the ...” (When the location is not visible)
 - Avoid double –meaning or confusing words such as:
 - Right – say correct
 - Straight – say ahead or forward
 - Red light – traffic signal
 - Slang – for the action you want: “step on it, OK.”
 - Improper phrases: “right **hand** turn,” “left **hand** turn.”
 - Curve vs. a Turn

Section 2: Giving Directions

The guidelines for giving directions – continued

9. How to give directions is critical in the driver's performance.
 - Talk loudly and clearly to the driver.
 - Talk at a normal talking rate.
 - Pause between the “where/when” and the “what” components of the directions.
 - If you have a long distance to go, use a standard phrase such as “continue ahead until I give you further directions.”

10. When/where to give directions.
 - Use a location that is easy to remember.
 - Physical landmarks that don't change.
 - Give the direction as soon as the driver has completed the tasks associated with your last direction if the next action is to follow immediately.
 - Depending on the distance to be traveled, time your directions to coordinate with the needed action.

 - Use a location that gives the driver time and distance to prepare to follow the direction.
 - Given well in advance.
 - Driver may not hear or understand the directions.
 - May be necessary to repeat the direction.
 - Know the route and area of instruction well. Have a plan B if a turn is missed or needs to be aborted. The plan B will allow easy access back to the planned route.

 - Use a cue that is obvious and will not change over time.

 - Avoid giving directions when the driver:
 - Is busy performing a maneuver.
 - Needs to be attentive to environment or traffic conditions.

 - Discuss the factors that need to be considered where giving directions.
 - The terrain (hills, curves, etc.)
 - Roadway configuration (curves, bridges)
 - Existing hazards that reduce visibility.
 - The speed of the vehicle.
 - The volume and speed of other traffic.
 - Roadway signs and signals.
 - Types of roadway and environments.
 - Sightlines.

Section 2: Giving Directions

Summary of giving directions

- The same for every driver, unless a student is not catching on or slow to respond, you may need to adjust the way you give directions.
- Short/concise directions.
- Easy to state and remember.
- Easy to understand and follow.
- Same style and similar content.
- “Where” first, then “what”.
- Given clearly and early.
- Timed for repeat if necessary.
- Timed so not to overload the driver.

Activity

Activity #1: Giving Directions

Your instructor will show you a series of slides for you to demonstrate how to give directions for the various scenarios.

Section 2
Summary

This section covered the guidelines for giving directions.

Section 3: How to Use Mirrors During In-Vehicle Instruction

Introduction Section 3 will discuss how to utilize the instructor rear view mirror and eye mirror.

How to use an instructor's rearview mirror during in-vehicle instruction Take care to select mirrors that are designed to reduce potential hazards, such as sharp edges and protruding parts. Look for devices that have protective materials around them and shatter proof mirrors and mounting brackets.

Instructor's Rearview Mirror

The instructor's rearview mirror should be fastened on the inside of the windshield with suction cups and positioned so that the instructor can see to the rear of the vehicle with a quick glance. Use a small amount of glycerin to spread a thin layer on the suction cup of the mirror to help adhere to the windshield.

Avoid areas in the vehicle where the mirrors might be impacted by the vehicle's airbags in a crash, thereby propelling the mirrors into the instructor and/or students.

Section 3: How to Use Mirrors During In-Vehicle Instruction

How to use an instructor's eye mirror during in-vehicle instruction

Instructor's Eye Mirror

1. The mirrors used to monitor a driver's visual glance behavior are typically a 2 ½" by 6" or 6.5 cm by 15 cm flat mirror. This size is sufficient to allow their use in any passenger vehicle.
2. Flat mirror glass is used since any degree of convexity will reduce the definition of the image and consequently the resolution and information available. Choose an eye mirror of good quality that employs a suction base with a swivel joint that allows for sufficient degrees of rotation to work on all windshields, especially those with considerable slope.
3. An instructor's eye mirror should be fastened to the windshield in a position where the instructor can see the student's eye movements.
4. An instructor eye mirror allows the instructor to see at a glance where the student is looking and where the student is searching and tracking. A fixed stare, failure to check blind spots before moving to a new lane, failure to check to the rear before slowing down, etc. are easily detected, allowing the instructor to coach the student until the correct habits are in place. The mirror should be a flat mirror.
5. Ideally, the eye mirror should be positioned low on the windshield. It must be low enough that it will not block the driver's sightline to anything of significance in the forward field of view; but high enough that the driver's hands positioned on the wheel will not obstruct the instructor's view of their eye movements.
6. In a passenger vehicle, the eye mirror is typically placed on or slightly left of the windshield centerline. Positions significantly to the right of this will decrease the quality of information available to the instructor.
7. The windshield must be clean to ensure the suction of the base is sufficient to preclude the possibility of the mirror falling off. Any good quality glass cleaner should work well. Typically, the mirror may need to be reattached twice a year.

Section 3: How to Use Mirrors During In-Vehicle Instruction

Steps to properly place and use an instructor's eye mirror

Properly place the eye mirror to allow the instructor to see student eye movements by:

- Properly adjusting the instructor's seat.
- Place the eye mirror in a location on the windshield where the instructor can see the student's eye movements.
- Adjusting the eye mirror so the instructor can see the student's eyes while they are in the proper instructor position.
- Observe the student's eye movements.
- Tell the student where to look to see properly.

Activity

Activity #2: Using Instructor Rearview and Eye Mirrors

Your instructor will take you outside to the driver education vehicles to have you determine where to place and practice securing eye and instructor's mirrors.

Note: Details on how to use eye mirrors will be covered later in the BTW activity.

Section 3
Summary

This section covered how to utilize the instructor rear view mirror and eye mirror during in-vehicle instruction.

Section 4: Challenges to In-Vehicle Training

Introduction Section 4 will discuss challenges to in-vehicle training, including addressing learning/physical disabilities, managing multiple tasks and managing distractions in the vehicle.

Relationship and Referral of the Driver Rehabilitation Specialist Driver education schools and instructors should have a relationship with their local Driver Rehabilitation Specialist(s). These specialists are properly trained to assist persons with disabilities in learning to drive. In consultation with the parent(s), the student should be referred to a qualified Driver Rehabilitation Specialist.

- Never deny a person training because of a disability.
- Do not try to teach a student with certain types of disabilities that you are not qualified to teach.
- Personally facilitate the referral of the person to a qualified Driver Rehabilitation Specialist.

Addressing learning/physical challenges during in-vehicle training Some students may have different types of learning, cognitive or physical disabilities. Some disabilities may not be as apparent as others.

- Learning disabilities: Are more common, such as attention deficit disorder (ADD), attention deficit hyperactivity disorder (ADHD), Autism/Asperger's and dyslexia.
 - Use diagrams and visuals prior to driving to explain maneuvers.
 - Make instructions clear and specific.
 - Be patient and consistent.
- Cognitive disabilities: when a person has greater difficulty with one or more types of mental tasks than the average person.
 - While learning disabilities are a type of cognitive or developmental disability, there are many other types of cognitive and developmental disabilities. They can occur from tumors, strokes, head injuries, infections, etc. Notice any type of difficulties to mentally process tasks such as the driving task.
- Physical disabilities: when a person has the lack of adequate power or strength than the average person.
 - Notice any difference in gait or walk. Instructor should be very aware of any limp or difference in limbs. Causes could be stroke at birth, Cerebral Palsy, amputation, spinal cord injury, etc.
 - For persons with minor physical disabilities: During the in-vehicle instruction pedal extenders or other adaptive devices may need to be used.

Section 4: Challenges to In-Vehicle Training

The American's with Disabilities Act

The American's with Disabilities Act requires that services should be available to everyone, even those with disabilities. As an instructor, you should perform to your fullest ability to assist in providing driver education to an individual with disabilities.

The purpose of the American's with Disabilities Act is to provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities. A physical or mental disability in no way diminishes a person's right to fully participate in aspects of society.

Higher level disabilities should be referred to a driver rehabilitation specialist. The driver education instructor should assist in coordinating and assisting with this referral.

There must be reasonable accommodations. For example, the student taking the classroom portion of the course and via a referral to a driver rehabilitation specialist the in-vehicle training portion could be provided.

How to manage multiple tasks while conducting in-vehicle training

The instructor candidate must learn to manage multiple tasks while instructing:

- To supervise student instruction.
- Maintain control of the instructional vehicle.
- Maintain situational awareness.
- Coordinate instruction of the driving route.
- Engage the student observers in the back seat during the driving lesson.

To manage multiple tasks while instructing, you should:

- Have the lesson and car prepared and routes established.
- Preview the lesson to be taught with your students so that they have a better understanding of the lesson and so they can operate more naturally.
- Make sure your cell phone is turned off, put away and out of reach during instruction.
- Pay close attention to the action of the student driver and envision yourself as the driver to maintain vehicle control by looking ahead as far as possible.

Section 4: Challenges to In-Vehicle Training

How to manage distractions while conducting in-vehicle instruction

- The instructor candidate must manage the distractions inside and outside of a vehicle.
- The instructor candidate does this by being alert to potential distractions so he/she can prepare the students driving and tell them how to control their actions in response to the distraction prior to the occurrence.
- To manage distractions in the vehicle while conducting in-vehicle training instruction you should:
 - Pre-plan your lesson and driving routes.
 - Drive the driving route prior to the lesson during the time period you will be teaching the lesson to your students to determine the types of distractions that may be found on the route.
 - Alert your students of potential distractions that may occur inside and outside of your car during your lesson and discuss possible countermeasures.
 - Eliminate distractions in the car by placing any student materials, e.g. books, bags, telephones, computers, etc. out of the car's passenger compartment.
 - Set ground rules for the students.
 - Make sure electronic components (cell phone, tablet, etc.) are turned off and stored away.
 - Make sure conversation is focused on driving.
 - Practice distraction reducing strategies with your students.

Section 4
Summary

This section covered challenges to in-vehicle training, including addressing learning/physical disabilities, managing multiple tasks and managing distractions in the vehicle.

Section 5: Changing Drivers and Observer Responsibilities

Introduction Section 5 will discuss the driver rotation process and the procedures for changing drivers.

Driver rotation and observer responsibilities

1. Inform observer(s) of responsibilities, if applicable.
 - Inform the observers what they should be doing while driving in the backseat of the vehicle. Observers should have a clear understanding of their responsibilities before the lesson.
 - Observers should be active while in the vehicle and observe the student driver. The observer should complete an observation form noting vehicle speed and position changes.
 - Check flow of traffic before allowing observers to exit vehicle. It is the instructor's responsibility to ensure it safe to exit the vehicle.
2. Identify a time to change drivers.
 - Ideally allow twenty to thirty minutes for each student, but **no more than** ninety minutes per day. **[Insert state specific information on maximum length of drive.]**
3. Identify a safe location for changing drivers.
 - Parking lots are the easiest and safest.
4. Identify how to position students.
 - Depending on environment, students with better road skill should drive first.

Section 5: Changing Drivers and Observer Responsibilities

Changing drivers

1. Choose a safe location to change drivers and include in the pre-planned route.
 - Use public parking areas unless you have permission from the private property owners.
 - Be certain it is a safe area with limited traffic.
 - Have a good sight distance ahead and behind (not around curves or over hills).
 - Pull completely off the roadway (parking lot is the best).
 - If beside the roadway, the backseat passengers should enter/exit from passenger side if possible.

Section 5 Summary

This section covered the driver rotation process and the procedures for changing drivers.

Section 6: Behind-the-Wheel Activity

Introduction Section 6 will allow you to work with your instructor in the vehicle to practice driving the route and giving directions.

Note: Take this section with you to the vehicle.

Purpose The purpose of the BTW activity is to manage the mobile classroom and give directions.

Objectives By the end of this activity, you will be able to:

- Conduct the vehicle and occupant safety checks.
- Give directions that are understandable.
- Demonstrate how to utilize instructor mirrors.
- Demonstrate how to manage multiple tasks and distractions.
- Demonstrate how to change drivers on street.
- Demonstrate how to engaging observers.

BTW Activity The following activities should be completed:

- Using an on-street route and lesson plans developed by the instructor you will practice:
 - driving the route;
 - managing the mobile classroom and
 - giving directions for the route.

Checklist for completion:

- Perform pre-drive procedures.
- Use correct terminology.
- Give directions clear and concise.
- Give direction in a timely manner.
- Manage multiple tasks in the vehicle.
- Manage distractions in the back seat.
- Use instructor rearview and eye check mirrors.
- Rotate drivers in a safe place and at the correct time.
- If applicable, engage back seat observer.

Materials Needed

- Clipboard
- Pens / pencils
- Sample driving route(s)
- Sample lesson plan(s)
- This page

Section 6 Summary This section provided the opportunity to demonstrate how to drive the route, manage the mobile classroom and give directions for the route.

Module Summary

Module Summary

The purpose of this module was to teach you how to manage the BTW portion of a driver education class through proper procedures for giving directions, using instructor mirrors, dealing with challenges during in-vehicle instruction, when to change drivers and observer responsibilities.

This module covered five topics:

- Preparing to drive
- Giving directions
- How to use instructor mirrors
- Challenges to in-vehicle training
- Changing driver s and observer responsibilities

The information presented in this module is essential for teaching you the proper procedures for giving directions, using instructor mirrors, challenges, changing drivers and observer responsibilities while teaching in-vehicle instruction.

Key Words

The following “Key Words” were introduced and defined during the lesson.

Driver rotation	Multiple tasks	Observers
Distractions	Instructor eye mirror	Instructor rearview mirror

Module Review Activity

Module Review
Activity

Key Words Matchup

On the line below, write the letter of the associated key word.

A. Driver rotation	B. Observers	C. Multiple tasks
D. Distractions	E. Instructor eye mirror	F. Instructor rearview mirror

1. _____ Passengers in the vehicle during a behind-the-wheel lesson who receive perceptual practice in how to manage time and space for risk reduction.
2. _____ The divided attention of an individual to other areas inside or outside of the vehicle.
3. _____ Allows the instructor to see at a glance where the student is looking.
4. _____ Changing drivers after 20 – 30 minutes of driving but no more than 90 minutes per day.
5. _____ Allows the instructor to see to the rear of the vehicle with a quick glance.
6. _____ Various responsibilities which need to be completed by the in-vehicle instructor.

Summary Sheet

Summary Sheet

Preparing to Drive

1. Check the student's permit/license.
2. Select a first driver based either on skill level or student rotation.
3. Be seated in the proper position to instruct the lesson.
4. Check the dual instructor brake before beginning the lesson.
5. Check the center pull emergency brake, if equipped.
6. Set the instructor's mirrors before beginning the lesson, including eye mirror.
7. Begin the lesson with a lesson overview while standing outside the driver education vehicle.

Guidelines for Giving Directions

- Write directions to negotiate a route, which will minimize misunderstanding.
- Verbalize directions, which maximize hearing and understanding of the direction.
- Identify where/when directions should be given that minimize driver overload.

Directions should be short and concise, easy to state and remember, easy to understand and follow, and consistent.

Before giving directions consciously plan the directions, get the drivers attention, and check for understanding once the directions are given.

To ensure the driver will follow the directions properly anticipate when drivers may have or are going to have problems, remind the students to listen carefully to the directions, and repeat the directions. Never give more than two directions at one time. Some student drivers may become confused with multiple directions.

When giving directions avoid using street names, but you can use well-marked highway or interstate route markers. Use destinations such as next intersection, first crossroad, second traffic light, the following street or end of road.

Directions should be started with a prepositional phrase such as, at the, go to the, continue to the...

Avoid double meaning or confusing words such as, right, straight, and red light.

Summary Sheet

Summary
Sheet –
continued

Guidelines for Giving Directions continued

How you give directions is critical in the driver's performance. Make sure you talk loudly and clearly and pause between the "where/when" and the "what" components of the directions. Use a location that is easy to remember and a location that gives the driver time and distance to prepare to follow the direction.

Avoid giving directions when the driver is busy performing a maneuver or needs to be attentive to environment or traffic conditions.

Using Instructor mirrors

- **Instructor rearview mirror** – Allows the instructor to see to the rear of the vehicle with a quick glance and should be fastened on the inside of the windshield.
- **Eye mirror** – Fastened to the windshield in a position where the instructor can see the student's eye movements and where they are searching or tracking.

Challenges to In-Vehicle Training

- **Addressing learning/physical challenges**
 - Use diagrams and visuals prior to driving to explain maneuvers.
 - Make instructions clear and specific.
 - Be patient and consistent.
- **Managing multiple tasks during BTW**
 - To supervise student instruction.
 - Maintain control of the instructional vehicle.
 - Maintain situational awareness.
 - Coordinate instruction of the driving route.
 - Engage the student observers in the back seat during the driving lesson.
- **Managing distractions during BTW**
 - Pre-plan your lesson and driving routes.
 - Drive the driving route prior to the lesson
 - Eliminate distractions in the car
 - Set ground rules for the students.
 - Make sure conversation is focused on driving

Summary Sheet

Summary
Sheet –
continued

Changing Drivers

Allow twenty to thirty minutes for each student, but no more than ninety minutes per day. Parking lots are the easiest and safest place to change drivers. Depending on environment, students with better road skill should drive first. Observers should have a clear understanding of their responsibilities before the lesson. Check flow of traffic before exiting vehicle. It is the instructor's responsibility to ensure it safe to exit the vehicle.

Choose a safe location to change drivers such as a public area with limited traffic and a good sight distance ahead and behind.

Module 3

In-Vehicle Teaching Techniques (Coaching and Correcting)



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Module Overview

Module Overview

1. Prior to this module we discussed managing the mobile classroom.
2. This module is titled “In-Vehicle Teaching Techniques (Coaching and Correcting).”
3. The purpose of this module is to teach the necessary steps for conducting an in-vehicle lesson.
4. This module will cover five topics:
 - In-vehicle teaching techniques
 - Commentary teaching and driving
 - Engaging the non-driving student
 - Coaching the driver
 - Evaluating or summarizing an in-vehicle lesson
5. By the end of this module, you will be able to:
 - Demonstrate the various teaching techniques that can be used in the vehicle to enable learning.
 - Demonstrate how to utilize commentary teaching.
 - Demonstrate how to engage the non-driving student.
 - Demonstrate coaching techniques and features of a good coach.
 - Demonstrate questioning techniques for in-vehicle teaching.
 - Demonstrate how to visually search the roadway ahead and check eye movements of the novice driver.
 - Demonstrate how to summarize the lesson when finished.
6. During the module, you will be required to participate in group discussion and activities lead by the instructor.
7. During the module, you will be evaluated through questions and answers. There will be a 10-point quiz at the end of the module which you must complete with at least 80% accuracy.
8. This module will last approximately 3 hours in the classroom.
9. This module will teach you necessary steps for preparing an in-vehicle lesson.

Key Words:

You will learn the following key words and their meaning as you proceed through this module:

Commentary teaching	Coaching	Coaching by correction
Situational awareness	Positive reinforcement	Student driver commentary

Section 1: In-Vehicle Teaching Techniques

Introduction

Section 1 will discuss the value of questions, how to establish good questions, examples of coaching questions, questioning techniques, tips for active listening and reflecting back.

The value of questions

- They heighten student's involvement.
 - They give the students an opportunity to quickly apply knowledge.
 - They help in the retention of information being learned.
 - They allow students to learn from each other.
 - They provide an opportunity to evaluate how well students are grasping the information.
 - They provide the instructor a means of evaluating how well they are coaching.
 - They provide the instructor a means of monitoring and adjusting their teaching accordingly.
-

How to establish good questions

To raise the awareness of the student and give them responsibility. Questioning techniques are one of the key skills of an instructor.

To establish good questions, utilize these principles:

- Questions should follow the interest of the student and use their words.
- Questions should start broadly and then increasingly focus on detail.
- The instructor should only ask one question at a time.
- Effective questions are clear and concise. Use open questions (what, when, where, who, etc.) which require attention and thought and are non-judgmental.
- Questions can and should focus on the senses (seeing, hearing, touching, etc.), emotions (moods, feelings), attitudes (opinions, values), goals and motives as well as cognitive factors (knowledge, habits).
- Questions can relate current experience to prior experience.

Section 1: In-Vehicle Teaching Techniques

Some basic examples of coaching questions in the context of in-vehicle driver training

- What is your main concern today?
- What do you want to do next?
- Have you done this before?
- How did it go?
- What do you need to know to do this?
- What do you need to particularly watch out for in this situation?
- What can you hear/see/feel?
- What are you feeling at this moment?
- How are you going to deal with this?
- Where are you looking?
- What did you actually do?
- How did you feel in the situation?
- What did you do well?
- What could you do in the future to avoid such a situation?
- What would make it easier for you to do this?

Section 1: In-Vehicle Teaching Techniques

Questioning techniques for in-vehicle teaching

- **Open vs. closed questions** – closed questions are to be answered with yes or no, either or, etc., open questions are those which begin with why, how, when, who, etc.
 - Example for closed: Do you feel nervous?
 - Example for open: How (nervous) do you feel?
- **Non-judgment vs. judgment questions**
 - Example for judgmental: Why did you drive so fast?
 - Example for non-judgmental: What factors did you take into account before deciding on this speed?
- **Questions on sense and body-awareness vs. intellectual questions** – sensory questions can lead to greater awareness of comfort, stress, nerves and excitement.
 - Example: On a scale from 1-10, how stressed are you now? What could you do to reduce stress for let's say one point only?
- **Coaching questions vs. questioning development** – in coaching questions the answer is up to the student. In question developing the learning content is already clear right from the beginning but will be elaborated by asking in order to activate the student.
 - Example for questioning development: What does this traffic sign mean?
 - Example for a coaching question: How stressed do you feel when you enter a roundabout?
- **Questions on internal subject (e.g. feelings, beliefs, self-evaluation, etc.) vs. questions on external facts (e.g. traffic rules, driving techniques, risk perception)**
 - Example for internal question: What signs are there when you are getting tired?
 - Example for external question: What is written in the law about fatigue?

Section 1: In-Vehicle Teaching Techniques

Activity

Activity #1: Questioning Techniques for In-Vehicle Teaching

Convert the questions into the type of question listed.

1. Change “Do you feel nervous?” into an open question.

2. Change “Why did you drive so fast?” into a non-judgmental question.

3. Change “What is written in the law about fatigue?” into an internal question.

Change the instruction into an open question.

4. Instruction: Drive with the safety margin where you feel safe.

Section 1: In-Vehicle Teaching Techniques

Tips for active listening

If the student has the responsibility and decision-making in driver education, the instructor has to listen to make sure the student's needs are being met. This makes listening an important skill for instructors.

Some tips for active listening include:

- Look at the student when they are talking
- Light nodding and friendly facial gestures are useful if the student is shy and needs encouragement
- Do not try to finish off someone's sentence
- Do not cut off the person when he/she is talking, even if you think you have understood the essence of what they are saying

How to reflect back

- Reflecting back is an important method for ensuring that nothing is lost in the questioning and listening process and for summarizing the student's words.
- An instructor could say: "So is it fair to say that your main concern today is to gain more experience turning left at intersections?"
- This shows you are listening and that the student's input is being appreciated and allows both of you to establish if you are on the same wavelength.
- If reflecting back can summarize the words of the student, this can also help structure their thoughts.

Section 1 Summary

Section 1 discussed questioning techniques, tips for active listening and how to reflect back, which can be used for in-vehicle training.

Section 2: Commentary Teaching / Student Driver and Observer Commentary

Introduction Section 2 will discuss what commentary teaching and student driver commentary is and how it can benefit both the instructor and the student driver.

Commentary teaching techniques

1. **Commentary teaching** – The instructor verbalizes the conditions (restrictions to line of sight, increasing traffic, etc.) and maneuver (speed control or lane position), executed in short bursts, one to two minutes at a time.

- This is used in the initial part of training or when teaching any new procedure.
- It helps to familiarize the students with what they are expected to do and the changes in the roadway by having the instructor verbalize what they are doing.
- Commentary teaching verbalizes both perceptual and psychomotor skills.

Student driver and observer commentary techniques

2. **Student driver and observer commentary** – The student verbalizes the conditions (restrictions to line of sight, increasing traffic, etc.) and their responses.

- Used after the instructor commentaries.
- Helps to evaluate students and aids in their retention by having them verbalize what they are doing and the condition of the roadway.
- Helps the instructor become aware of what the student is thinking and how they plan to respond to the traffic condition.
- Students identify conditions that would cause a change in speed or direction (perception).
- Students can recite selected procedures.
- Students can read the traffic picture aloud.

Both commentary teaching and student driver commentary

Both teaching methods, commentary teaching and student commentary, are very important components to the in-vehicle training process.

- Helps to create interaction.
- Helps students to understand what they need to do.
- Provides sequential steps.
- Aids in retention of information taught.
- Reinforces visual perceptual skills.

Section 2: Commentary Teaching

Activity

Activity #2: Commentary Teaching

Your instructor will guide you through this activity. You will practice using commentary teaching.

Summary

Commentary Teaching and Student Commentary are critical components to the in-vehicle training process.

They create a dialog in the teaching and learning process between the instructor and student.

With practice, you will become proficient conducting both Commentary Teaching and Student Commentary.

Section 2
Summary

This section covered commentary teaching and driving and how it can benefit both the instructor and the student driver.

Section 3: Engaging the Non-Driving Students

Introduction Section 3 will identify ways to engage the observers.

-
- Ways to engage the observers
- All students need to be active participants at all time during the in-vehicle training.
 - When one student is driving the other student(s) must be observing and critiquing.
 - Instructors should monitor all the students all the time.
 - Observing students can also be used to provide feedback.
 - Activities can be developed for observing students to keep them busy when not driving the car. Some examples of observer activities include:
 - Have student observers rate the performance of the student driver using an instructor made form.
 - Have student observers imagine they are driving and analyze the differences between what they would do and what the student driver actually does.
 - Have the student observer use commentary driving/student commentary (to add to what they are seeing and would do, but not distract the student driver).
 - Ask student observers to monitor the student driver's use of mirrors, obedience of traffic laws, speed control, etc.
 - Ask student observers questions related to the driving environment and the lesson objectives.
 - Ask the observer the same questions as the driver.

Section 3 Summary This section covered how to engage the non-driving student in the vehicle.

Section 4: Coaching the Driver

Introduction Section 4 will discuss the importance of coaching the student while driving to enable learning and how coaching by correction is an effective way of enabling learning, identifying and meeting goals, raising the awareness and responsibility of the student and addressing internal obstacles.

The definition of coaching

1. Methods where the instructor and student form a partnership in which the instructor, through observation, questioning and feedback, encourages the learner to be him/herself, identify goals, reflect on their experience and develop strategies to meet their driving goals in the future.
2. Coaching is designed to develop the awareness and responsibility of the person being coached, which is important in encouraging safe driving.
3. Driving is a self-paced task which involves constant decision-making and a continual need to make choices. To make the right choices in traffic, a student requires:
 - Self-awareness, e.g. how one's mood or emotions can affect one's driving.
 - Awareness of inner and outer factors, such as the actions of other road users.
 - A sense of responsibility and of the consequences of the student's behavior.
 - Self-confidence to prevent any feeling of inadequacy leading to risky driving behavior.

Summary of Coaching The instructor and student form a partnership. Encourages the learner to:

- be him/herself,
- identify goals,
- reflect on their experience, and
- develop strategies to meet their driving goals in the future.

Section 4: Coaching the Driver

Features of a good coach

Good coaches:

- Allow the student to develop skills through their own practice and experience with guidance and feedback.
- Ignore the small things unless they are a clear safety risk.
- Avoid being an expert and focus on the shared learning environment.
- Once all instructional objectives have been accomplished allow the new driver to make navigation and route decisions (usually occurs after the six hours of instruction).
- Should be aware of their student's abilities, limitations and frustrations. If the student is frustrated or overloaded they should be able to opt out of the activity. This helps build trust. Then they can come back to this activity when they are mentally capable.
- See their role as a mentor.
- Believe that safe driving skills are developed through practice and experience.
- Provide driving experiences that promote improvement from lesson one to the final drive.

Section 4: Coaching the Driver

Activity

Activity #3: Coaching Your Peers

Your instructor will place you in small groups and provide you with the written description of a task that they want you to teach. Then you will have to coach the remainder of your peer group through the activity. When all IC's complete the "coaching" task, the group will discuss how they might have been better "coached" in the activity.

Section 4: Coaching the Driver

The importance of coaching the student while driving to enable learning

1. In-vehicle instructors should identify a driver's mistakes.
 - Positive comments should always be given to build confidence.
2. In-vehicle instructors should take it a step further and explain to the driver how to correct the mistake, so that driver success can be achieved.

How coaching by correction is an effective way of enabling learning

1. Instructor must first be able to identify the driver's mistakes.
 - Immediate feedback should be given once the mistake is identified.
 - Pull over safely. Explain the mistake either by way of diagram or verbally and how it can be corrected.
 - Give the driver another opportunity as soon as possible and have student repeat as necessary to build comfort level.

Coaching by correction

Correcting student's mistakes with constructive criticism.

- Never use harsh criticisms.
- Never simply tell them that they have done it wrong.
- Always tell them "how" to do it better next time.
- Try to find something positive to say.
- When a student's performance is deficient, the instructor should point out the problem in a positive, encouraging fashion and let the student try again.
- In providing constructive criticism, the instructor should commend the student for the progress he or she is making, but point out where the remaining deficiencies lie.
- Avoid over coaching. Let students make mistakes as long as they are not dangerous.

Section 4: Coaching the Driver

Positive reinforcement

Telling them that they have done a good job.

- Reinforces the positive behavior so the student will continue to perform the correct behavior or action.
- When a student has been doing poorly and performs with a positive behavior, reinforce that positive behavior by telling him or her they have done well to encourage improvement.
- Instructors should tell students they have done well when they have performed well.

How both coaching by correction and positive reinforcement are critical components to the training process

Both “coaching by correction” and “positive reinforcement” are critical components to the training process.

- Coaching is an integral part of the training process.
- Coaching should occur throughout the training process.

Leading the student into an active role

- The big challenge of coaching is to lead the student out of the role of a passive learner and into the role of an active learner.
- The more active a person is involved in the learning process, the more responsibly and awareness we create and the better we recognize learning opportunities and the will to act upon them.
- Summary – the more active the student is in the learning process, the more likely they are to develop and maintain skills, not just during training but also when driving.

Section 4: Coaching the Driver

Visual search habits and eye movement of driver during in-vehicle instruction

1. Develop a regular search and scanning pattern.
2. Maintain a 12-15 second path of travel.
3. Use a left, center, right search pattern.
4. Rear view mirror checks should be made on a regular basis.
5. Head checks need to be made in the direction of a planned vehicle movement prior to changing the path of travel to be certain the new path is clear of obstacles in the area around the vehicle, which are called "blind spots."
6. Scan eye check mirror to make sure the student is scanning the roadway ahead and to the sides as well.

Section 4: Coaching the Driver

Situational awareness

- The instructor candidate must be alert to environmental and sociological situations the student driver will need to respond to for safe control of the vehicle:
 - Vehicle movement
 - Weather conditions
 - Roadway and condition changes
 - Emergency vehicles
 - Pedestrian activities
 - In-vehicle student interactions
 - Other roadway users or situations that might arise

Section 4: Coaching the Driver

Identifying and meeting goals

1. Goals must fit the needs of traffic safety.
2. Goals could be the overall goal, “what do I hope to achieve as a result of the training?” or specific goals, within each lesson.
3. The student should fully accept the goals and ensure the student subscribes to the basic goals of training (safe, social and environmentally conscious driving).
4. It is important that the goals meet the needs of the student and addresses concerns from previous lessons before moving onto the next step in the training process.
5. The instructor should encourage the student to identify their own goals, within the limits laid down by the training program and the law.

Section 4: Coaching the Driver

Raising awareness

1. A high state of awareness is required for driving, both in terms of awareness of the outside world (what is happening around me?) and in terms of self-awareness (how do I feel and what do I feel?).
2. To be able to drive safely, you have to be aware of these inner and outer worlds.
3. The instructor can raise awareness of both these worlds, primarily through questioning, i.e. what do you see, what can you hear, how do you feel, what do you feel, etc.?
4. Questions raise awareness in the form of feedback from the environment, your body, your actions and from the car you are driving.

Raising responsibility

1. Safe drivers are responsible drivers. This sense of responsibility can be developed in the driver training process, if the student is empowered to make decisions, choices, identify their own goals, etc.
2. The student should not immediately be able to make decisions which have serious highway safety implications, but the student should feel responsible for their own learning.
3. Students should be given responsibility right from the beginning of the training to get them accustomed to making decisions and choices on their own.

Raising self-acceptance

1. Low self-acceptance is a typical trait of teens. Feelings of inadequacy can lead to compensation in the form of risky behavior, such as showing off in order to try to gain the respect and admiration of others.
2. Low self-acceptance in teens often breeds anxiety and dependence or nervousness and lack of concentration.
3. If the student feels empowered and responsible for the learning process, they recognize the instructor as a partner rather than an instructor and feels they are being listened to and develops a sense of inner self-esteem.

Section 4: Coaching the Driver

Raising awareness through senses and emotions

1. There is too much focus on rational thinking and not enough on the senses and emotions. Senses and emotions are important because:
 - Driving is not just a rational process. People inevitably bring in their lives and emotions into the car with them and it is a highly physical activity.
 - Young drivers are going through a very emotional period in their late teens as they develop into adults and start to experience new freedom. Coaching on an emotional and physical level is important to prepare novice drivers for feelings and emotions they will have in a wide variety of potentially risky situations during solo driving.
 - Self-awareness is an important characteristic of a good driver and can only be developed if the learner recognizes physical sensations and emotions.
 - Being encouraged to learn for oneself, based on emotional, physical and intellectual experiences is considered to have a longer-term impact on learning and well-being than more instruction based teaching techniques.
 - Make sure not to discuss other students.
 - Make sure as an instructor not to discuss personal issues, such as boyfriends/girlfriends, relationships, how a student looks today, etc. These are catalysts for a sexual harassment issue. Conversation should be kept on a professional level.

Addressing internal obstacles

1. Internal obstacles are any form of interference inside a person which disrupts the learning process and ability to meet a goal.
2. An internal obstacle to an effective driving lesson could be a concern that the student has from a previous lesson. If this concern is not addressed and the instructor continues with the curriculum the student is unlikely to focus fully on the new goals.
3. A typical coaching question at the beginning of each lesson could be: "What is your main concern today?"

Section 4: Coaching the Driver

Building on prior knowledge and experience

1. Building on prior experience is another important principle to incorporate into driver training and to help set goals.
2. Learning is about connecting new elements with old elements (prior experience) or building blocks on existing blocks.
3. An important principle of coaching is that it doesn't start from scratch. Students bring to driver training a wealth of experience from life and often from driving itself. Many will have driven before and all will have had the opportunity since childhood to observe their parents and others drive. Most students have ridden a bicycle and all have been pedestrians.
4. The driver training process provides experiences, but they must be built on and structured in a process of reflection to ensure what has been learned is sustainable in the future.

Section 4: Coaching the Driver

Authentic, neutral and non-judgmental communication

1. The instructor should be genuinely interested in the world of the student. Instructors have a range of techniques to help students feel that they are being listened to and treated seriously. These include:
 - Repeating sentences
 - Rephrasing and repeating the main ideas
 - Looking at the person
 - Facing them (when you can) rather than standing beside them
2. The instructor needs to be non-judgmental with the student. Direct criticism or blame invokes defensiveness and tension which puts a strain on the relationship and encourages the student to close up.
3. Instructors should avoid only focusing on errors and establishing their authority in pointing them out. To avoid direct criticism:
 - Don't tell the student they have done something wrong. Ask non-judgmental questions about things that went wrong, such as "What do you think happened back there?"
 - Focus on the situation and not the driver's behavior. Try to focus on the specific behavior or situation that was a problem rather than directing a criticism at the driver's ability to drive.
 - Focus on the positives. Always point out what the student is doing well.

Section 4
Summary

This section discussed the definition of coaching, coaching by correction, positive reinforcement, checking visual search habits and eye movement of the driver, being alert to situational awareness, identifying and meeting goals, raising the awareness and responsibility of the student and addressing internal obstacles.

Section 5: Evaluating and Summarizing an In-Vehicle Lesson

Introduction Section 5 will discuss the importance of evaluating and summarizing the in-vehicle lesson when the lesson is finished.

The importance of summarizing the lesson when the lesson is finished

1. Summarize each student's driving performance.
 - Ask the students to assess their driving.
 - Begin with the positives.
 - Constructively correct negatives.
 - End with positives.
 - Suggest improvements.
 - Discuss what will be done in the next lesson.
2. Immediately record the student's performance.
3. Brief the parent or guardian when possible on how well the student is doing and what they need to practice more on.

Section 4
Summary

This section covered the importance of evaluating and summarizing the in-vehicle lesson when finished.

Module Summary

Module Summary

The purpose of this module was to teach students the necessary steps for preparing an in-vehicle lesson.

By the end of this module, you should be able to:

- Demonstrate the various teaching techniques that can be used in the vehicle to enable learning.
- Demonstrate how to utilize commentary teaching.
- Demonstrate how to engage the non-driving student.
- Demonstrate coaching techniques and features of a good coach.
- Demonstrate questioning techniques for in-vehicle teaching.
- Demonstrate how to visually search the roadway ahead and check eye movements of the novice driver.
- Demonstrate how to summarize the lesson when finished.

The information presented in this module is essential for conducting an in-vehicle lesson and learning coaching techniques.

Key Words

The following “Key Words” were introduced and defined during the lesson.

Commentary teaching	Coaching	Coaching by correction
Situational awareness	Positive reinforcement	Student driver commentary

Module Review Activity

Module Review
Activity

Key Words Matchup

On the line below, write the letter of the associated key word.

A. Commentary teaching	B. Coaching	C. Coaching by correction
D. Situational awareness	E. Positive reinforcement	F. Student driver commentary

1. _____ The student verbalizes what they are doing and the condition of the roadway.
2. _____ Telling the student that they have done a good job to reward student for positive behavior.
3. _____ Methods where the instructor and student form a partnership in which the instructor, through observation, questioning and feedback, encourages the learner to be themselves, identify goals, reflect on their experience and develop strategies to meet their driving goals in the future.
4. _____ The instructor verbalizes the lesson and conditions to familiarize the students with what they are expected to do and the condition of the roadway.
5. _____ Environmental and sociological situations the student driver will need to respond to for safe control of the vehicle.
6. _____ Correcting student's mistakes with constructive criticism.

Summary Sheet

Summary
Sheet

Commentary Teaching and Student Commentary

Commentary teaching is when the instructor, in short bursts (one to two minutes only), verbalizes the lesson and conditions to help familiarize the students with what they are expected to do and the condition of the roadway.

Student driver commentary is when the student verbalizes what they are doing and the condition of the roadway.

Both teaching methods, commentary teaching and student driver commentary, are very important components to the initial part of the in-vehicle training process. Both methods help to create interaction and help students to understand what they need to do.

Coaching the Driver

Coaching is a method where the instructor and student form a partnership in which the instructor, through observation, questioning and feedback, encourages the learner to be him/herself, identify goals, reflect on their experience and develop strategies to meet their driving goals in the future.

Coaching by correction is correcting student's mistakes with constructive criticism. In-vehicle instructors should not only identify mistakes made, but provide positive comments and explaining to the driver how to correct the mistake.

Positive reinforcement is telling them they have done a good job and rewards the student for positive behavior.

Summary Sheet

Summary
Sheet –
continued

Coaching Techniques

Leading the student into an active role - The more active a person is involved in the learning process, the more responsibly and awareness we create and the better we recognize learning opportunities and the will to act upon them.

Identifying and meeting goals - It is important that the goals meet the needs of the student and addresses concerns from previous lessons before moving onto the next step in the training process.

Raising awareness - The instructor can raise awareness of both inner and outer worlds, primarily through questioning, i.e. what do you see, what can you hear, how do you feel, what do you feel, etc.?

Raising responsibility - The student should not immediately be able to make decisions which have serious highway safety implications, but the student should feel responsible for their own learning.

Raising self-acceptance - If the student feels empowered and responsible for the learning process, they recognize the instructor as a partner rather than an instructor and feels they are being listened to and develops a sense of inner self-esteem.

Raising awareness through senses and emotions - Being encouraged to learn for oneself, based on emotional, physical and intellectual experiences is considered to have a longer-term impact on learning and well-being than more instruction based teaching techniques.

Addressing internal obstacles - Internal obstacles are any form of interference inside a person which disrupts the learning process and ability to meet a goal.

Building on prior knowledge and experience - Learning is about connecting new elements with old elements (=prior experience) or building blocks on existing blocks.

Authentic, neutral and non-judgmental communication - The instructor needs to be non-judgmental with the student. Direct criticism or blame invokes defensiveness and tension which puts a strain on the relationship and encourages the student to close up.

Summary Sheet

Summary
Sheet –
continued

How to Establish Good Questions

Effective questions are clear and concise, open questions (what, when, where, who, etc.) which require attention and thought and are non-judgmental, should focus on the senses and should relate to prior experiences.

Engaging the Non-Driving Students

- All students need to be active participants at all time during the in-vehicle training.
- When one student is driving the other student(s) must be observing and critiquing.
- Activities can be developed for observing students to keep them busy when not driving the car.

Visual Search Habits and Eye Movement of Driver During In-Vehicle Instruction

- Develop a regular search and scanning pattern.
- Rear view mirror checks should be made on a regular basis.
- Head checks need to be made
- Scan eye check mirror to make sure the student is scanning the roadway ahead and to the sides as well.

Situational Awareness

The instructor candidate must be alert to environmental and sociological situations the student driver will need to respond to for safe control of the vehicle

Evaluating and Summarizing an In-Vehicle Lesson

Summarize each student's driving performance by noting the positives, constructively correcting negatives, suggest improvements, discuss what will be done in the next lesson and end with positives. The student's performance should be recorded immediately. Brief the parent or guardian when possible on how well the student is doing and what they need to practice more on.

Module 4

Driver Evaluation



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Module Overview

Module Overview

1. Prior to this module, we discussed In-Vehicle Teaching Techniques (Coaching and Correcting).
2. This module is titled “Driver Evaluation.”
3. The purpose of this module is to be able to evaluate a driver when teaching BTW lessons.
4. This module will cover three topics:
 - Types and characteristics of in-vehicle evaluation
 - How to evaluate the driver
 - Providing feedback to the driver
5. By the end of this module, you will be able to:
 - Describe the various types of in-vehicle evaluation.
 - Describe acceptable criteria for rating a driver’s performance.
 - Describe how evaluation takes place and what can be evaluated in the vehicle.
 - Demonstrate how to provide feedback on the driver’s performance.
6. During the module, you will be required to participate in group discussion and activities lead by the instructor. At the end of the module you will participate in a BTW activity to demonstrate your understanding of the content.
7. During the module, you will be evaluated through questions and answers. There will be a 10 point quiz at the end of the module which you must complete with at least 80% accuracy.
8. This module will last approximately 2 hours 30 minutes in the classroom and 1 hour 45 minutes behind-the-wheel.
9. This module will help you to understand how to evaluate a driver when teaching BTW lessons.

Key Words:

You will learn the following key words and their meaning as you proceed through this module:

Evaluation	On-going evaluation
Summative evaluation	Guided self-evaluation

Section 1: Types and Characteristics of In-Vehicle Evaluation

Introduction Section 1 will discuss the types and characteristics of in-vehicle evaluation and the measurements obtained when evaluating drivers.

Four types of in-vehicle evaluation

1. Initial evaluation: what is the student bringing to this lesson, what have they retained/incorporated from the last lesson?
2. On-going evaluation each time a driver drives.
3. Guided self-evaluation by the student.
4. Summative evaluation at the end of the in-vehicle phase.

The characteristics of initial evaluation

- Determine what the student has learned up to that point.
- Look at previous BTW lesson evaluations.
- Ask the student what they are having difficulties with.
- Ask short questions to gauge their understanding.

Section 1: Types and Characteristics of In-Vehicle Evaluation

The characteristics of the on-going evaluation

- Occurs each time a driver drives.
- Requires immediate and appropriate feedback from the instructor.
- Instructors must specifically identify the “mistakes” a driver makes.
- Mistakes must be corrected.
 - Can be corrected through use of words.
 - Can be corrected through use of visual aids.
 - Can be corrected through the use of demonstration.
- Instructors should also provide appropriate praise and other positive re-enforcements when necessary.
- This type of evaluation should be written on the individual driver’s in-vehicle record as a progress report and for grading purposes.

Section 1: Types and Characteristics of In-Vehicle Evaluation

The characteristics of guided self-evaluation by the student

- Formal attempt to develop the students' ability to evaluate their own driving performance.
- Students should recognize their responsibility for continual self-appraisal during the years of future driving and be able to carry out this responsibility.
- During in-vehicle sessions, students will drive over an established route and at the end of the drive evaluate their own performance.
- The self-evaluation can take the form of brief commentaries which include their most important actions.
- Share with the students (parents) verbally and in writing those skills that they will need to practice with their parents before the next lesson with the instructor.
- It may be appropriate to have the students record their evaluation for further assessment by the instructor and student.
- It is important that students engage in rigorous and accurate self-appraisal. One key point here is for the instructor to avoid imposing their own evaluation before allowing students to provide their own evaluation.

The characteristics of end of unit or course (summative) evaluation

- To evaluate student learning at the end of an instructional unit by comparing it against a standard or benchmark.
- Cumulative evaluations used to measure student growth after instruction and are generally given at the end of a course in order to determine whether long term learning goals have been met.
- Include a clear alignment between assessment, curriculum, and instruction, as well as the use of assessments that are both valid and reliable.
- Includes end of unit in-vehicle evaluations and course grades.

Section 1: Types and Characteristics of In-Vehicle Evaluation

Measurements obtained when evaluating drivers

1. The driver's skills at maneuvering the car can be measured.
2. The driver's speed choices can be evaluated.
3. The driver's ability to understand the information presented by the roadway (signs, lines, traffic lights) can be measured.
4. The driver's understanding of the rules of the road can be measured.
5. The driver's ability to see, identify & interact with other road users (vehicles, pedestrians, bicycles, etc.) can be measured.
6. The driver's searching skills and their ability to identify and avoid situations that are likely to produce a collision can be measured.
7. The driver's management of space and time (space cushion, position of vehicle in the lane, using vehicle position to communicate with other road users) can be measured.

Section 1: Types and Characteristics of In-Vehicle Evaluation

What evaluations can determine and identify?

Evaluations can consistently:

- Determine where this student is on the learning progression.
- Identify what the next step in the learning process is for this student.
- Determine if the learning process in the lesson is achieving the intended learning outcomes (ILO) for the lesson. If not, what is the cause and what might remediate this? Identify the basic root cause leading to the weakness, and focus on correcting that behavior.
- Determine which drivers are most successful in responding to hazardous traffic situations.
- Identify the driver's strengths and weaknesses based on positive feedback to meet their goals.

Section 1: Types and Characteristics of In-Vehicle Evaluation

Activity #1

Activity #1: Types and Characteristics of In-Vehicle Evaluation

Fill in the correct answer for each question.

1. What are four types of in-vehicle evaluation?
 - a. _____
 - b. _____
 - c. _____
 - d. _____

2. What are the 3 ways mistakes can be corrected during the evaluation?
 - a. _____
 - b. _____
 - c. _____

3. List four measurements which can be obtained when evaluating drivers?
 - a. _____
 - b. _____
 - c. _____
 - d. _____

Section 1
Summary

This section covered the types and characteristics of in-vehicle evaluation and the measurements obtained when evaluating drivers.

Section 2: How to Evaluate the Driver

Introduction

Section 2 will discuss how to evaluate a driver.

What to do
when identifying
a driver's
performance
reliably

When identifying a driver's performance reliably, you must:

- Identify objectives and content that will influence a driver's behaviors.
 - Be completely familiar with the objectives and the behaviors the student will demonstrate during the lesson.
 - Identify what driver's do and how they control the car.
 - Set criteria for acceptable performance as established in the lesson plan objectives.
 - Prescribe a rating method/route.
 - Evaluate the driver while driving.
-

What to do
when evaluating
the driver

When evaluating the driver you must:

- Observe the driver behaviors closely and carefully.
 - Observe the change in traffic situations and conditions.
 - Rate the driver after the performance.
 - Record the rating in writing.
-

Section 2: How to Evaluate the Driver

The process for driver evaluation

- If necessary create an evaluation route which will present environments & situations allowing the evaluator to make accurate assessments of the aspects of driving to be evaluated.
- Direct the driver over the route.
- Observe the road environment & all other road users.
- Anticipate potential issues on the roadway well in advance.
- Observe the vehicle behavior.
- Assess what information the driver is acquiring & when they are getting it (use of an eye mirror is extremely helpful) & compare this to the information they need to acquire to drive safely.
- Assess how successful the driver is in their making decisions and the consistency of this process.
- Assess the effectiveness of the driver in implementing the decisions.
- Ensure the safe operation of the vehicle at all times.
- Record the observations.

Section 2: How to Evaluate the Driver

The various factors that influence a driver's performance

There are various factors that influence a driver's performance. These include:

- Existing risks.
 - Risks that are always present in a particular environment or along selected route.

- Potential risks.
 - Risks that are constantly changing which can cause immediate conflicts along the drivers intended path of travel.

- Environmental conditions.
 - Weather.
 - Areas of limited sight.
 - Areas of limited space.

- Traffic volume.
 - Depends on time of day.

- The type of roadway (driving environment).
 - Expressways
 - Residential
 - Rural
 - Open highways
 - Business district

- The speed of traffic.
 - This will vary depending on driving environments.

Section 2: How to Evaluate the Driver

The factors that will influence the objectivity of evaluations

The following are factors instructors have control over that influence the objectivity of evaluations:

- Giving the directions as planned.
 - Did the route match the objectives for the environment?
 - Did the instructor stay to the route designed for the lesson?
- Rating the driver's performance on what was observed.
 - Did the instructor rate the driver based off the objectives for the environment?
 - Did the instructor observe the driver's behavior closely and carefully when driving?
- Avoid any biases that you may have.
 - Evaluating a driver's performance based off the bias will cause the evaluation to be invalid.
- Avoid any critical comments during the evaluation process.
 - Can cause the driver to become nervous and more likely to make mistakes.

Section 2: How to Evaluate the Driver

Driver actions to evaluate	<p>When evaluating a driver there are four driver actions to evaluate.</p> <ol style="list-style-type: none">1. Searching (space management system) – is the student driver searching ahead, to the sides and behind and making frequent eye movements?2. Speed control – is the student driver obeying the speed limit, driving at a speed suitable for conditions and the environment, slowing down and speeding up at the correct times?3. Direction Control – is the student driver in the proper lane position, selecting the correct lane, maneuvering turns and curves correctly and using proper lane change procedures, keeping the vehicle in balance?4. Timing and Space Control - is the student driver using proper gap selection, using the proper following distance and maintaining proper space ahead, to the sides and behind?
----------------------------	---

Common driver responses	<p>Drivers commonly respond in any of the six ways.</p> <ol style="list-style-type: none">1. Gradual or smooth.2. Anticipate or make an early response.3. Delay or make a late response.4. NO RESPONSE AT ALL5. Sudden, abrupt or spontaneous response.6. Erratic responses either incidentally or continually.
-------------------------	--

Section 2: How to Evaluate the Driver

The cause of driver actions

Actions can be caused by several key factors, which will directly influence the difficulty of performing certain driving tasks. Those key factors are:

- The time/distance available to judge.
- Time/distance available to take the action once the decision to act has occurred.
- The number of tasks that must be performed.

Driver actions are the result of the decisions the driver makes.

These decisions are influenced by internal & external factors.

Some Internal factors are:

- What the driver knows (about reading the roadway information {signs, lines lights, etc.} & where & how to get this information
- The ability to look for other road users
- The ability to acquire & prioritize information
- The ability to acquire information sufficiently early to allow time for decision making and implementation.
- Internal distractors
- Risk perception
- Risk acceptance

Some External factors are:

- The quantity of information available
- The quality of the information available
- The complexity of the environment
- External distractors

Section 2: How to Evaluate the Driver

Acceptable criteria for rating a driver's performance

There are several ways of determining whether or not the driver's performance in a particular environment is acceptable or unacceptable.

Acceptable criteria for rating driver performance includes:

- Decreasing risk by searching, adjusting speed or direction.
- Not causing another driver to change speed and/or direction.
- Reporting what was observed about the driver's behaviors.
- Complying with traffic laws.

Criteria must be based on state law, proper procedures, time/space management, search habits and student's growth and improvement.

Unacceptable criteria for rating a driver's performance

Unacceptable criteria for rating driver performance includes:

- You "feel comfortable."
- The driver does what you do.
- You become frightened.
- You compare one driver to another driver.

Section 2: How to Evaluate the Driver

Activity

Activity #2: How to Evaluate the Driver

Fill in the correct answer for each question.

1. What are the six factors that influence a driver's performance?
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____

2. When evaluating a driver what are the four driver actions to evaluate?
 - a. _____
 - b. _____
 - c. _____
 - d. _____

3. List 3 ways to determine whether or not the driver's performance in a particular environment is acceptable.
 - a. _____
 - b. _____
 - c. _____

Section 2
Summary

This section covered how to evaluate the driver.

Section 3: Providing Feedback to the Driver

Introduction

Section 3 will discuss how to provide feedback to the driver and record keeping.

How to provide feedback to the driver when evaluating their performance

When evaluating a driver's performance providing feedback should:

- Be done in a systematic way related to the objectives of the lesson/environment.
- Relate to judgment and/or performance in searching, speed control, direction control, and timing/decision-making skills.
- Be done timely/immediately, as needed if mistakes are being made, such as:
 - actions or inactions.
 - judgments or decisions.

The observations from the evaluation should be communicated to the driver in a clear & concise manner. If this is part of a learning experience some remedial suggestions relevant to the driver's abilities should be outlined with some reasons why this individual would find it helpful to work to implement these suggestions.

Section 3: Providing Feedback to the Driver

- Record keeping
- Keep records of the driving performance of each student during each in-vehicle period to ensure continuity and keep instructors and students on track.
 - The record should indicate the lesson objectives and the content practiced, an evaluation of the student's performance and progress, and suggestions for what should be covered in subsequent practice periods.
 - An accurate record of the student's past performance encourages the instructor to design each in-vehicle practice in relation to needed skills and objectives.

Section 3 Summary

This section covered how to provide feedback to the driver and effective record keeping.

Section 4: Behind-the-Wheel Activity

Introduction Section 4 will allow you to work with your instructor in the vehicle to provide directions and commentary to the instructor and summarize the lesson as well as practice providing feedback and completing an in-vehicle evaluation form on the student.

Purpose The purpose of this BTW activity is to demonstrate teaching techniques, coaching the driver, providing commentary and practice evaluating a driver when teaching BTW lessons.

Objectives By the end of this activity, you will be able to demonstrate:

- The various teaching techniques.
- Coaching techniques.
- Questioning techniques for in-vehicle.
- How to visually search the roadway.
- How to summarize the lesson.
- The various types of in-vehicle evaluation.
- How, when or where to provide feedback to the driver's performance.
- How to fill out information on an evaluation form.

BTW Activity Your instructor will have you perform the following activities in the vehicle:

- Role play being an instructor by providing directions and commentary teaching.
- Practice the various coaching and evaluation techniques.
- Practice how to visually search the roadway ahead and check eye movement of the driver.
- Engage the observers.
- Summarize the in-vehicle lesson.
- Practice appropriate ways of providing feedback.
- Practice filling out an evaluation form.

Materials

- Clipboard
- Pens / pencils
- Sample driving route(s)
- Sample lesson plan(s)
- Evaluation forms
- This page

Section 4 Summary This section provided the opportunity to demonstrate ways of providing feedback to drivers and filling out and recording information on an evaluation form.

Module Summary

Module Summary

The purpose of this module was to describe how to evaluate a driver when teaching BTW lessons.

By the end of this module, you should be able to:

- Describe the various types of in-vehicle evaluation.
- Describe acceptable criteria for rating a driver's performance.
- Describe how evaluation takes place and what can be evaluated in the vehicle.
- Describe how to provide feedback on the driver's performance.

The information presented in this module is essential for understanding how to evaluate a driver when teaching BTW lessons.

Key Words

The following "Key Words" were introduced and defined during the lesson.

Evaluation	On-going evaluation
Summative evaluation	Guided self-evaluation

Module Review Activity

Module Review Activity **Key Words Matchup**

On the line below, write the letter of the associated key word.

A. Evaluation	B. On-going evaluation
C. Summative evaluation	D. Guided self-evaluation

1. _____ Evaluating the driver each time the driver drives.
2. _____ Identifying the driver's strengths and weaknesses.
3. _____ Evaluation at the end of the in-vehicle phase.
4. _____ Formal attempt to develop the students' ability to evaluate their own driving performance.

Summary Sheet

Summary
Sheet

Four types of in-vehicle evaluation

1. Initial evaluation
2. On-going evaluation each time a driver drives.
3. Guided self-evaluation
4. Summative evaluation at the end of the in-vehicle phase.

Mistakes must be corrected through use of:

- words.
- visual aids (traffic boards).
- demonstration.

Measurements obtained when evaluating drivers:

- The driver's skills at maneuvering the car can be measured.
- The driver's ability to identify and avoid situations that are likely to produce a collision.

Evaluations can consistently:

- Determine which drivers are most successful in responding to hazardous traffic situations.
- Identify the driver's strengths and weaknesses.

The various factors that influence a driver's performance:

- Existing risks, Potential risks, Environmental conditions, Traffic volume, the type of roadway, and the speed of traffic.

Driver actions to evaluate:

- Searching, speed control, direction control and timing

Common driver responses.

Drivers can respond in any of the six ways.

1. Gradual or smooth.
2. Anticipate or make an early response.
3. Delay or make a late response.
4. NO RESPONSE AT ALL
5. Sudden, abrupt or spontaneous response.
6. Erratic responses either incidentally or continually.

Summary Sheet

Summary Sheet

Acceptable criteria for rating a driver's performance

Did they decrease risk by searching, adjusting speed or direction?, Did they cause another driver to change speed or direction?, What was observed about the driver's behavior during a particular driving situation?, Did the driver comply with the traffic laws?

Unacceptable criteria for rating a driver's performance

Did "you feel comfortable? Did the driver follow your commands when told? Did you become frightened? You compare one driver to another driver, Would you feel comfortable with the student driving towards you in another vehicle?

How to provide feedback to the driver when evaluating their performance

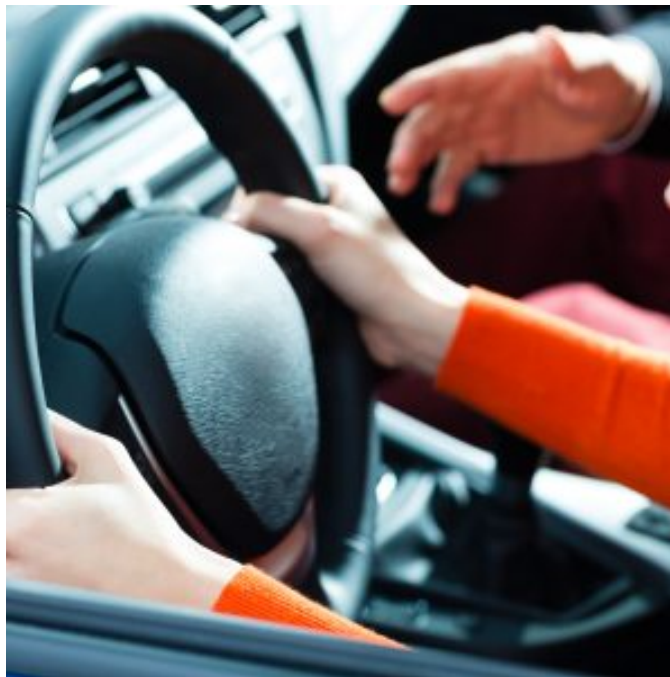
- Be done in a systematic way.
- Relate to judgment and/or performance in searching, speed control, direction control, and timing/decision-making skills.
- Be immediately done if mistakes are being made

Record keeping

- Keep records of the driving performance of each student during each in-vehicle period indicating the content practiced, an evaluation of the student's performance, and suggestions for what should be covered in subsequent practice periods, which encourages the instructor to design each in-vehicle practice in relation to needed skills.

Module 5

Command and Control of the Mobile Classroom



Module Contents

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Module Overview

Module Overview

1. Prior to this module we discussed driver evaluation.
2. This module is titled “Command and Control of the Mobile Classroom.”
3. The purpose of this module is to help you understand the proper instructor seating position, when and how to take control of the vehicle during in-vehicle instruction, how to utilize dual-brakes, and what to do in an emergency or collision.
4. This module will cover three topics:
 - Managing and taking control of the vehicle
 - Utilizing a dual brake in the vehicle
 - What to do in case of collisions
5. By the end of this module, you will be able to:
 - Demonstrate the proper instructor seating position.
 - Demonstrate when and how to manage and take control of the vehicle.
 - Demonstrate how to utilize dual-brakes.
 - Explain what to do in an emergency or collision.
6. During the module, you will be required to participate in group discussion and activities. At the end of the module you will participate in a BTW activity to demonstrate your understanding of the content.
7. During the module, you will be evaluated through questions and answers. There will be a 10-question quiz at the end of the module which you must complete with at least 80% accuracy.
8. This module will last approximately 1 hour in the classroom and 1.5 hours behind-the-wheel.
9. In this module you will learn how to take control of the vehicle during in-vehicle instruction and utilize dual brakes in the vehicle.

Key Words:

You will learn the following key words and their meaning as you proceed through this module:

Center-pull parking brake	Dual instructors brake	Gear selector lever
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Section 1: Managing and Taking Control of the Vehicle

Introduction Section 3 will discuss the importance of the instructor seating position while teaching in-vehicle and how to manage and take control of the vehicle in an emergency situation.

Instructor seating position 1. The instructor shall be sitting in a manner to take control of the vehicle.

- Relaxed position but alert.
- Left hand should be in a position of immediate access to the steering wheel, typically perched on the center console and gear selector lever.
- Foot positioned ready to use the dual brake.

Activity **Activity #1: Demonstrating Proper Seating Position**

Your instructor will demonstrate the proper seating position to you.

Section 1: Managing and Taking Control of the Vehicle

Ways of managing and controlling the vehicle

Explain the process to the novice driver for managing and taking control of the vehicle, when needed.

1. Use of verbal commands.
2. Use of controls during the lesson. Should be explained prior to starting the lesson.
 - Dual brake use.
 - Steering assistance if needed
 - Gear selector lever
3. Taking control of the vehicle by using the steering wheel.
 - Left hand should be in a position of immediate access to the steering wheel.
 - Adjust the steering wheel if the situation presents a threat.
4. Taking control of the vehicle using the dual instructors brake.
 - Do not let dual brake become a student's crutch.
 - Firm pressure with ball of foot.
 - Use when a situation may become a threat to you or other roadway users.
5. Taking control of the vehicle by using the gear selector lever.
 - Left hand in position to reach gear selector lever.
 - Shift to "neutral" in situations where engine is over revving or acceleration is more than braking power.
6. Taking control of the vehicle by using the center-pull parking brake.
 - Can be used as a back-up to instructor brake.
 - Should limit its use due to possible rear-wheel lock-up.
 - Thumb should depress button when using.

Do not turn off the ignition while the vehicle is moving to demonstrate vehicle emergencies. This is unsafe.

Section 1: Managing and Taking Control of the Vehicle

Recognizing and taking appropriate action when drivers cannot perform

You can tell when a student is not understanding the lesson if the student:

- Seems confused or frustrated
- Is asking a lot of questions
- Doesn't feel comfortable performing a maneuver

What to do when a student is not understanding the tasks:

- Explain the material in a different manner.
- Break down the steps to the procedure.
- Take over control for part of the maneuver such as braking and see if that helps.
- When a student seems overloaded go back to a simpler maneuver or less complex maneuver and review.

It is possible that a student will just be doing something dangerous or wrong.

- There may not be a lot of discussion.
- Instruct the student on what to do.

Section 1: Managing and Taking Control of the Vehicle

Student issues The student should know that their learning and safety is the instructor's highest priority.

The student may express the following issues while in the vehicle:

- Nervousness
 - Take each step slowly and clearly
 - When you introduce a new topic or skills many students will freeze up or become overloaded
 - Back up and review, go back to basics
- Crying
 - Result of frustration
 - Try not to push too far
- Know it all
 - Ask a lot of questions
 - In this way the student realizes what they don't know
- Lack of confidence
 - Focus on what the student does well in the beginning
 - As they gain skill you can critique their skills or challenge them more
- Doesn't listen or follow directions
 - It is important to maintain safety at all times
 - Do not yell at the student
 - May have to use dual instructor brake if student continues (i.e. speed)
 - When possible talk to parents regarding student behavior

Section 1 This section covered the importance of the instructor seating position
Summary while teaching in-vehicle and how to take control of the vehicle.

Section 2: Utilizing a Dual Brake in the Vehicle

Introduction Section 2 will discuss how to utilize a dual-brake during in-vehicle instruction.

How to use a dual-brake during in-vehicle instruction

1. The instructor candidate should determine that the dual brake is installed properly (see manufacturer's instructions) and is positioned in such a way that it operates smoothly.
2. Prior to the student lessons, the instructor candidate should practice applying the dual control brake with their right foot while the vehicle is operated at varying speeds to determine how the vehicle will respond.
3. The dual control brake should only be used to control the driving situation.
4. Verbal commands should be used before using the dual brake, if possible. When necessary, use the dual brake.
5. The instructor candidate should not place their foot over or on the dual control brake because the brake can be sensitive and may lead to the brake being pressed by mistake.
6. The instructor candidate must maintain an instructional position in the car so that he/she can smoothly operate the dual control brake.
7. **The dual control brake should be rarely used as it will cause the student to become dependent on the instructor candidate's actions.**

Section 2
Summary

This section covered the procedures for using the dual-brake during in-vehicle instruction.

Section 3: What to do in an Emergency or Collision

Introduction Section 3 will discuss what to do in an emergency or collision.

What to do in an emergency or collision

If an emergency or collision occurs follow the policies and procedures established by your program.

Example procedures may include:

1. Stop immediately.
2. Protect and control the scene.
3. Aid the injured (if qualified, otherwise call for help)
4. Record witnesses' names and addresses
5. If necessary call 911 or proper authorities.
6. Exchange information/reporting

Take these additional steps after a collision:

1. Make a sketch of the collision scene
2. Take a photograph
3. Record such facts as time, date, location, weather and driving conditions
4. Note the name of the hospital to which any injured persons were taken
5. Note the name and the identification number of the police officer at the collision scene
6. Notify the program manager and follow procedures by your program administrator.
7. Follow state and jurisdictional requirements for emergencies.

Give police the facts. Provide honest, accurate facts and never argue about who was to blame. Do not admit fault. Stay at the scene until all information has been recorded. Produce proof of financial responsibility by showing a card that lists current insurance or a bond card. Also, notify appropriate insurance agent promptly.

Section 3
Summary

This section covered how to take control of the vehicle in an emergency situation.

Section 4: Behind-the-Wheel Activity

Introduction Section 4 will give you practice in a parking lot and on the road managing and taking control of the vehicle.

Note: Take this section with you to the vehicle.

Purpose The purpose of this behind-the-wheel activity is to give you practice (30 minutes in a parking lot and 60 minutes on the road) managing and taking control of the vehicle.

Objectives By the end of this activity, you will demonstrate how to:

- Use proper instructor seating and hand positions.
- Use verbal commands to maintain control.
- Take physical control of the vehicle.

BTW Activity Your instructor will have you perform the following activities:

- Proper instructor seating and hand positions.
- How to manage risks during BTW instruction.
- Practice visual skills and other techniques learning in the driver education program.
- How to anticipate student errors and use verbal commands to take and maintain control of the vehicle.
- How to take physical control of the vehicle.
- Instructor/center brake (soft/medium/hard braking).
- Instructor brake with accelerator applied.
- Using steering assist.
- Taking control of the steering wheel depending on the location of student's hands.
- Placing the transmission into neutral.
- IC's will practice the techniques during the following situations/environments:
 - Backing Residential driving
 - Parking lot driving Roadway driving under 45 mph
 - Turns Lane changes

Materials Needed

- Clipboard
- Pens / pencils
- Sample driving route(s)
- Sample lesson plan(s)
- This page

Section 4 Summary This section provided the opportunity to demonstrate the proper instructor seating position, taking control of the steering wheel, using a dual-brake and directing the driver to perform maneuvers.

Module Summary

Module Summary

The purpose of this module was to help you understand the proper instructor seating position, when and how to take control of the vehicle during in-vehicle instruction, how to utilize dual-brakes, and what to do in an emergency or collision.

By the end of this module, you should be able to:

- Demonstrate the proper instructor seating position.
- Demonstrate when and how to manage and take control of the vehicle.
- Demonstrate how to utilize dual-brakes.
- Explain what to do in an emergency or collision..

The information presented in this module is essential for teaching you how to take control of the vehicle during in-vehicle instruction and utilize dual brakes in the vehicle.

Key Words

The following “Key Words” were introduced and defined during the lesson.

Center-pull parking brake	Dual instructors brake	Gear selector lever
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Module Review Activity

Module Review Activity **Key Words Matchup**

On the line below, write the letter of the associated key word.

A. Center-pull parking brake	B. Dual instructors brake	C. Gear selector lever
-------------------------------------	----------------------------------	-------------------------------

2. _____ Allows the driver to shift the transmission and is located either on the steering column or on a console located between the front seats.
3. _____ A hand-operated lever located to the right of the steering column, or to the right of the driver on the floor or center console used to stop the vehicle in an emergency situation.
5. _____ For use by the instructor and located on the passenger side of the vehicle to be used in an emergency situation.

Summary Sheet

Summary
Sheet

Instructor seating position

You should be sitting in a manner to take control of the vehicle by sitting in a relaxed but alert position, with your left hand positioned in immediate access to the steering wheel and gear selector lever and your foot positioned ready to use the dual brake.

Controlling the vehicle in an emergency situation

The instructor can take control of the vehicle by means of:

- The steering wheel – if the situation presents a threat
- The dual instructors brake - use when a situation becomes a threat to you or other roadway users
- The gear selector lever – use in situations where engine is over revving or acceleration is more than braking power
- The center-pull parking brake - used as a back-up to instructor brake

Utilizing the dual brake in the vehicle

Practice using and only use when necessary so the student does not become dependent on the instructor's actions.

What to do in an emergency or collision

Follow the procedures of your program. Example procedures may include:

1. Stop immediately.
2. Protect and control the scene.
3. Aid the injured (if qualified, otherwise call for help)
4. Record witnesses' names and addresses
5. If necessary, call 911 or proper authorities.
6. Exchange information/reporting

Module 6

Putting it All Together and Practice Teaching



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Module Overview

Module Overview

1. Prior to this module we discussed:
 - Lesson Plans for In-Vehicle Instruction
 - Managing the Mobile Classroom
 - In-Vehicle Teaching Techniques
 - Driver Evaluation
 - Command and Control of the Mobile Classroom
2. This module is titled “Putting it All Together and Practice Teaching.”
3. The purpose of this module is to put together all of the information you have learned in the previous modules and demonstrate your understanding of the content. You will be given the opportunity to modify and utilize lesson plans for in-vehicle peer teaching and practice proper procedures for giving directions.
4. This module will cover four topics:
 - Overview of Part III
 - The peer teaching assignments
 - Modifying lesson plans
 - BTW practice
5. By the end of this module, you will be able to:
 - Modify and utilize lesson plans for each of the different driving environments as described in Module 1.
 - Modify and utilize a 20-30 minute driving route(s) in the immediate area based on the driving environments as described in Module 1.
 - Practice delivering in-vehicle lesson(s).
6. During the module, you will be required to participate in group discussion and activities lead by the instructor. At the end of the module you will participate in a BTW activity to demonstrate your understanding of the content.
7. This module will last approximately 1 hour in the classroom and 5 hours 45 minutes behind-the-wheel to demonstrate your understanding of the content and prepare for the driving route teaching assignments.
8. This module will give you experience in utilizing lesson plans and prepare for in-vehicle peer teaching.

Section 1: Overview of Part III

Introduction Section 1 provides a review of Modules 1 – 5 in Part III. This module gives you the opportunity to practice what you have learned in the previous modules.

Lesson Plans for In-Vehicle Instruction Module 1 introduced the in-vehicle lesson plan format, the five different driving environments: 1.) low speed, light traffic (residential); 2.) moderate speed, light traffic (open highway/rural); 3) moderate speed, dense traffic (suburban/urban/business); 4.) high speed, moderate and heavy traffic (expressway) and 5.) night driving. Guidelines for how to develop an on-street route were also discussed.

Managing the Mobile Classroom Module 2 provided the procedures for teaching an in-vehicle lesson, guidelines for giving directions during the in-vehicle instruction, how to use instructor mirrors during in-vehicle instruction, challenges to in-vehicle instruction, such as learning/physical challenges, managing multiple tasks and distractions and changing drivers and observer responsibilities.

In-Vehicle Teaching Techniques Module 3 discussed commentary teaching, student driver and observer commentary, coaching the driver by correction and positive reinforcement, engaging the non-driving students, visually searching the roadway and eye movement of driver and evaluating and summarizing an in-vehicle lesson.

Driver Evaluation Module 4 discussed the types and characteristics of in-vehicle evaluation, how to evaluate the driver, various factors that influence a driver's performance, driver actions to evaluate, criteria for rating a driver's performance, providing feedback to the driver and record keeping.

Command Control of the Vehicle Module 5 discussed how to manage and take control of the vehicle, how to utilize a dual brake in the vehicle and what to do in case of a collision.

Section 1 Summary This section provided a review of Modules 1-5 in Part III. Now you will have an opportunity to put it all together and practice teaching behind-the-wheel.

Section 2: Peer Teaching Assignments

Introduction Section 2 will discuss the peer teaching assignments and how you will be graded.

- The 20-30 minute peer teaching assignments
1. You will be assigned a driving route(s) for which you will be responsible for teaching a 20-30 minute in-vehicle instruction lesson.
 - You will be required to utilize and modify lesson plans and routes for each of the five driving environments.
 - You will be evaluated on at least two of the five driving environments during an on-road evaluation.
 - Depending on class size the driving route may be performed in a group.
 - The driving route should be at least 20 – 30 minutes.
-

- How you will be graded
1. Grading will be done using the On-Street Lesson Evaluation Form. Sample on-street teaching lesson evaluation forms are included in the appendices.
 - The On-Street Lesson Evaluation Form will evaluate your in-vehicle teaching performance.
 - Each evaluation will be assigned points. Each evaluation category will be given a minimum and maximum score based on a point system.
-

Section 2 Summary This section covered the peer teaching assignments and how you will be graded.

Section 3: Lesson Plan Format

Introduction Section 3 will discuss the format of the lesson plan and what should be included for your teaching assignment.

The lesson plan format

The cover page of the lesson plan shall include:

- Presenters name, date of lesson, and title of lesson.
- Required entry level will state what prior lessons should have been taught before presenting the lesson.
- Overall lesson goal(s) for the lesson.
- Visuals/equipment can be incorporated into the lesson plan. Ex. Diagrams, pictures, clipboard.
- Any assignments for the lesson.

Each page following the cover page shall include:

- Prerequisites and classroom objectives related to the in-vehicle lesson.
- Instructional objectives
- Content based on the instructional objective
- Learning activities that will be used during the lesson
- Problem area(s)
- Evaluation/Questions

Final copy of lesson plan before presenting must be typed. Lesson plans must be turned in before presenting and will be assigned points as determined by the instructor.

- Instructor may assign due dates for lesson plan review prior to presentations.

Section 3 Summary

This section covered the format of the lesson plan and what should be included for your teaching assignment.

Section 4: Behind-the-Wheel Activity 1

Introduction Section 4 will allow you to work with your instructor in the vehicle to see how a behind-the-wheel lesson should be taught.

Note: Take this section with you to the vehicle.

Purpose The purpose of the behind-the-wheel activity is to give you an understanding of how a behind-the-wheel lesson is conducted by having your trainer model the instruction.

Objectives By the end of this activity, you will be able to:

- Describe how a BTW lesson is conducted.

BTW Activity Your instructor will perform the following activities in the vehicle: (check off the box when completed)

- Model/demonstrate how to conduct fundamental activities in an off-street parking area utilizing one or more of the behind-the-wheel lesson plans.
- Model/demonstrate how to conduct a behind-the-wheel lesson.
 - Model how to introduce the lesson.
 - Model how to conduct the lesson.
 - Model how to summarize the lesson.

Materials Needed

- Clipboard
- Pens / pencils
- Sample driving route(s)
- Sample lesson plan(s)
- This page

Section 4 Summary This section provided a model of a behind-the-wheel lesson and demonstrated how to utilize a lesson plan and driving route for behind-the-wheel instruction.

Section 5: Behind-the-Wheel Activity 2

Introduction Section 4 will allow you to work with your instructor and peers in the vehicle to practice conducting behind-the-wheel lessons.

Note: Take this section into the vehicle with you.

Purpose The purpose of the behind-the-wheel activity is to demonstrate your understanding of how to conduct behind-the-wheel lesson(s) in the vehicle.

Objectives By the end of this activity, you will be able to:

- Demonstrate the proper instructor seating position.
- Utilize a lesson plan and driving route for conducting on-street instruction.
- Conduct the vehicle and occupant safety checks.
- Give directions that are understandable.
- Demonstrate how to utilize instructor mirrors.
- Demonstrate how to manage multiple tasks and distractions.
- Demonstrate how to change drivers on street
- Demonstrate how to engage observers.
- Demonstrate the various teaching techniques that can be used in the car to enable learning.
- Demonstrate coaching techniques and features of a good coach.
- Demonstrate questioning techniques for in-vehicle teaching.
- Demonstrate how to visually search the roadway ahead and check eye movement of driver.
- Demonstrate how to manage and take control.
- Demonstrate how to utilize dual-brakes.
- Demonstrate how to summarize the lesson.
- Utilize and demonstrate the various types of in-vehicle evaluation.
- Fill out and record information on an evaluation form.

Section 5: Behind-the-Wheel Activity

BTW Activity 2

The following activities should be completed in the vehicle:

- Practice conducting BTW lesson(s) utilizing one or more of the BTW lesson plans.
 - driving the route;
 - managing the mobile classroom and
 - giving directions for the route.

Checklist for completion:

- Performs pre-drive procedures correctly.
- Proper instructor seating position.
- Uses correct terminology.
- Gives directions clear and concise.
- Gives directions in a timely manner.
- Correctly manages multiple tasks in the vehicle.
- Correctly manages distractions in the back seat.
- Uses instructor and eye mirrors correctly.
- Rotates drivers in a safe place and correct time.
- If applicable, engages back seat observers.
- Correctly utilizes commentary teaching.
- Visually searches the roadway ahead.
- Checks eye movement of the driver.
- Correctly fills out and records information on form.
- Take control of the steering wheel in emergency.
- Use a dual-brake in the vehicle.

Direct the driver to perform the following:

- Backing maneuvers
- Parallel parking
- 3 point turns
- Straight backing
- Lane changes
- Freeway entering/exiting
- Control dual brake
- Use bottom of steering wheel to make turns
- Summarizes the in-vehicle lesson.
- Provides feedback to drivers while in the vehicle.
 - Clipboard
 - Pens / pencils
 - Sample driving route(s)
 - Sample lesson plan(s)
 - This page

Materials
Needed

Section 4
Summary

This section provided the opportunity to demonstrate how to conduct a behind-the-wheel lesson, utilizing the information that was learned in the previous modules.

Module Summary

Module Summary

The purpose of this module was to put together all of the information you have learned in the previous modules and demonstrate your understanding of the content. You were given an opportunity to utilize lesson plans for the in-vehicle peer teaching and practice proper procedures for giving directions.

By the end of this module, you should be able to:

- Modify and utilize lesson plans for each of the different driving environments as described in Module 1.
- Modify and utilize a 20-30 minute driving route(s) in the immediate area based on the driving environments as described in Module 1.
- Practice delivering in-vehicle lesson(s).

The information presented in this module is essential for giving you experience in utilizing lesson plans and practice teaching.

Summary Sheet

Summary
Sheet

Peer Teaching Assignments

You will be assigned a driving route(s) for which you will be responsible for teaching.

- You will be required to utilize and modify lesson plans and routes for each of the five driving environments.
- You will be evaluated on two of the five driving environments.

Lesson Plan Format

The cover page of the lesson plan shall include:

- Presenters name, date of lesson, and title of lesson.
- Required entry level will state what prior lessons should have been taught before presenting the lesson.
- Overall lesson goal(s) for the lesson.
- Visuals can be incorporated into the lesson plan. Ex. Diagrams, pictures, clipboard.
- Any assignments for the lesson.

Each page following the cover page shall include:

- Instructional objectives.
- Content based of the instructional objective.
- Learning activities that will be used during the lesson.
- Problem area(s).
- Evaluation/Questions.

Module 7

Peer Teaching Driving Route Demonstrations



Module Contents

Module Overview..... 7-2

Section 1: Conducting a Practice Driving Route..... 7-3

Module Summary 7-4

Summary Sheet 7-5

Module Overview

Module Overview

1. Prior to this module, we discussed Putting it all Together and Practice Teaching.
2. This module is titled “Peer Teaching Driving Route Demonstrations.”
3. The purpose of this module is to discuss and conduct the in-vehicle peer teaching lessons and how you will be evaluated.
4. This module will cover one topic:
 - Conducting a practice driving route
5. By the end of this module, you will be able to:
 - Prepare for the in-vehicle training task.
 - Teach an in-vehicle driving lesson.
 - Demonstrate how to properly complete a student in-vehicle recording form.
6. During the module, you will be required to conduct driving route demonstrations for conducting lessons including: an introduction, giving directions, coaching, correcting, and assessing the novice driver.
7. This module will take approximately 6.5 hours to conduct the Peer Teaching assignments.
8. In this module you will be evaluated on your ability to conduct an in-vehicle lesson.

Section 1: Conducting a Practice Driving Route

Introduction Section 1 will discuss the peer teaching assignments and how you will be graded.

The peer teaching assignments

1. You were assigned a driving lesson(s) for which you are responsible for teaching.
 - You were required to utilize and modify lesson plans and routes for each lesson.
 - You will be evaluated on a minimum of two driving lessons.
 - You will have 20-25 minutes to complete your driving lesson with 5-10 minutes of discussion after the lesson.

How the instructor candidates will be graded

1. Grading will be done using the On-Street Lesson Evaluation Form.
 - The On-Street Lesson Evaluation Form will be used to record your in-vehicle teaching performance.
 - Each evaluation will be assigned points by your instructor.

Section 1 Summary This section covered the peer teaching assignments and how you will be graded.

Module Summary

Module Summary

The purpose of this module was to give you an opportunity to discuss and conduct the in-vehicle student teaching lessons.

By the end of this module, you should be able to:

- Prepare for the in-vehicle training task.
- Teach an in-vehicle driving lesson.
- Demonstrate how to properly complete a student in-vehicle recording form.

The information presented in this module is essential for giving you experience in teaching an in-vehicle lesson.

Summary Sheet

Summary
Sheet

Teaching Assignment

The Instructor Candidate will be assigned driving lessons(s) for which they will be responsible for teaching.

- The Instructor Candidate will be required to utilize and modify lesson plans and routes for each driving lesson.
- The Instructor Candidate will be evaluated on a minimum of two lessons.
- You will have 20-25 minutes to complete your driving lesson with 5-10 minutes of discussion after the lesson.

Grading

Grading will be done using the On-Street Lesson Evaluation Form.

- The On-Street Lesson Evaluation Form will be used to record your in-vehicle teaching performance.
- Each evaluation will be assigned points by your instructor.

Module 8

Coordination Between Behind-the-Wheel Instruction and Classroom



If already covered in Part II recap this module.

If the instructor candidate did not attend Part II this module will need to be conducted in Part III.

Module Contents

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Activity #1: Create a Wall Chart	8-5
Activity #2: Discussion on Tools to Connect Instructors of Different Phases	8-5
Section 2: Transitioning and Relating Classroom Content to Behind-the-Wheel Instruction	8-6
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Module Review Activity: Key Word Matchup.....	8-9
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Module Overview

Module Overview

1. Prior to this module, we conducted peer teaching driving route demonstrations.
2. This module is titled “Coordination Between Behind-the-Wheel and Classroom.”
3. The purpose of this module is to identify how to integrate behind-the-wheel instruction and classroom through communication and coordination.
4. This module will cover two topics:
 - Coordinating and communicating with the classroom instructor.
 - Transitioning and relating classroom content to behind-the-wheel instruction.
5. By the end of this module, you will be able to:
 - Describe the purpose of classroom instruction and the BTW lessons in a driver education program.
 - Describe the purpose and need for a shared vocabulary and common concepts between classroom and BTW instructors based upon the state or jurisdiction approved teen driver education curriculum.
 - Describe the educational benefit of a concurrent and integrated driver education program.
 - Identify how to coordinate BTW lessons with the classroom content using a curriculum flow chart to insure a program is concurrent and integrated.
 - Demonstrate the methods for communicating and connecting with the classroom instructor, BTW instructor, teen and parents.

Module Overview

Module Overview

6. During the module, you will be required to participate in group discussion and activities lead by the instructor.
7. During the module, you will be evaluated through questions and answers. There will be a 10-point quiz at the end of the module, which you must complete with at least 80% accuracy.
8. This module will last approximately 1 hour in the classroom.
9. This module will help you to integrate the driver education behind-the-wheel and classroom courses.

Key Words:

You will learn the following key words and their meaning as you proceed through this module:

Coordination	Concurrent	Integrated
Transitioning	Communicating	Relating

Section 1: Coordinating and Communicating with the Classroom Instructor

Introduction Section 1 will cover how to coordinate lessons and communicate with the classroom instructor.

Coordinating lessons with the classroom instructor The behind-the-wheel instructor should coordinate lessons with the classroom instructor.

Classroom, behind-the-wheel, observation time and laboratory instruction should be concurrent, no break between phases and integrated, meaning scheduled to include an alternating mix of instruction (classroom sessions and behind-the-wheel sessions) throughout the duration of the course.

Methods of communicating with the classroom instructor It is important for the classroom and behind-the-wheel instructor to communicate. Communication can occur through:

- Planned meetings
- Student driving records
- Classroom instructor participate in BTW observations (ride along, be aware of all BTW routes and the order skills are taught)
- BTW instructor participate in classroom observations (sit in on classroom, be aware of all classroom lessons and the order materials are taught)

Section 1: Coordinating and Communicating with the Classroom Instructor

Activity

Activity #1: Create a Wall Chart

Create a wall chart with different elements found in both the classroom and in-vehicle portions of the course demonstrating the purpose of each phase. After wall charts are completed, the class will engage in a discussion about the common elements.

Activity

Activity #2: Discussion on Tools to Connect Instructors of Different Phases

Your instructor will lead a discussion on what tools instructors need to connect with each other for the different phases of the course and how to use them to communicate with other instructors, parents, and teens?

Section 1
Summary

This section covered how to coordinate lessons and communicate with the classroom instructor.

Section 2: Transitioning and Relating Classroom Content to Behind-the-Wheel Instruction

Introduction Section 2 will cover how to transition and relate classroom content to behind-the-wheel instruction.

Transitioning and relating classroom content to behind-the-wheel instruction Classroom Instructors and BTW Instructors will create, maintain, and use a list of questions specific to each BTW lesson. Similar questions will be used in class discussions, BTW lessons, and observer activities.

Questions will pertain to:

- classroom content
- key words
- text book content
- videos
- state driving manual

Section 2: Transitioning and Relating Classroom Content to Behind-the-Wheel Instruction

Activity

Activity #3: Common Vocabulary

Your instructor will lead a class discussion regarding the need for a common vocabulary. Each instructor candidate will share a concept from the classroom that needs to be shared during the in-vehicle lesson.

Activity

Activity #4 Curriculum Flow Chart

Your instructor will provide you with a curriculum flow chart to review and identify the flow of concepts through the driver education program.

Section 2
Summary

This section covered how to transition and relate classroom content to behind-the-wheel instruction.

Module Summary

Module Summary

The purpose of this module was to identify how to integrate behind-the-wheel instruction and classroom through communication and coordination.

By the end of this module, you should be able to:

- Describe the purpose of classroom instruction and the BTW lessons in a driver education program.
- Describe the purpose and need for a shared vocabulary and common concepts between classroom and BTW instructors based upon the state or jurisdiction approved teen driver education curriculum.
- Describe the educational benefit of a concurrent and integrated driver education program.
- Identify how to coordinate BTW lessons with the classroom content using a curriculum flow chart to insure a program is concurrent and integrated.
- Demonstrate the methods for communicating and connecting with the classroom instructor, BTW instructor, teen, and parents.

The information that was presented in this module is essential to integrate the behind-the-wheel and classroom courses.

Key Words

The following “Key Words” were introduced and defined during the lesson.

Coordination	Concurrent	Integrated
Transitioning	Communicating	Relating

Module Review Activity

Module Review Activity **Key Words Matchup**

On the line below, write the letter of the associated key word.

A. Coordination	B. Concurrent	C. Integrated
D. Transitioning	E. Communicating	F. Relating

1. _____ Classroom, behind-the-wheel and observation time runs simultaneously with no break between phases.
2. _____ The organization and integration of the classroom and behind-the-wheel courses to enable them to work together effectively.
3. _____ To convey information about the classroom course to the behind-the-wheel instructor and vice versa.
4. _____ An alternative mix of classroom, behind-the-wheel and observation time throughout the duration of the course.
5. _____ Changing from classroom instruction to behind-the-wheel instruction.
6. _____ To establish or demonstrate a connection between the classroom course and the behind-the-wheel course.

Summary Sheet

Summary Sheet

Coordinating lessons with the classroom instructor

The behind-the-wheel instructor should coordinate lessons with the classroom instructor.

Classroom, behind-the-wheel, observation time and laboratory instruction should be concurrent, no break between phases and integrated, meaning scheduled to include an alternating mix of instruction (classroom sessions and behind-the-wheel sessions) throughout the duration of the course.

Methods of communicating with the classroom instructor

It is important for the classroom and behind-the-wheel instructor to communicate. Communication can occur through:

- Planned meetings
- Student driving records
- Classroom instructor participate in BTW observations
- BTW instructor participate in classroom observations

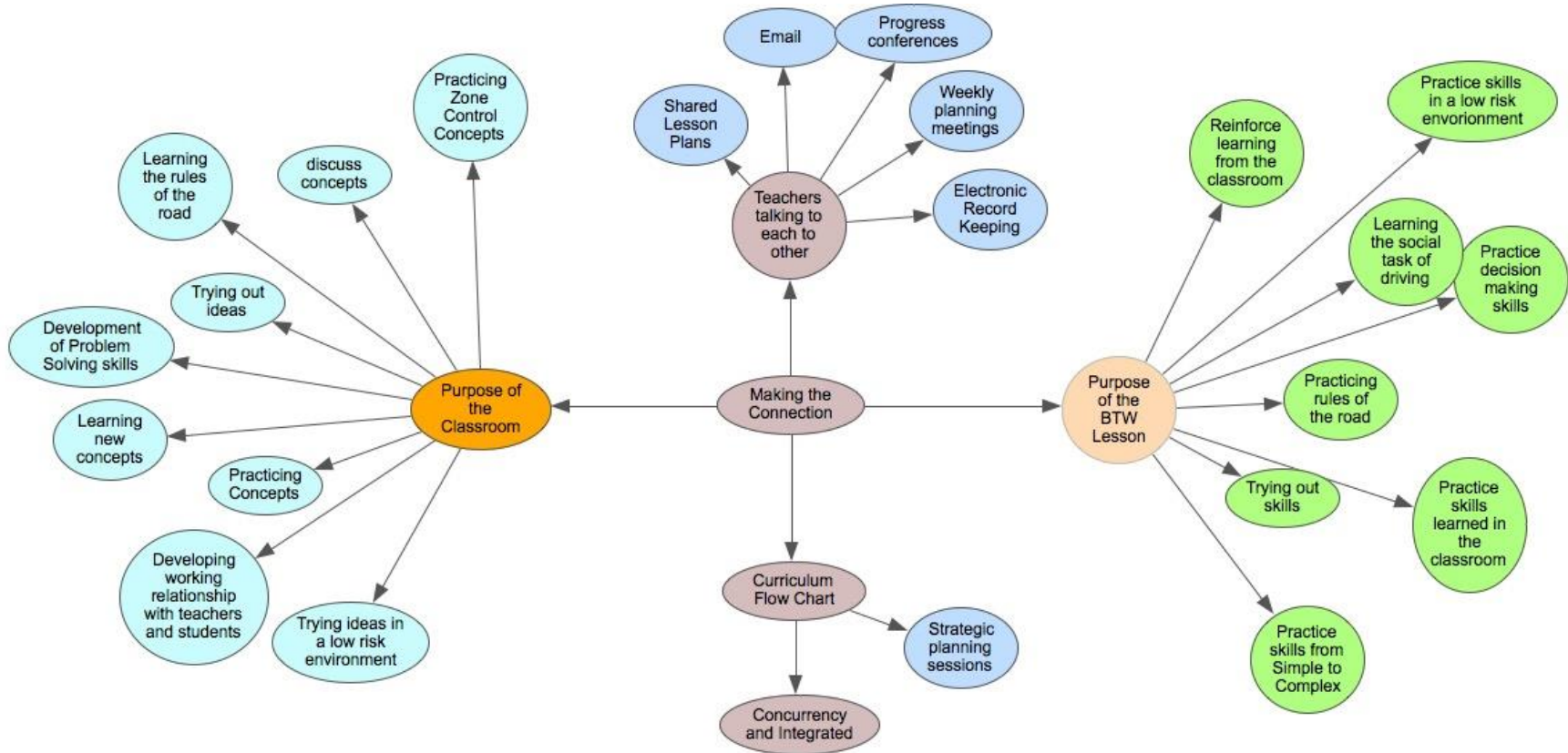
Transitioning and relating behind-the-wheel instruction to classroom content

Classroom Instructors and BTW Instructors will create, maintain, and use a list of questions specific to each BTW lesson. Similar questions will be used in class discussions, BTW lessons, and observer activities.

Questions will pertain to:

- classroom content
- key words
- text book content
- videos
- state driving manual

Collaboration Between Classroom and BTW



Relationship between Classroom and In-Car Standards

The following table describes how the classroom standards relate to the in-car standards.

Classroom Standard	In-Car Standard
<p>C 1.0 Classroom Standard One: Preparing To Operate a Vehicle.</p> <p>C 2.0 Classroom Standard Two: Understanding Vehicle Control Needs.</p>	<p>IC. 1.0. In-car Standard One: Preparing to Operate a Vehicle.</p> <p>1.1 Preparations to Operate Vehicle.</p> <p>1.2 Judgment of Vehicle to Roadway Position.</p>
<p>C 3.0 Classroom Standard Three: Introducing Traffic Entry Skills.</p> <p>C 4.0 Classroom Standard Four: Introducing Intersection Skills and Negotiating Curves and Hills.</p>	<p>IC. 2.0 In-car Standard Two: Introducing Traffic Entry and Intersection Approach Skills.</p> <p>2.1. Visualization of Intended Travel Path</p> <p>2.2 Searching Intended Travel Path</p>
<p>C 5.0 Classroom Standard Five: Space Management and Vehicle Control Skills in Moderate Risk Environments.</p> <p>C 6.0 Classroom Standard Six: Developing Traffic Flow and Space Management Skills at Speeds Below 55 m.p.h.</p> <p>C 7.0 Classroom Standard Seven: Developing Traffic Flow and Space Management Skills at Maximum Highway Speeds</p> <p>C 10.0 Classroom Standard Ten: Other Roadway Users.</p>	<p>IC. 3.0. In-car Standard Three: Developing Visual and Mental Perception for Vehicle Control Tasks.</p> <p>3.1 Speed Control</p> <p>3.2 Lane Position Selection</p> <p>3.3 Rear Zone Searching and Control</p> <p>3.4 Communication and Courtesy</p> <p>3.5 Using Three Steps to Problem-Solving (i.e. SEE)</p>
<p>C 9.0 Classroom Standard Nine: Dealing with Adverse Conditions.</p> <p>C 11.0 Classroom Standard Eleven: Responding to Emergencies, Vehicle Malfunctions and Crashes.</p>	<p>IC. 4.0. In-car Standard Four: Responding to Emergency Situations.</p> <p>4.1 Divide Focal and Mental Attention Between</p> <p>4.2 Identify, Assess and Respond to Vehicle Emergencies.</p> <p>4.3 Identify, Assess and Respond to Environmental Conditions.</p>

Module 9

On-Board Technologies



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Module Overview

Module Overview

1. Prior to this module, you completed the driving route teaching assignments.
2. This module is titled “On-board Technologies.”
3. The purpose of this module is to give the student a better understanding of on-board technologies.
4. This module will cover one topic:
 - The role and use of on-board technologies
5. By the end of this module, you will be able to:
 - Describe the role and use of on-board technologies in behind-the-wheel instruction, including technology used for driver training and new vehicle technology.
6. During the module, you will be required to participate in group discussion and activities lead by the instructor.
7. During the module, you will be evaluated on your participation in class discussion. There will be a 6-point quiz at the end of the module, which you must complete with at least 80% accuracy.
8. This module will last approximately 1 hour.
9. This module will help you to learn more about on-board technologies.

Key Words:

You will learn the following key words and their meaning as you proceed through this module:

Electronic scoring sheets	GPS	On-board technologies
Tracking devices		

Section 1: The Role and Use of On-board Technologies

Introduction Section 3 will cover the role and use of on-board technologies in supporting behind-the-wheel instruction, including current technologies for in-vehicle training, such as cameras and GPS systems and other technologies found or available in vehicles today. Some technologies are factory installed while others are available as aftermarket items. Some are passive and require no driver intervention while others must be actively enabled or disabled by the driver. None should add to the driver's task load or distractions.

Activity **Activity #1: Discussion on On-Board Technologies**

Provide a definition of On-board Technologies and participate in a discussion on the various types of On-board Technologies one can find and use in a vehicle.

What are on-board technologies? On-board technologies include the computer and electronic technology in your vehicle, including emergency warning systems, GPS navigation, integrated cell phones, wireless safety communications, automatic driving assistance systems and vehicle tracking.

Many new technological advances in vehicle integrity are available in vehicles to lessen the events of a crash for today's drivers. Vehicle telematics has been changing very rapidly over the past few years, with advances in smart phone integration, the Internet and GPS receivers. Emerging technologies include vehicle to vehicle (V2V) and vehicle to infrastructure (V2I).

Section 1: The Role and Use of On-board Technologies

Current technologies for in-vehicle training

Current technology used for in-vehicle training includes:

- **Cameras that can be used to record:**
 - student driving performance including eye use, bookmark events and review the student’s driving through video in the classroom
 - the driving scene to make instructional movies and to make simulated driving scenes of the local area. The students can take home a card with the video on it to review at home.
 - instructor activities to evaluate their teaching skills. Can also protect against liability and sexual harassment.
- In addition to video, camera system may also include audio capture, accelerometer and GPS information and Bluetooth/cellular connectivity
- **GPS systems** – used to assist with driving route and giving directions.
- **Tracking devices** – used to monitor/evaluate student’s driving, including location, time, speed, lateral and linear acceleration, generating a “Drive Score” and electronic Log Book as well as vehicle/fleet maintenance information for the instructor/school. It may also include Bluetooth/cellular connectivity.
- **Electronic Score sheets** – used for evaluation/assessment and lesson/progress/performance tracking. Possible to generate a very robust representation of driver performance when integrated/synchronized with other telematic data. It may also include Bluetooth/cellular connectivity

Activity

Activity #2: Using Vehicle Technology in Driver Education

Participate in a discussion on how they actually use on-board technology while teaching driver education.

Section 1: The Role and Use of On-board Technologies

New technology in vehicles

New technology in vehicles includes:

- Adaptive Cruise Control
- Adaptive Headlights
- Anti-Lock Braking System
- Automatic Emergency Braking
- Automatic Parallel Parking
- Automatic Reverse Braking
- Back-up Camera
- Back-up Warning
- Bicycle Detection
- Blind Spot Monitor
- Brake Assist
- Curve Speed Warning
- Drowsiness Alert
- Electronic Stability Control
- Forward Collision Warning
- High Speed Alert
- Hill Descent Assist
- Hill Start Assist
- Lane Departure Warning
- Lane Keeping Assist
- Left Turn Crash Avoidance
- Obstacle Detection
- Parking Sensors
- Pedestrian Detection
- Push Button Start
- Rear Cross Traffic Alert
- Sideview Camera
- Temperature Warning
- Tire Pressure Monitoring System
- Traction Control

For more detailed information on these technologies, please visit mycardoeswhat.org.

Instructors must be aware of this vehicle technology when teaching in-vehicle instruction.

Any technologies available in your driver education vehicle should be covered in your lesson plan.

Activity

Activity #3: New Technologies in Vehicles

Provide a list of new technologies in vehicles that you have observed or read about.

Section 1
Summary

This section discussed the use of on-board technologies.

Module Summary

Module
Summary

The purpose of this module was to give the student a better understanding of on-board technologies.

By the end of this module, you should be able to:

- Describe the role and use of on-board technologies in behind-the-wheel instruction.

The information presented in this module will help you to learn more about ways to enhance your driver education program through on-board technologies.

Key Words

The following “Key Words” were introduced and defined during the lesson.

Electronic scoring sheets	GPS	On-board technologies
Tracking devices		

Module Review Activity

Module Review Activity

Key Words Matchup

On the line below, write the letter of the associated key word.

A. Electronic scoring sheets	B. GPS	C. On-board technologies
D. Tracking devices		

1. _____ The computer and electronic technology in your vehicle, including emergency warning systems, GPS navigation, integrated hands-free cell phones, wireless safety communications, automatic driving assistance systems and vehicle tracking.
2. _____ Used to monitor/evaluate student's driving, including location, time, speed, lateral and linear acceleration, generating a "Drive Score" and electronic Log Book as well as vehicle/fleet maintenance information for the instructor/school.
3. _____ Used to assist with driving route and giving directions.
4. _____ Used for evaluation/assessment and lesson/progress/performance tracking.

Summary Sheet

Summary Sheet – continued

The Role and Use of On-board Technologies

On-board technologies include various vehicle telematics such as the computer and electronic technology in your vehicle, including emergency warning systems, GPS navigation, integrated hands-free cell phones, wireless safety communications, automatic driving assistance systems and vehicle tracking. These may be factory-installed or aftermarket items.

Current technology used for in-vehicle training includes cameras used for students, used for the driving scene and used for instructors, GPS systems, and tracking devices as well as various hand-held devices.

New and emerging technology in vehicles includes:

- Back-up Camera
- Anti-Lock Braking System
- Blind Spot Monitor
- Automatic Emergency Braking
- Lane Departure Warning
- Tire Pressure Monitoring System
- Adaptive Cruise Control
- Adaptive Headlights
- Automatic Parallel Parking
- Automatic Reverse Braking
- Back-up Warning
- Bicycle Detection
- Brake Assist
- Curve Speed Warning
- Drowsiness Alert
- Electronic Stability Control
- Forward Collision Warning
- High Speed Alert
- Hill Descent Assist
- Hill Start Assist
- Lane Keeping Assist
- Left Turn Crash Avoidance
- Obstacle Detection
- Parking Sensors
- Pedestrian Detection
- Push Button Start
- Rear Cross Traffic Alert
- Temperature Warning
- Sideview Camera
- Traction Control

Module 10

**Behind-the-Wheel Teaching and
Learning Theories Course
Wrap-Up**



Module Contents

Module Overview 10-2

Section 1: Summary of Behind-the-Wheel Teaching and Learning Theories Course 10-3

Module Summary 10-4

Summary Sheet 10-5

Module Overview

Module Overview

1. Prior to this module, we discussed On-Board Technologies.
2. This module is titled “Behind-the-Wheel Teaching and Learning Theories Course Wrap-Up.”
3. The purpose of this module is to provide a summary of the Behind-the-Wheel Teaching and Learning Theories Course and answer any questions before you take the knowledge test.
4. This module will last approximately 30 minutes.
5. This module will provide a summary of the course and help you have additional questions answered.

Section 1: Summary of Behind-the-Wheel Teaching and Learning Theories Course

Introduction Section 1 will provide a summary of the Behind-the-Wheel Teaching and Learning Theories Course.

The main topics of this course

In this course, you learned:

- The lesson plan consists of instructional objectives, content, learning activities, anticipated problems and method of evaluation.
- When developing a route, work from the simple to complex environments, the characteristics of the environment should match the objectives in the lesson plan, and allow for 20-30 minutes per student.
- The five driving environments are low-speed, light traffic (residential), moderate speed, light traffic (open highway/rural), moderate speed, dense traffic (suburban/urban), high speed, moderate and heavy traffic (expressway) and night driving.
- When giving directions, they should be the same for every driver, unless a student is not catching on, short/concise directions, easy to state and remember, easy to understand and follow, “Where” first, then “what,” given clearly and early and timed so not to overload the driver.
- The instructor should be sitting in a manner to take control of the vehicle by sitting in a relaxed but alert position, with left their hand in immediate access to the steering wheel and gear selector lever, with their foot positioned ready to use the dual brake.
- The instructor can take control of the vehicle by means of the steering wheel, the dual instructors, the gear selector lever, and the center-pull parking brake.
- Commentary teaching is when the instructor verbalizes the lesson and conditions and student commentary is when the student verbalizes what they are doing and the condition of the roadway.
- Types of in-vehicle evaluation includes initial evaluation, on-going evaluation, guided self-evaluation and summative evaluation.

Module Summary

Module Summary

The purpose of this module was to provide a summary of the Behind-the-Wheel Teaching and Learning Theories Course and help you have additional questions answered.

This module covered one topic:

- Summary of behind-the-wheel teaching and learning theories course.

The information that was presented in this module is essential for understanding the behind-the-wheel teaching and learning theories course and to prepare for the knowledge test.

Summary Sheet

Introduction Section 1 will provide a summary of the Behind-the-Wheel Teaching and Learning Theories Course.

Lesson plans
for in-vehicle

Lesson Plan Format

Each instructional objective shall include content for the instructional objective, learning activities, anticipated problems and method of evaluation. After the instructional objectives a copy of the route will be attached to the lesson plan.

On-Street Route Development

- Always work from the simple to the more complex environments.
- The characteristics of the environment should match with the objectives in the lesson plan.
- Every on-street route should allow for:
 - An introduction.
 - A demonstration of skills.
 - Repetitious practice (specify the number of repetitions).
 - Assessments.
- The instructor should be very familiar with the routes.
- Each route should contain:
 - Twenty to thirty instructional minutes per student.
 - Time for directions.
 - Static and dynamic situations.
 - Simple to complex situations

Different Driving Environments

The five driving environments are:

1. Low-speed, light traffic (i.e. residential) – speeds of 5-25 mph, few traffic controls
2. Moderate speed, light traffic (i.e. open highway/rural) - speeds of 35-50 mph, variable sight distance, multiple lanes
3. Moderate speed, dense traffic (i.e. suburban/urban/ business district) – speeds of 25-35 mph, maximum number of users, multiple traffic lanes and intersections
4. High speed, moderate and heavy traffic (i.e. expressway) – speeds of 55 – 70 mph, variety of exchanges, limited access
5. Night driving should be included in driver education instruction if possible. Night driving provides significantly reduced visibility for the student and the instructor.

Summary Sheet

Giving directions

Changing Drivers

Allow twenty to thirty minutes for each student to drive. Choose a safe location to change drivers such as a public area with limited traffic and a good sight distance ahead and behind.

Guidelines for Giving Directions

- Write directions to negotiate a route, which will minimize misunderstanding.
- Verbalize directions, which maximize hearing and understanding of the direction.
- Identify where/when directions should be given that minimize driver overload.
- Directions should be short and concise, use key words, easy to state and remember, easy to understand and follow, and consistent.
- How you give directions is critical in the driver's performance. Make sure you talk loudly and clearly and pause between the "where/when" and the "what" components of the directions.

Instructor seating position

You should be sitting in a manner to take control of the vehicle by sitting in a relaxed but alert position, with your left hand positioned in immediate access to the steering wheel and gear selector lever, with your foot positioned ready to use the dual brake.

Controlling the vehicle in an emergency situation

The instructor can take control of the vehicle by means of:

- The steering wheel – if the situation presents a threat
- The dual instructors brake - use when a situation becomes a threat to you or other roadway users
- The gear selector lever – use in situations where engine is over revving or acceleration is more than braking power
- The center-pull parking brake - used as a back-up to instructor brake, limit use due to rear-wheel lock up

Summary Sheet

In-vehicle
teaching
techniques

Commentary Teaching

Commentary teaching is when the instructor verbalizes the lesson and conditions to help familiarize the students with what they are expected to do and the condition of the roadway.

Student commentary is when the student verbalizes what they are doing and the condition of the roadway.

Both teaching methods, commentary teaching and student commentary, are very important components to the initial part of the in-vehicle training process. Both methods help to create interaction and help students to understand what they need to do. Commentary teaching should be utilized in short sessions. It is not meant to be used for long periods of time.

Coaching the Driver

Coaching is a method where the instructor and student form a partnership in which the instructor, through observation, questioning and feedback, encourages the learner to be him/herself, identify goals, reflect on their experience and develop strategies to meet their driving goals in the future.

Coaching by correction is correcting student's mistakes with constructive criticism. In-vehicle instructors should not only identify mistakes made, but provide positive comments and explaining to the driver how to correct the mistake.

Positive reinforcement is telling them they have done a good job and rewards the student for positive behavior.

Coaching is designed to develop the awareness and responsibility of the person being coached. These are all vital components in encouraging safe driving.

- **Leading the learner into an active role**

It is important to lead the learner into an active role. The more active the student is in the learning process, the more likely they are to develop and maintain skills not just during training but also when driving.

- **Projecting positive personality traits to students**

Demonstrate respect and empathy for learners as growing, developing and feeling human beings.

Summary Sheet

Driver
evaluation

Types of in-vehicle evaluation

1. Initial evaluation.
2. On-going evaluation each time a driver drives.
3. Guided self-evaluation.
2. End of unit or course (summative) evaluation at the end of the in-vehicle phase.

Measurements obtained when evaluating drivers:

- The driver's skills at maneuvering the car can be measured.
- The driver's ability to identify and avoid situations that are likely to produce a collision.

Evaluations can consistently:

- Determine which drivers are most successful in responding to hazardous traffic situations.
- Identify the driver's strengths and weaknesses.

Driver actions to evaluate:

- Break down the driver's strong and weak points.
- Searching, speed control, direction control and timing

How to provide feedback to the driver

- Be done in a systematic way.
- Relate to judgment and/or performance in searching, speed control, direction control, and timing/decision-making skills.
- Be immediately done if mistakes are being made

On-board
technologies

On-board technologies

Include the computer and electronic technology in your vehicle, including emergency warning systems, GPS navigation, integrated cell phones, wireless safety communications, automatic driving assistance systems and vehicle tracking.

Technology for in-vehicle training

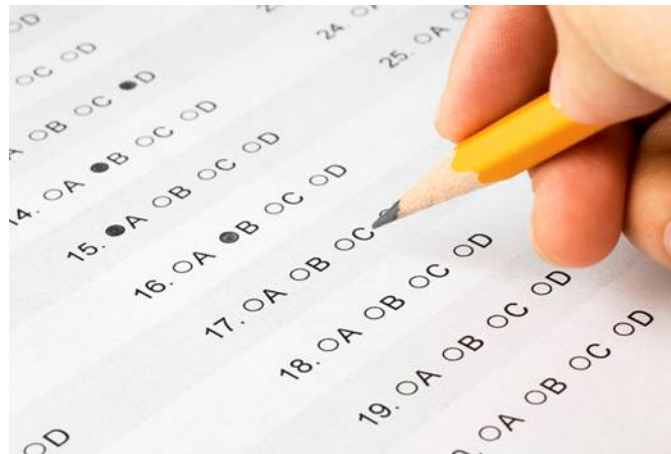
Includes cameras to record, GPS systems, tracking devices, electronic score sheets

New technology in vehicles

Includes back up cameras, blind spot detector, automatic parallel parking, back-up warning, brake assist, drowsiness alert, lane keeping assist, pedestrian detection, push button start, traction control and more. Any technologies available in your driver education vehicle should be covered in your lesson plan.

Module 11

Behind-the-Wheel Teaching and Learning Theory Knowledge Test



Module Contents

Module Overview 11-2

Section 1: Behind-the-Wheel Teaching and Learning Theories

Knowledge Test 11-3

Module Summary 11-5

Module Overview

Module Overview

1. Prior to this module, you were provided a course wrap-up.
2. This module is titled “Behind-the-Wheel Teaching and Learning Theories Knowledge Test.”
3. The purpose of the module is to provide you with a clear understanding of the examination requirements; and to demonstrate that you have a firm understanding of the knowledge and skills necessary for becoming a driver education instructor.
4. This module covers one topic:
 - Behind-the-Wheel Teaching and Learning Theory Knowledge Test.
5. By the end of this module, you will be able to:
 - Demonstrate an understanding of the knowledge and skill necessary for being a driver education instructor.
 - Demonstrate an understanding of the attitudes and responsibilities necessary for being a behind-the-wheel driver education instructor.
 - Successfully pass the Behind-the-Wheel Teaching and Learning Theories Knowledge Test with an 80% accuracy.
6. This module will last approximately 1 hour.
7. This module will help you understand the Behind-the-Wheel Teaching and Learning Theories Knowledge Test for completion of the Behind-the-Wheel Teaching and Learning Theories course.

Section 1: Behind-the-Wheel Teaching and Learning Theories Knowledge Test

Introduction Section 1 will cover what to expect from the Behind-the-Wheel Teaching and Learning Theories Knowledge Test.

Behind-the-Wheel Teaching and Learning Theories Knowledge Test

1. Consists of 30 multiple choice questions.
2. There are three alternatives for each question (a, b and c).
3. Pick the response that best answers the question.
4. You must pass with a score of 80% or higher to complete the Behind-the-Wheel Teaching and Learning Theories Course.
5. You have one hour to complete the test.
6. When finished remain in the room and your instructor will collect the test and answer sheet.

Section 1 Summary This section covered what to expect from the Behind-the-Wheel Teaching and Learning Theories Knowledge Test.

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Module Summary

Module Summary

The purpose of this module was to provide you with a clear understanding of the requirement that driver education instructors successfully complete the required examination upon completion of the Behind-the-Wheel Teaching and Learning Theories Course to demonstrate that you have a firm understanding of the knowledge, knowledge, and attitude necessary for becoming a driver education instructor.

By the end of this module, you should be able to:

- Demonstrate an understanding of the knowledge and skill necessary for being a driver education instructor.
- Demonstrate an understanding of the attitudes and responsibilities necessary for being a behind-the-wheel driver education instructor.
- Successfully pass the Behind-the-Wheel Teaching and Learning Theories Knowledge Test with an 80% accuracy.

The information that was presented in this module is essential for understanding the Behind-the-Wheel Teaching and Learning Theories Knowledge Test for completion of the Behind-the-Wheel Teaching and Learning Theories course.

Part III Addendum

Module C

Optional Content

Driving Ranges and Driving Simulators



NOTE: The instructor should use their discretion as to what topics to cover in this module. This module may not need to be covered in detail, but provides a sample of what could be covered in the course. If your state does not have specific content for these topics use this module to teach these topics.

Module Contents

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Activity #1: Driving Skills Enhanced through Simulation	C-4
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Activity #3: Advantages of the Driving Range	C-10
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Summary Sheet	C-17

Module Overview

Module Overview

1. Prior to this module, we completed the knowledge test.
2. This module is titled “Driving Ranges and Driving Simulators.”
3. The purpose of this module is to give the student a better understanding of how driving ranges and driving simulators can enhance driver education.
4. This module will cover two topics:
 - Driving ranges
 - Driving simulators
5. By the end of this module, you will be able to:
 - Describe the role and use of driving simulators in behind-the-wheel-instruction.
 - Describe the role and use of driving ranges or off-street practice areas in behind-the-wheel-instruction.
6. During the module, you will be required to participate in group discussion and activities lead by the instructor.
7. During the module, you will be evaluated on your participation in class discussion. There will be a 10-point quiz at the end of the module, which you must complete with at least 80% accuracy.
8. This module will last approximately 1 hour and 30 minutes.
9. This module will help you to learn more about ways to enhance your driver education program through driving simulation and driving ranges.

Key Words:

You will learn the following key words and their meaning as you proceed through this module:

Dedicated driving range	Immersion	Interactive driving simulator
Presence	Simulated driving	Simulation system
Temporary driving range	Virtual reality	

Section 1: The Role and Use of Driving Simulators

Introduction Section 1 will cover the role and use of driving simulators in behind-the-wheel training.

The meaning of driving simulators

- Describes a multitude of combinations of computer hardware, software and real or proxy vehicle components, e.g. controls, instruments, seat and dashboard, enclosed cabins.
- Designed to reproduce, with varying degrees of realism part or all of the experience of driving a motor vehicle within a realistic road and traffic environment.
- Visual displays range from desktop computer screens to 360-degree curved screens.
- Motion reproduction of varying qualities is also available to add realism to the driving experience.
- Typically available in a wide range of configurations with costs that vary according to the quality of the realism of the simulation and additional features.

Categories of driving simulators based on quality

Driving simulators can be divided into three categories, low, medium and high quality.

1. Low quality driving simulators consist of desktop, single-screen computers with a gaming steering wheel and pedals and can cost as little as a few hundred dollars.
2. Medium-quality driving simulators normally increase the field of view, present a more realistic driving cockpit, are available with motion platforms and can provide a high degree of realism – prices may vary between \$30,000 and \$250,000 depending features and the degree of realism that is simulated.
3. At the high end, multimillion-dollar, full-scale driving simulators use real motor vehicles surrounded by 360-degree viewing screens mounted on hexapod platforms that glide on tracks that provide realistic motion and acceleration feedback.

Section 1: The Role and Use of Driving Simulators

Simulation and what it can offer to a driver education program

A simulator can provide:

1. A repetitive sequence in a protected environment.
2. The opportunity for the student to develop judgment and decision-making abilities.
3. The opportunity for the instructor to observe student responses to traffic situations under simulated conditions.

What is the purpose of driving simulation?

- Liaison between classroom and in-vehicle instruction.
- Provides additional knowledge necessary for safe operation of a motor vehicle.
- Provides a variety of learning experiences.
- It is learning in a protected environment.

Certain skills that can be built using driving simulators:

- Basic visual skills and abilities.
- Basic perceptual skills and abilities.
- Judgment and decision-making abilities.
- Appropriate responses to situations of increased risk.
- Procedural and vehicle handling skills.

Activity

Activity #1: Driving Skills Enhanced through Simulation

In a small group setting, you will discuss the role of driving simulation in a driver education program and determine driving skills that are enhanced through this technique.

Section 1: The Role and Use of Driving Simulators

The suitability of different visual systems to evaluate a normal range of driving skills

Suitability of different visual systems to evaluate a normal range of driving skills.

Driving skills	180-degree FOV screens with 1:1 graphic-to-optic ratio plus blind spots	120-degree FOV screens with graphic compression of 180 degrees and no blind spots
Speed control	Yes	Yes (Speed perception decreases as field of view narrows [3])
Brake reactions	Yes	Yes
Lane keeping	Yes	Yes
Turns at Y intersections	Yes	Yes
Proceeding straight through intersections	Yes	Not recommended
Lane changes (with shoulder checks)	Yes	No
Turns (with shoulder checks)	Yes	No
Expressway merges (with shoulder checks)	Yes	No

Section 1: The Role and Use of Driving Simulators

Different types of simulators: interactive, simulated driving and virtual reality.

1. Interactive driving simulator
 - Early versions of driving simulators were non-interactive, meaning that the drivers' actions did not influence the behavior of the virtual vehicle driving in the filmed or animated driving environment.
 - With interactive driving simulators, drivers directly control the movement of their vehicles and may even influence the driving and traffic environment.
 - Most importantly, events can be programmed to occur that can train or test a driver's ability to perform safely.
 - Have great potential as both driver training and driver assessment tools because they have programmable driving scenarios and they can measure driver performance and behavior with precision and reliability.
 - This combination of features makes it possible to develop standardized scenarios with driving routes that present complex and high-risk traffic situations allowing for standardized scores and objective comparisons of driving behavior.
2. Simulated driving
 - Visual media like videos and games that reproduce aspects of the driving experience and require the performance of tasks similar to real life driving.
3. Virtual reality
 - A term that applies to any computer-generated environment that simulates real or imaginary worlds through visual displays, sounds and sometimes tactile feedback and that allow participants varying degrees of freedom to interact within those environments.

Section 1: The Role and Use of Simulators

Immersion and presence in relation to driving simulators

In understanding driving simulators, two critical constructs are often neglected, immersion and presence.

- **Immersion:** A measure of the degree to which information surrounds and includes a driver through sensory means; in other words, the extent to which the driver's external sensory inputs are occupied with the driving task vs. any external distraction.
 - Example: A 180-degree visual configuration is more immersive than a single monitor desk-top simulator.
- **Presence:** The measure of the degree to which we feel we are in or part of an environment; in a sense, the extent to which our internal sensory and cognitive systems are occupied with the driving task vs. any internal distraction, e.g. thoughts, hypothesis.

Immersion and presence are related but different. The difference is that immersion is the cause or the process and presence is the effect or the result.

- These terms are important to understand because the degree of presence that the driver feels while driving in the simulator is directly related to the probability that the learned behaviors will transfer to the real world and the validity of the evaluation of that driver's performance and behavior.
- Driving simulators that produce a more immersive environment, through more realistic and comprehensive sensory outputs, have a greater likelihood of producing the presence that is critical learning.

Section 1: The Role and Use of Simulators

Guidelines to ensure students know what to expect and how they are going to be evaluated

- Instructor must know and understand how to operate driving simulators.
- Instructors should organize the driving simulation lesson into an introduction (highlighting the important concepts/points that will be emphasized in the lesson), the actual driving simulation video while driving the simulators (emphasizing key points, stopping where appropriate/necessary, getting student input, etc.), and a good summary at the end of the lesson.
- Student orientation to equipment and assessment.
- Student orientation to instructional programs.
- Expectation of student performance in-vehicle.
- Evaluation of student performance in driving simulation.

Activity

Activity #2: Driving Simulation Demo

Participate as a student in many driving simulation lessons. Discover the skills that beginning drivers will learn from the driving simulation experience.

Section 1: The Role and Use of Driving Simulators

The methods of evaluating students when using simulators

1. Based on instructor observation and computerized scoring system.
 - Observing procedures to be followed.
 - Observing student's responses to certain scenes.
 - Computer automatic scoring through set checks in the selected driving program.
 2. Written or verbal testing based on the scenarios.
 3. Commentary driving during the scenarios.
 4. Scenario clips with response sheets.
-

Limitations of driving simulators

Even though simulation does have its strong points it can also have weak points, heavily dependent upon the type of simulator used and the quality of instruction provided. These may include:

- Absence of kinetic feedback.
 - Limited visual field
 - Possible negative transfer of learning when errors or omissions in student observation and/or procedure are not identified and corrected.
-

Converting simulation into behind-the-wheel driving hours

- Generally accepted time ratio is 4:1 (four hours of simulation equals one hour of on-street instruction). It is important to mention that driving simulation can be used as a part of classroom instruction.
 - Maximum two hours substitution time allowed.
-

Section 1 Summary

This section covered the role and use of simulators in behind-the-wheel training.

Section 2: The Role and Use of Driving Ranges

Introduction Section 2 will cover the role and use of driving ranges, including types of ranges, advantages of using a range, and convert driving range time into behind-the-wheel driving hours.

Driving range and driving range instruction Driving range – a defined roadway course closed to public traffic and allowing for the recreation of various basic driving scenarios, used for driver training.

Driving range instruction – use of a closed course to instruct drivers.

Two types of driving ranges There are two types of ranges used for driver education.

1. Dedicated, specially designed and built traffic mix facility which can include most elements found in an urban driving environment. It may also include a skid pad or skid simulation equipment.:
2. Temporary, off-street exercise range that is most likely a parking lot where some pre-assessment exercises, parking exercises, and basic handling procedures can be performed.

The advantages of incorporating range exercises into a driver education program The advantages of incorporating range exercises into a driver education program are:

- Allows for repetitive experiences in a controlled environment.
- Allows for more driving experience per hour of supervision/guidance.
- Allows for individual student differences.
- It is a low risk in-vehicle experience.
- When using a temporary off-street facility, issues of permission and liability must be properly addressed.

Activity **Activity #3: Advantages of the Driving Range**

Your instructor will be involved in a discussion on the advantages of utilizing the driving range program as an enhancement to in-vehicle instruction.

Section 2: The Role and Use of Driving Ranges

The basic equipment needed to operate a dedicated driving range

- Initial cost of building a dedicated range is extremely high if the facility is a traffic mix setup.
- Equipment needs may include:
 - Additional vehicles.
 - Communication system.
 - Vehicle identification.
 - Storage.
 - Signs, signals, markings, cones
 - Control tower
 - Vehicle remote controls for ignition and braking
 - Skid pad or skid simulation equipment
 - Landscaping for hills, various road chambers and surfaces

Other driving range considerations

- Teaching stations protected from the elements.
- Safety considerations of the students, instructors, and of the vehicles.
- Types of basic skill exercises placed on a dedicated range at one time.
 - Starting and stopping
 - Lateral maneuvers
 - Traffic mix
 - Left/right turns
 - Vision/steering skills
 - Parking exercises
 - Passing lanes
 - Backing exercises
 - Various types of intersections

Section 2: The Role and Use of Driving Ranges

Driving range safety rules

1. Avoid contact with the vehicle when giving directions. Do not stand on the running boards or in a location with the door open that could result in injury if the vehicle suddenly moves.
2. Stand well away from the vehicle. Do not approach the vehicle unless it is in neutral and the parking brake is set.
3. Do not stand directly in front or in the rear of a vehicle.
4. Be prepared to move at any time.
5. Always keep the driver in sight, and make sure that you stay where the driver can see you. If you cannot see their mirrors, they cannot see you.
6. If the driver cannot hear your directions, have them turn the engine off.
7. Never allow the driver to do anything dangerous. For example,
 - Do not allow them to exit the vehicle without maintaining 3 points of contact on the vehicle.

Section 2: The Role and Use of Driving Ranges

Converting driving range time to behind-the-wheel driving hours

Generally accepted time ratio is 2:1 (two hours of range instruction is equivalent to one hour of on-street instruction).

Maximum two hours substitution time allowed.

Other activities a driving range may be used

Even though a dedicated driving range may have been designed for driver education, it may be used for other types of activities such as:

- Public driver improvement programs.
- Motorcycle operator courses.
- Private driver training.
- School functions.

Section 2: The Role and Use of On-board Technologies

Summary of the important topics

- Program enhancements can add to the learning environments available to the students.
- Each enhancement, simulation, range and vehicle technology has its strength's and its weaknesses.
- Some program enhancements may have a high initial cost.
- Program enhancements may reduce instructional costs over time.

Section 2
Summary

This section covered the role and use of driving ranges, including types of ranges, advantages of using a range, converting driving range time into behind-the-wheel driving hours.

Module Summary

Module Summary

“The purpose of this module was to give the student a better understanding of how driving ranges and driving simulators can enhance a driver education program.”

By the end of this module, you should be able to:

- Describe the role and use of driving simulators in behind-the-wheel-instruction.
- Describe the role and use of driving ranges or off-street practice areas in behind-the-wheel-instruction.

The information presented in this module will help you to learn more about ways to enhance your driver education program through driving simulation and driving ranges.

Key Words

The following “Key Words” were introduced and defined during the lesson.

Dedicated driving range	Immersion	Interactive driving simulator
Presence	Simulated driving	Simulation system
Temporary driving range	Virtual reality	

Module Review Activity

Module Review Activity **Key Words Matchup**

On the line below, write the letter of the associated key word.

A. Dedicated driving range	B. Immersion	C. Interactive driving simulator
D. Presence	E. Simulated driving	F. Simulation system
G. Temporary driving range	H. Virtual reality	

1. _____ Describes a multitude of combinations of computer hardware, software and vehicle components.
2. _____ The measure of the degree to which we feel we are in or part of an environment.
3. _____ Specially designed and built traffic mix facility which can include most elements found in an urban driving environment.
4. _____ A measure of the degree to which information surrounds and includes a driver through sensory means.
5. _____ Off-street exercise range that is most likely a parking lot where some pre-assessment exercises and basic handling procedures can be performed.
6. _____ Visual media like videos and games that reproduce aspects of the driving experience.
7. _____ A term that applies to any computer-generated environment that simulates real or imaginary worlds through visual displays, sounds and tactile feedback.
8. _____ Drivers directly control the movement of their vehicles and may even influence the driving and traffic environment.

Summary Sheet

Summary
Sheet

Overview of Program Enhancements

- Program enhancements add to the learning environments available to the students.
- Each enhancement, simulation, range and vehicle telematics has its strength's and its weaknesses.
- High initial cost for each.
- Can reduce instructional costs over time.

The Role and Use of driving Simulators

A driving simulation system can provide a repetitive sequence in a protected environment to observe student responses to traffic situations under simulated conditions. Driver simulation provides liaison between classroom and in-vehicle instruction and provides additional knowledge necessary for safe operation of a motor vehicle, such as decision-making and judgment abilities and basic visual and perceptual skills and abilities.

Driving simulators can have limitations such as absence of kinetic feedback, limited visual field and possible negative transfer of learning.

Driving simulation can be converted into behind-the-wheel driving hours using a 4:1 ratio (four hours of driving simulation is equivalent to one hour of on-street instruction).

Summary Sheet

Summary
Sheet –
continued

The Role and Use of Driving Ranges

There are two types of driving ranges: a specially designed and built traffic mix facility that includes painted lines, stop signs, parking exercises, skid pad, and expressway driving and an off-street exercise range where some pre-assessment procedures are practiced.

The advantages of incorporating range exercises into a driver education program are they allow for repetitive experiences in a controlled environment, they allow for more driving experience per hour of supervision/guidance, they allow for individual student differences and it is a low risk in-vehicle experience.

Driving range time can be converted into behind-the-wheel driving hours using a 2:1 ratio (two hours of range instruction is equivalent to one hour of on-street instruction).