<u>Prerequisite:</u> Successfully complete the 80-hour Basic Motorcycle Course (Course Control Number 32550) and be able to properly demonstrate and complete all of the motor exercises used in the Basic Motorcycle Course AND successfully have completed a Basic Instructor Development Course (IDC) such as Academy Instructor Certification Course (AICC) or an equivalent.

INSTRUCTIONAL GOAL: To provide experienced motorcycle officers an opportunity to develop the training skills necessary to become Motorcycle Training Instructors. Upon successful completion of the Motorcycle Training Instructor (MTI) course, the student will be certified as a Motorcycle Training Instructor, which will adhere to Peace Officer Standards and Training (POST) requirements 1070 Specification for POST Certified Specialized Training.

Performance Objectives: Using group discussion, learning activities, practical application and a test the student will:

- Adhere to course safety guidelines to ensure that the instructors and students are aware of potential hazardous conduct and how to avoid it.
- Clearly understand and complete the 80-hour Motorcycle Training Instructor Course (CCN 21540).
- Participate in on the job training for additional hours determined by the Motorcycle Training Unit staff.
- Demonstrate the ability to teach motorcycle skills and techniques.
- Be able to apply adult learning methodologies in a classroom setting.
- □ Identify legal issues facing an instructor.

INSTRUCTOR CERTIFICATION (Pre-Requisite) 80-Hour Basic Motorcycle Course:

- A. New instructors will participate as a student for the entire 80-hour Basic Motorcycle Course (1850-32550).
- B. Students need to consider the key points of each technique taught, from the mind-set of an instructor.
- C. During the course, ensure that new instructors remain in the role of a student.
- D. Advise students that in order to progress to the 80-hour Motorcycle Instructor Course, they must successfully complete the 80-hour Basic Motorcycle Course, which is considered the first portion of the training program.
- E. 80-hour Basic Motorcycle Course lesson plan is provided as an addendum.

<u>NOTE</u>: Some students participate in the Basic Motorcycle and Motorcycle Training Instructor training courses concurrently. If the classes are being taught as individual blocks, remind students that in order to be certified as an instructor, they must participate in both blocks of instruction, which consists of 160-hours of total instruction.

I. OPENING

Day 1

0600-0630 (30 Min)

- A. Introduction
 - 1. Instructor:
 - a. Name
 - b. Assignment
 - c. Experience
 - 2. Student:
 - a. Name
 - b. Assignment or Agency
 - c. Training and Experience
 - d. Expectations from the course
- B. Overview of goals and objectives
 - 1. Develop instructors for the Basic Motorcycle Course 1850-32550 and Motorcycle Update Trainings 1850-32575 and 1850-32503.
 - 2. Develop uniformity standards of instruction for all classroom presenters related to motorcycle training.
 - 3. Adhere to 1070 Specification requirements for POST Certified Specialized Training.
 - 4. Develop instructors who will use adult learning teaching techniques to create a positive learning environment.
 - 5. Brief overview of training schedule:
 - a. Completion of the 80-hour Basic Motorcycle Course as a student (pre-requisite).
 - b. Överview the Basic Motorcycle Course Training Manual.
 - c. Effective strategies for presentations, such as walk-through and drills.
 - d. Developing agency specific lesson plans and safety guidelines.
 - e. Completion of the 80-hour Motorcycle Training Instructor Course as a student.
- C. Goals of the Overview of the Motorcycle Training Instructor program:
 - 1. Provide clear understanding of how to implement the Basic Motorcycle and Motorcycle Update Curriculum:
 - a. Basic Motorcycle Course 1850-32550:
 - 1) 20-modules
 - 2) 103-segments
 - b. Motorcycle Update Training 1850-32575 (10 hours)
 - 2. Develop agency specific lesson plans for motorcycle training curriculum.
 - 3. Develop agency specific safety guidelines.
 - 4. Review the differences between instructor demonstrations, a walk-through and drills.
 - 5. Review and analyze training tools.
 - 6. Practice presenting training topics.
 - 7. Successfully demonstrate the ability to teach motorcycle riding techniques.
 - 8. Successfully complete all phases of the Motorcycle Training Instructor course, including the on the job training portion.

II. ISSUE FOR INSTRUCTORS

0630-0700 (30 Min)

- A. Lecturette: POST Instructor Regulations:1
 - Emphasize the following points:
 - 1. At the successful completion of the course, each student will be certified as a Motorcycle Training Instructor.
 - 2. New instructor responsibilities and accountability
 - a. Demonstrate ethical decision making:
 - 1) At no time shall this important topic be minimized, diminished or overlooked
 - a) No unauthorized behaviors, such as "horse playing"
 - b) No "early outs" (i.e., early end-of-watch), as is commonly practiced
 - 2) Instructors must be perceived as leaders and authoritative experts in their field²
 - b. Instructors must realize the impact of their personal behavior on students and their department process:
 - 1) Fraternization with students can negatively impact the training
 - 2) Potential for harassment complaints associated with this type of physical contact training
 - 3) Necessity for impartial objectivity when evaluating students:
 - a) Be aware of personal biases
 - b) Avoid language that might be demeaning or disrespectful
 - 4) Demonstrate and portray enthusiastic and positive personal demeanor
 - 5) At all times, display an encouraging attitude toward safety and a professional demeanor
 - 6) Report and/or stop all unsafe actions
 - c. Overview safety guidelines and protocols:
 - 1) Provide the new instructor with strategies to develop agency specific safety guidelines
 - 2) Discuss the importance of following safety guidelines and having a contingency plan to address emergencies
 - 3) Ensure that all necessary Workers Compensation and other necessary reports are completed in a timely manner
- B. Legal Issues
 - 1. Legal ramifications and civil liability issues:
 - a. Consequences if techniques are taught improperly
 - b. Modifying authorized and approved techniques
 - c. Civil rights violations
 - d. Agency specific policy must be adhered to at all times
 - 2. Methods for reducing civil liability:
 - a. Documenting all training:

¹Minimum training standards for Instructors related to POST certified specialized training courses are outlined in POST Regulation 1070.b

²Board of Public Safety Standards and Training Instructor Development Training Manual

- 1) Lesson plans
- 2) Rosters
- 3) Consistency
- 4) Discoverable
- b. Documentation of student performance:
 - 1) Performance evaluation checklist
 - 2) Skill level evaluation
 - 3) Test
- c. Documentation of re-mediation efforts:
 - 1) Written checklist to rack time for re-mediation
 - 2) Appropriate review process
 - 3) Document outcome of the re-mediation
- C. The above responsibility and accountability issues apply to each and every new instructor, including the students they train

III. LESSON PLAN OVERVIEW

0700-0800 (60 Min)

A. Lecturette:

Procedures: Small group activity (maximum of 3 per group)

- 1. Form students into small groups:
 - a. Instructor ratio: One (1) instructor for every three (3) students
- 2. DISTRIBUTE:
 - a. Basic Motorcycle Course lesson plan³
 - b. Motorcycle Update Training lesson plan
 - c. Motorcycle Individual Proficiency Night Road Course lesson plan
- 3. Instructor overviews the lesson plans:
 - a. Overview each lesson plan and how to present the specific techniques
 - b. Point out to the new instructors:
 - 1) Identified nuances that assist the students in learning a new technique(s)
 - 2) Importance using the back of the lesson plan for note taking
 - a) Assist new instructor on how to present material to their students upon their return from a break
 - b) Address variations / enrichment to techniques
 - 3) History of The Motorcycle Training Unit (MTU):
 - a) Research and development
 - b) Methodology
- B. Group Discussion:

Procedures: Conduct a discussion regarding how to transition from one block of instruction to the next. Emphasize the following:

- The success of this course depends in part upon the ability of the new instructor(s) to link individual techniques and apply situational or tactical strategies into the training
- 2. The importance of using adult learning styles, including group discussions, demonstration, walk through, drills and testing

³Los Angeles Police Department Basic Motorcycle Course

IV. REVEIW OF HOW ADULTS LEARN

0800-0830 (30 Min)

- A. Learning Modalities:
 - 1. Refers to the perceptual channels or senses through which a person receives and processes information:
 - a. Visual Learns by observing (readers and observers)
 - b. Auditory Learns by listening (listeners and/or talkers)
 - c. Tactile Learns with tactile assistance (feelers and touchers)
 - d. Kinesthetic Learns with kinesthetic support (movement/muscle memory)
 - 2. In any learning situations, most individuals use a combination of learning modalities
- B. Team Teaching:
 - 1. Two individuals "share" the classroom during a teaching block
 - 2. One instructor is considered primary and the other secondary
 - 3. Using such a teaching configuration allows for different learning modalities to be comfortably utilized within the classroom
- C. Facilitation:
 - 1. Utilizing a student's knowledge, skills and ability to assist in the exchange of information
 - 2. Understanding that most adult learners have a tremendous experience base to draw upon information during training sessions
 - 3. Learning to "tap into" student experiences to discover innovative methods to handle problems identified within their profession
- D. Adult learning style:
 - 1. Cognition People input, perceive and gain knowledge differently
 - 2. Conceptualization People form ideas, process information and "think differently"
 - 3. Affect People's values and feelings influence style
 - 4. Behavior People act differently, based on genetics
 - 5. Adult learners are more "performers" than "learners" in that they rely on their experiences to process information. Although they still absorb additional information, learning does occur

E. Training methods:

- 1. Provide a general guideline for lesson plan development
- 2. Lesson plan is broken down into three (3) major components:
 - a. Opening
 - b. Body
 - c. Closing
- 3. The **Opening** consists of
 - a. Instructor's introduction
 - b. Brief overview of the training goals,
 - c. Expectations and
 - d. Some type of an "icebreaker"
- 4. The Body consists of the
 - a. Instructional material to be presented and
 - b. Utilizing all of the different training methods

- 5. The **Closing** (last portion of the presentation)
 - a. Where the key learning points related to the block of instruction are reiterated.
 - b. This ensures that all students leave the classroom with a clear and consistent understanding of the block of instruction and
 - c. Allows for any misinformation to be clarified
- 6. Learning Activity: Effective motorcycle techniques NOTE: This is a lecture about learning activities and NOT an actual learning activity

Purpose: For students to demonstrate new skills and existing techniques

Procedures: In large group or small group

- a. GROUP DISCUSSION: The instructor facilitates a discussion, which allows for participation from the students
- b. Walk Through:
 - 1) Students perform the new skill at less than full speed to familiarize themselves with the procedures related to the new skill
 - 2) Drills:
 - a) Repetitively practice a portion of a new skill
 - b) An adult learner can improve their skills, or apply new skills during the drill portion
- c. Conducted individually, in large or small groups:
 - 1) Drills:
 - a) Conducted once an entire skill set is learned by a student(s)
 - b) Opportunity to practice the entire skill set in real time
 - c) Students "perform tasks" in a controlled environment, which allows for errors to be corrected in a supportive manner
- d. CLOSING: At the conclusion of each block of instruction, summarize the key points
- e. TEST: To evaluate a student's ability to retain and apply new knowledge
- 7. Common instructor pitfalls:
 - a. Frustration
 - b. Blaming the learner
 - c. Egotistic
 - d. Burnout
- 8. Common learner problems:
 - a. Insecurity
 - b. Difficulty/Slow in grasping information
 - c. Fear/anxiety
 - d. Lack of assertiveness
 - e. Lack of attentiveness
 - f. Difficulty to perform at expected level
- 9. Giving criticism:
 - a. Focus on the behavior not the person
 - b. Describe the behavior accurately
 - c. Don't use personality traits to explain the problem: (i.e. You're lazy, dumb, not motivated, etc.)

V. SAFETY PROTOCOLS

0830-0900 (30 Min)

- A. The Los Angeles Police Department Motorcycle Training Unit (MTU) is responsible for
 - 1. Overseeing all motorcycle training and related safety issues for all Department and allied agency personnel who request training from this Department.
 - 2. These operational guidelines are designed to ensure a safe working environment for students, instructors and visitors
- B. The safety plan is outlined below:
 - 1. The Motorcycle Training Unit shall
 - a. Develop,
 - b. Periodically update, and
 - c. Distribute a comprehensive safety plan to all training staff members.
 - 2. Training staff members will insure that all students and visitors adhere to this safety plan
 - 3. A complete copy of all safety guidelines shall be given to personnel selected as part of the MTU staff
 - 4. Personnel are expected to be thoroughly familiar with all aspects of the safety plan
 - 5. Equipment
 - a. Motorcycle helmets with chinstraps secured
 - b. Safety glasses
 - c. Non-padded gloves shall be worn at all times when operating a police motorcycle
 - d. Long sleeve shirts
 - e. Ankle high leather boots
 - f. Long legged durable pants (jeans, utilities, etc.) shall be worn when operating a police motorcycle.
 - Note: Instructors may wear "Instructor" short sleeved shirts.
 - 6. All staff members shall be
 - a. Certified in a POST First Aid and
 - b. CPR class prior to being assigned to MTU's instructional staff
 - 7. The Motorcycle Training Unit shall
 - a. Provide safety information and
 - b. Briefings to all personnel receiving training
 - 8. The Motorcycle Training Unit
 - a. Design and implement an "Emergency Notification Card" containing specific information necessary to immediately notify the student's supervisor
 - b. Notify emergency contact person in the event the
 - 1) Student becomes injured or
 - 2) Requires medical treatment
 - c. The student shall be required to complete the Notification Card prior to the start of any motorcycle training
 - d. Notification Card
 - 1) Retained by MTU throughout the training period
 - 2) Readily available for immediate referral
 - 9. A training overview will be made available to all personnel in order to familiarize them with various requirements or demands during the training period
 - 10. A list of emergency medical facilities
 - a. Provide to all training staff members and posted at a readily accessible location at the training facility
 - b. Additionally, a list of emergency medical facilities shall be maintained in the offices of the Motorcycle Training Unit for quick reference
 - 11. Communications equipment

- a. Readily available at all times and locations where training occurs
- b. Training staff members shall carry their issued two-way radio at all times while training and cellular telephone capabilities shall be available at times when conventional telephones are not available or accessible
- c. The training staff shall maintain the capability of immediately summoning emergency services from any location on the training facility via wireless communications
- 12. The Lead Instructor shall conduct daily inspection of all training facilities and equipment to determine its suitability for training
- 13. The Lead Instructor shall discuss
 - a. All aspects of operational safety with students on each day of training
 - b. A safety discussion will be incorporated into the AM or PM briefing
 - c. And point out the location of all safety-related information
 - d. Safety rules shall be posted and readily available for student review.
 - e. All personnel will be given safety updates as needed, at the start of each training day or whenever changes occur at the training facility.
- 14. The Lead Instructor shall respond to all questions regarding safety procedures prior to commencing training
- 15. The Lead Instructor shall insure that all instructors and students adhere to the safety plan. Violations shall be immediately corrected and reported to the Officer in Charge for MTU
- 16. Each day the Lead Instructor shall coordinate the MTU's training schedule with safety officers from all other training disciplines on site to ensure that potential conflicts are avoided. These disciplines include but are not limited to the
 - a. Tactics and Firearms Units,
 - b. Emergency Vehicle Operations Center (EVOC)

VI. MODULES

0900-0930 (30 Min)

- A. Format:
 - 1. The Basic Motorcycle Course is divided into 20 modules
 - 2. The 20 modules are divided into 103 segments
- B. Model Teaching of the Modules:
 - 1. When providing instruction related to module techniques, the modules will be demonstrated
 - 2. The modules will be further broken down to the smallest segment to ensure thorough understanding
 - 3. The modules will be practiced by the students
 - 4. The ability to demonstrate each of the modules will be tested
 - 5. The modules are list below for additional presentation methodology (Addendum 1 Basic Motorcycle Course)
- C. Module One:
 - 1. Facility orientation
 - 2. Training orientation
 - 3. Administrative orientation
 - 4. Introduction to the school motorcycle and maintenance
 - 5. Basic motorcycle operations and hand signals
 - 6. Basic school motorcycle manipulation procedures
 - 7. Initial student ride

- 8. Introduction to motorcycle trailing
- 9. Introduction to slow tight-circles and figure-eight patterns
- 10. Introduction to four basic mazes and figure-eight maze
- D. Module Two:
 - 1. Introduction to combination braking
 - 2. Four basic mazes and figure-eight mazes
 - 3. Introduction to dirt trailing
- E. Module Three:
 - 1. Trailing
 - 2. Four basic mazes and figure eight maze
 - 3. Combination braking practice
 - 4. Introduction to the Challenger maze
 - 5. Introduction to board dragging
 - 6. Introduction to 60-foot circle and switchback exercise
- F. Module Four:
 - 1. Combination braking practice switchback and 60-foot circle exercise
 - 2. Four basic mazes
 - 3. Figure 8 maze
 - 4. Challenger maze
 - 5. Dirt trailing
 - 6. Introduction to 90-degree dirt slides
- G. Module Five:
 - 1. Trailing
 - 2. Maze practice All previously introduced mazes
 - 3. Introduction to the Hillside maze
 - 4. Combination braking practice
 - 5. Introduction to cone threading
 - 6. Introduction to the "D-cell" U-turn
 - 7. Introduction to 90-degree slides
- H. Module Six:
 - 1. Introduction to counter steering
 - 2. Introduction to high speed cone weaving
 - 3. Combination braking practice
 - 4. Introduction to maze five and six
 - 5. Maze practice All previously introduced mazes
 - 6. Dirt trailing
 - 7. 90-degree dirt slides
- I. Module Seven:
 - 1. Trailing
 - 2. Maze practice All previously introduced mazes Introduction to the triple drill
 - 3. 90-degree slides
 - 4. Introduction to the monster competition
- J. Module Eight:

- 1. Introduction to the road course
- 2. Dirt trailing.
- K. Module Nine:
 - 1. Maze practice
 - 2. Maze pre-test
 - 3. Combination braking practice
 - 4. Introduction to Hillside figure Eight maze
 - 5. Maze practice
 - 6. Monster combination
- L. Module Ten:
 - 1. Combination braking practice
 - 2. Introduction to the Top Gun competition
 - 3. Combination braking practice
 - 4. Dirt trailing
 - 5. 180-degree dirt slides
 - 6. Introduction to dirt scrambles
- M. Module Eleven:
 - 1. Trailing
 - 2. Maze practice
 - 3. Combination braking practice
 - 4. Introduction to the reaction light
 - 5. Monster competition
 - 6. Triple Drill
- N. Module Twelve:
 - 1. Cone threading
 - 2. Road course
 - 3. Dirt trailing
 - 4. Dirt scrambles
 - 5. Cone threading
- O. Module Thirteen:
 - 1. Trailing
 - 2. Maze practice
 - 3. Final maze test
 - 4. Combination braking test
 - 5. Road course qualification:
 - a. Safely operate a motorcycle during enforcement stops
 - b. Defensive riding
 - 6. Introduction to the full-dresser police motorcycle
- P. Module Fourteen:
 - 1. Trailing police motorcycle
 - 2. Introduction to riding in pairs
 - 3. Combination braking-full-dresser police motorcycle
 - 4. Combination braking practice with reaction light
 - 5. Introduction to maze seven and eight
 - 6. Introduction to the curb pull-away/outs

- 7. Top Gun full-dresser police motorcycle
- Q. Module Fifteen:
 - 1. Trailing full-dresser police motorcycle
 - 2. Combination braking practice with reaction light
 - 3. Mazes seven and eight
 - 4. Introduction to the Department of Motor Vehicle (DMV) maze
 - 5. Introduction to the vehicle pullovers with D Cell" U-turn
 - 6. Road course full-dresser police motorcycle
- R. Module Sixteen:
 - 1. Road course full-dresser police motorcycle
 - 2. Top Gun full-dresser police motorcycle
- S. Module Seventeen:
 - 1. Trailing full-dresser police motorcycle
 - 2. Combination braking test full-dresser police motorcycle
 - 3. Road course qualification full-dresser police motorcycle
 - 4. Street and freeway ride Part I
- T. Module Eighteen:
 - 1. Street and freeway ride Part II
 - 2. Safe riding
- U. Module Nineteen:
 - 1. Trailing full-dresser police motorcycle
 - 2. Introduction to the high-speed exercise
 - 3. Graduation ceremonies
- V. Module Twenty:
 - 1. Final administrative review
 - 2. Students complete course critique
 - 3. Certificate presentation
 - 4. Final debrief

Day1-5

VII. MODEL TEACHING of the MODULES

0930-1500 (2190 Min)

A. Learning Activity: Demonstration of all 20 Motorcycle Modules

Purpose: For students to observe the techniques/drills as demonstrated from an instructor's perspective

Procedures: Small group (maximum of 3 per group)

- 1. Describe how the practice section of the day will be conducted
- 2. All student instructors participate by following along in the instructor manual as each technique/drill is demonstrated from an instructor's perspective, and not as a student
- 3. If student instructors intend on conducting "team-teaching," they can practice with their partner instructor

- 4. Allow for student instructors to review the lesson plan prior to modeling how to demonstrate the technique
- B. Learning Activity: Break down of all 20 Motorcycle Modules

Purpose: For students to demonstrate the role of an instructor and improve skills ability

Procedures: In pairs

- 1. Student instructors shall rotate in-between the role of the student and the role of instructor
- 2. Ensure that all student instructors have had an opportunity to practice the exercise until they have mastered the ability to properly demonstrate the skill
- 3. Allow time for feedback before moving to the next pair of student instructors
- C. Learning Activity: Drill all 20 Motorcycle Modules

Purpose: For students to differentiate the role of a student and as an instructor

Procedures: In pairs

- 1. Have student instructors rotate in-between the role of a student and the role of an instructor
- 2. Ensure that all student instructors have had an opportunity to practice in real time until they have mastered the ability to teach the skill
- 3. Allow time for feedback before moving to the next pair of new instructors
- D. Learning Activity: Drill all 20 Motorcycle Modules

Purpose: For students to perform as an instructor in front of a group

Procedures: Small group (maximum of three per group)

- 1. Assign one of the student instructors to play the role of an instructor
- 2. Assign the rest of the group to play the role of the student
- 3. The student instructor will present a motorcycle technique to the group
- 4. Allow time for feedback / critiques before selecting another student instructor
- 5. Continue to rotate student instructors between the role of a student and the role of an instructor
- 6. Ensure that all student instructors have the opportunity to model teach in real time until they have mastered the ability to demonstrate the skill
- E. Learning Activity: Test (All 20 Motorcycle Modules)

Purpose: To evaluate students ability to teach all techniques/drills learned

Procedures: Individually

- 1. The instructor will observe the student instructor as he/she presents to the group the various motorcycle techniques
- 2. Students to note how instructor critique
- 3. The presentation of each motorcycle technique by a student instructor is limited to five minutes, each
- 4. The instructor will evaluate⁴ the student instructor in the following areas:
 - a. Ability to effectively demonstrate the technique(s)
 - b. Ability to effectively breakdown the technique / oral presentation(s)
 - c. Class structure, supervision, and safety
 - d. Ability to effectively drill students on a specific motorcycle technique
- 5. Include a brief review of each student's performance
- F. Performance Evaluation Techniques:
 - 1. Instructor model techniques for critiquing, during the students' Test portion
 - 2. Conduct a discussion with the students regarding how they will critique their students. Use techniques that were modeled by the instructors when they received their evaluation

Day 6-10 VIII. BASIC MOTORCYCLE SCHOOL PRACTICAL APPLICATION

0600-1000 (2160 Min)

A. Learning Activity: Assist Lead Instructors

Purpose: For students to demonstrate all techniques/drills learned and apply as an instructor

Procedures: Individually

- 1. The student will assist the Lead Instructor as an assistant instructor during a regularly scheduled Basic Motorcycle Course
- Expose student instructors to the first week of Basic Motor School to learn the teaching and evaluation techniques
 NOTE: The second week of this instructor course is in conjunction with the first

NOTE: The second week of this instructor course is in conjunction with the first week of Basic Motorcycle Course

B. Debrief

- 1. At the end of each day, debrief with student instructors
- 2. Review daily student evaluation form
- 3. Address any issues/concerns students may have

IX. CLOSING

1330-1500 (90 Min)

- A. Address all questions from the students regarding their instructors
- B. Present certificates, which must contain:5
 - 1. Title of the Course
 - 2. Dates of the course
 - 3. Hours completed
 - 4. POST course control number

⁴ LAPD Motorcycle Daily Student Evaluation Form

⁵POST Regulation 1055 Requirement for Course Presentation

- C. Reinforce the key learning points of the course
 - 1. While operating a motorcycle in an enforcement mode, the motor officer must be aggressive to apprehend violators while maintaining complete control of the motorcycle at all times
 - 2. Officer must ride with heightened awareness of possible road conditions and traffic hazards that can be potentially dangerous
 - 3. Officer will have to be proficient in all types of riding that may be encounter in their daily enforcement activities
 - 4. Teaching riding skills just like the riding skills themselves are perishable and must be regularly practiced
 - 5. Learning Modalities, Team Teaching, Facilitation, Adult Learning Style Training methods are effective parts of student-centered learning environment