

Teaching Psychomotor Skills

Thanks to:
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Overview

- Learning Theories
- Teaching Psychomotor Skills
- Basic Guidelines

Learning Theories

Learning Theory

- People learn by differing means and with levels of effectiveness

Learning Theory

- B.F. Skinner (1904-1990)
 - Two types of Learning
 - Classical Conditioning
 - Stimulus and Response
 - Non-Classical Conditioning
 - All others

Learning Theory

- B.F. Skinner (1904-1990)
 - Example of Classical
 - Ring a bell each time you feed an animal
 - It will associate the bell with food
 - (*Pavlovian*)

Learning Theory

- Reinforcing Behavior
 - Positive
 - Negative

Learning Theory

- Reinforcing Behavior
 - Positive
 - Give the subject something that is desired as a result of exhibiting a behavior
 - Examples:
 - The rat gets the cheese
 - The student gets the "A"

Learning Theory

- Reinforcing Behavior
 - Negative
 - Take something away from the subject that is desired as a result of exhibiting a behavior
 - Examples:
 - Restrict the rat's freedom if it doesn't complete the maze
 - Denying a student to start clinicals until skill tests are passed

Learning Theory

- **Reinforcing Behavior**
 - **Punishment –not negative reinforcement**
 - Doing something negative to the subject that is undesired
 - Example
 - Shock the rat if it makes a wrong turn
 - Publicly ridiculing a student's performance

Learning Theory

- **Reinforcing Behavior**
 - **Punishment –not negative reinforcement**
 - Doing something negative to the subject that is undesired
 - Example
 - Shock the rat if it makes a wrong turn
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Learning Theory

- **John Watson (1878-1958)**
 - Behaviors are a result of "glanduar secretions" and responses to stimuli
 - Conditioning will cause repeated behavior

Learning Theory

- **John Watson (1878-1958)**
 - Performed a experiment with a baby known as "Little Albert"
 - Conditioned emotional reactions

Learning Theory

- **Example of Watson theory:**
 - Each time a student makes a mistake, sound a loud alarm behind them
 - Unethical, and doesn't promote long term learning

Learning Theory

- **Edward Thorndike (1874-1949)**
 - Learning is due to reaching a "satisfying state of affairs"
 - Cats in a "puzzle box"
 - Acted naturally
 - Some behaviors were successful

Learning Theory

- Edward Thorndike (1874-1949)
 - Known as "law of effect"
 - A student may naturally procrastinate
 - If the instructor allows for deadline extensions, the student will "learn" to procrastinate

Other Theories

- Edwin R. Guthrie (1886-1959)
 - Believed that people learn in "one shot", with one experience
 - Strength of learning is enhanced with future experiences

Other Theories

- Gestaltists
 - People learn due to a combination of "thinking" and reinforcement
- Hull (1884-1959)
 - A student's desire to succeed will effect how they learn

Learning Theory

- Because people learn through various methods:
 - Tap into many strategies
 - Tailor to the individual students

Teaching Psychomotor Skills

Teaching Psychomotor Skills

- What are they?
 - The skills of the EMS profession
 - The use of manikins, scenarios, "see & do sessions", etc.

Teaching Psychomotor Skills

- **What is so important?**
 - Knowledge is in the head
 - Caring in the heart
 - Putting it together is in the hands
 - Our job is to teach this

Teaching Psychomotor Skills

- **Why is teaching skills so important?**
 - What we teach affects:
 - Patient care
 - Student Safety
 - Public Health

Teaching Psychomotor Skills

- **Levels of Mastery**
 - 5 Levels of skills learning
 - Imitation
 - Manipulation
 - Precision
 - Articulation
 - Naturalization

Teaching Psychomotor Skills

- Levels of Mastery
 - Imitation – *See then do*
 - Manipulation – *hands-on-practice*
 - Precision – *Practice-practice-practice*

Teaching Psychomotor Skills

- Levels of Mastery
 - Articulation
 - Integration
 - Student knows "why"
 - Student knows "when"

Teaching Psychomotor Skills

- Levels of Mastery
 - Naturalization
 - Mastery – student can perform the skill while concurrently performing other tasks

Teaching Psychomotor Skills

- How to teach a skill
 - Teach the basics first
 - Allow for variations
 - Exemplify excellence

Teaching Psychomotor Skills

- Teaching Theories - *Whole-Part-Whole*
 - Demonstrate the whole
 - Demonstrate in sections (parts)
 - Demonstrate without interruptions
 - Discuss (Q&A)

Teaching Psychomotor Skills

- Teaching Theories - *The Next Step*
 - Students learn the steps first
 - Skills should be mastered
 - Then apply to a "multi-tasking scenarios"



- ### Teaching Psychomotor Skills
- Students will go through stages
 - Novice will make mistakes
 - Masters shouldn't make mistakes

- ### Teaching Psychomotor Skills
- The instructor must:
 - Provide Feedback
 - Correct mistakes promptly
 - Do not allow to learn "bad practices"
 - Mental and muscle learning can be difficult to change

Teaching Psychomotor Skills

- The instructor must:
 - Remain positive
 - Respect differences in learning styles
 - Kinesthetic
 - Auditory
 - Visual
 - Combinations

Teaching Psychomotor Skills

- Example:
 - A student is choosing to tape an ETT instead of using a holder
 - Do you let the student complete the skill?

Teaching Psychomotor Skills

- Feedback process
 - Start positive
 - Deliver constructive criticism
 - End positive

Role playing

Teaching Psychomotor Skills

- During practice sessions:
 - Novices need close supervision
 - Bad practices are difficult to unlearn
 - Advanced learners may be allowed to catch their own mistakes

Teaching Psychomotor Skills

- During practice sessions:
 - Working in groups can facilitate learning
 - *Monitoring is still required*
 - Allow the Adult learner to adapt practices
 - Develop "critical thinking skills"
 - They have to evaluate methods and choose the right one

Basic Guidelines

Basic Guidelines

- Prepare the equipment
- Use up-to-date materials
- Use standardized check-offs
- Allow for ample practice time

Basic Guidelines

- Model the “right” practice for each demonstration
- Allow for each student to get “hands-on” time
- Correct “wrong” practices early

Basic Guidelines

- Keep students involved
 - Watch for “wall-flowers”
 - Use advanced students as “team leaders”
- Instill pride and care for the equipment

Basic Guidelines

- Use scenarios at the Mastery level
 - Explain how the skill fits the context
- Make scenarios as realistic as possible
 - Real equipment
 - Moulaged patients

Basic Guidelines

- Maximize your time
 - Use real calls to develop your scenarios
 - Prepare the "patients" to play their roles
 - Be *very* familiar with the scenario

Basic Guidelines

- Running the scenario
 - Begin with "dispatch" information
 - Allow the scenario to progress
 - Try not to interfere unless:
 - Safety issues
 - Significant problems in practice

Basic Guidelines

- **Running the scenario**
 - Offer critique, feedback
 - End on a positive note

Basic Guidelines

- **At the end of the scenario**
 - Allow the team leader or student to evaluate their own performance
 - Ask:
 - What went right?
 - What went wrong?

Basic Guidelines

- **At the end of the scenario**
 - Allow other team members (if present) to evaluate and offer feedback
 - Do not allow the process to focus on only the negative aspects

Basic Guidelines

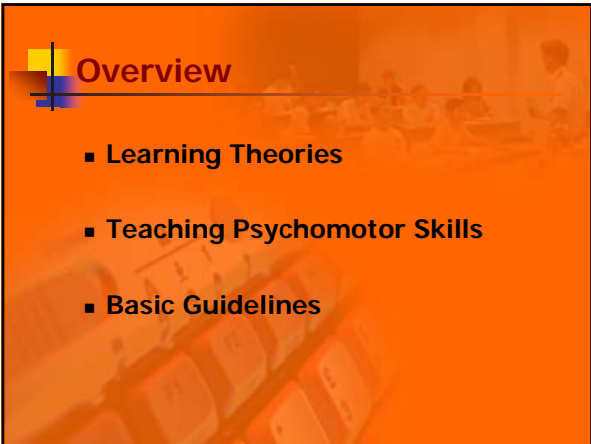
- **At the end of the scenario**
 - Provide feedback to the team members about individual and collective efforts
 - Maintain written records
 - Allow for discussion and questions

Basic Guidelines

- **Other thoughts**
 - Demand excellence
 - Do not allow passing score based on past performance
 - Be honest in evaluations
 - Allow for and plan on remediation

Psychomotor skills are:

- The core of our profession
- The route to practicing the art of EMS



Overview

- Learning Theories
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Questions
