Year 12

Physical Education Studies ATAR

Motor Learning and Coaching

1. 3 Categories of Skill Transfer

* Skill to Skill
* **Positive Transfer**: When the skills learnt in one sport assists in the learning of skills in a different sport.
* **Negative Transfer**: When the skills from one sport hinders the learning of skills in another sport.
  + A skill learned from a previous sport affects the learning of a skill from a new sport
    - Retroactive – Newly learnt skill has an impact on a previously learnt skill
    - Proactive – Previously learnt skill has an impact on a newly learnt skill
* Theory to Practice
  + Game plans, strategies and tactics implemented by the coaches verbally and on paper are put into action during practice
* Training to Competition
  + Transfer of skills learnt in training are transferred to competition
    - Training must replicate the demands of the game
    - Training must expose athletes to game specific situations at training
    - When put in a game situation they can then replicate what has been learnt at training

1. Effects of Transfer of Learning

* Positive transfer
  + Previously learned skills positively affect the learning of new skills
    - Shooting in basketball and netball
* Negative transfer
  + Previously learned skills negatively affect the learning of new skills
    - Eg. AFL and Touch Rugby
    - Basketball and Netball (dribble)
    - Squash and Tennis
* Zero transfer
  + Previously learned skills have no affect on the learning of new skills
    - Golf and football

THE GREATER THE RANGE OF SPORTS AN ATHLETE EXPERIENCE, THE GREATER THE LIKELIHOD OF THERE BEING POSITIVE TRANSFER BETWEEN THE SKILLS OF EACH SPORT

1. Types of Movement Analysis

* Laboratory testing
* Testing in a controlled lab
* Computerised analysis can be used
* Cameras can be used
* Field testing
* Testing in a field
* In normal surroundings
* Competition Analysis
* Observations and analysis from looking at an athlete in competition
* During a game or competition

1. Methods of Movement Analysis

* Quantitative
  + Achieved by objective measurements
  + E.g. metres, seconds
* Qualitative
  + The description of movement without using numbers. Achieved by observation and is subjective
  + E.g. good, short, etc.

1. Knudsen and Morrison - Qualitative Analysis Model

* Preparation
  + Coach must have prior experience regarding the skill
  + Athlete prepares to perform the skill, execute the skill and follow through
* Observation
  + Gathering information about the performance
    - What’s the best angle/method to observe?
    - Direct observation or video?
    - Observe/record several trails to get more accurate results
    - How close to the subject are you going to be
* Evaluation
  + Identify the strengths and weaknesses of the performer
    - These are listed in order of priority
  + Identify methods which can be used to improve the performance
  + “Cause-effect relationship”
    - Given an error, the coach must be able to identify what occurred prior to that which led to the error occurring
* Intervention (Feedback)
  + Provides feedback and corrections to the performer
    - Feedback must;

1. Motivate

2. Change Performance

3. Reinforce Learning

* Coach provides the athlete with visual, verbal and proprioceptive cues.
  + Visual = coach shows athlete correct technique
  + Verbal = coach provides verbal cues that performer can use to improve. Eg. gooseneck for shooting in basketball
  + Proprioceptive = coach physically moves the performer through the desired movement pattern to make them aware of how it should feel
* Re-evaluation
  + After changes are implanted, coach sees if the changes make a difference or if further intervention is needed

1. Basic Coaching Process

* Introduce
  + Explain name of skill and when it is used
* Demonstrate
  + Demonstrate the skill to athletes
  + Point out 2-3 key points of technique needed for successful performance
  + Answer any questions which they may have
* Practice
  + Practice the skill ASAP after demonstration
  + Should be fun and motivating
  + Should be appropriate to skill level of group
* Feedback
  + Provided with feedback which performers use to correct technique

1. Ways of Teaching Simple Skills

* Imitation
  + Coach demonstrates, learner copies
* Demonstrate/Explanation/Practice/Correction
  + Coach demonstrates and explains the skills
  + Learners practice
  + Feedback and correction is provided
  + More practice follows
  + More correction etc.

1. Teaching Complex Skills

* Shaping
  + Learning a simplified version of a skill and gradually adding in missing components after becoming comfortable with the simplified version (training wheels)
* Chaining
  + Break up the skill into small steps

1. Static and Dynamic Skills

* Static
  + Stationary
  + Only focussed on the skill
  + Limited decision making
  + Predictable environment
  + Beneficial when learning a new skill
* Dynamic
  + Moving
  + Less predictable environment
  + Decision making required
  + Drills more difficult and game related
  + Used to extend skill development

1. Coaching/Leadership Styles

* Autocratic/ Authoritarian (PRE-SEASON) {NFL} Larger teams
  + Makes all the decisions
  + Strict style of coaching
  + Players follow, coach commands
  + Less confident players intimidated
  + Effective when team is winning
  + Intense energy
  + Well organised
  + Punish those who make mistakes
  + Winning is the only goal
* Democratic/ Co-operative Coach (DURING THE SEASON AND FINALS)
  + Open communication with players
  + Players have a say
  + Players feel they have a degree of ownership
  + Good for inexperienced players
  + Enjoyment is important
  + Liked by players
  + Flexible
  + Strives for an atmosphere of mutual respect
  + Concerned for player welfare
* Lassiez Faire/ The Casual Coach (Briefly in PRE-SEASON and during OFF-SEASON)
  + Relaxed and easy going
  + No pressure on player
  + Less organised and prepared
  + Works best with experienced players
  + Offers guidance when asked
  + Limited improvement
  + Inexperienced players unsure of what to do
  + Provides little instruction and minimal guidance
  + Relaxed atmosphere and lack of general direction
  + Exerts little influence on the players

1. Why We Use Checklists
   * Determine technical and tactical ability of athletes
   * Identify key criteria for successful performance. Athlete performs skill and info of performance recorded on checklist
   * Info gathered used to improve performance
2. Why We Use Video
   * Slow movement down for more accurate analysis to observe strengths and weaknesses of the performance
   * Respond better to visual feedback and verbal feedback combined
   * Accurate identification of where errors occur in movement and then make corrections necessary
3. How to measure physical vs mental performance

* Checklists
* Implementation of a psychological skills training program

1. Other Methods of Info Gathering

* Fitness Requirements
  + GPS
* Intensity of work
  + Heart rate monitor
* Performance Criteria
  + Eg. Key Performance Indicators (KPI’s)
* Live data from assistants
* Analysing tactics
  + Analysing videos of upcoming opposition teams or using forward scouts

1. 4-Stage Reflective Process

* Reflection
  + Reflective journals
    - Record the factors contributing to success
  + Mentoring
    - Mentor is someone in the same sport that is more experienced that provides constructive feedback
  + Video Analysis
    - A way of watching old performances and comparing and contrasting old performances with new performances
  + Questionnaires
    - Gather information about individual players, the leadership group, potential leaders and the coaching staff
    - Can be used to make changes if required and to guide the development of the team
* Recognition
  + Athlete uses stats and data gained to determine what aspects of the performance could have been done better, or could be improved to enhance future performances. They look at what trends tend to occur
    - Data is gained from technology which is accurate
* Planning for future improvement (Recognition of areas to improve)
  + Using the most up to date methods to be applied when planning for improvement in the future.
  + Understanding strategy.
  + Keep up to date with the latest coaching trends (strategies, tactics)
  + Attend coaching courses
  + SWOT (strengths, weaknesses, opportunities and Threats)

The opportunities or threats are external and are controlled by increasing or decreasing the strengths and weaknesses which are internal.

* Action
  + Athlete attempts to rectify areas previously identified as limiting performance, improving identified deficiencies

1. Examples of Self-Instruction

* When the athlete has to tell him/herself what to do
* Eg. In a tennis match when a coach is not available
* In cricket where the fielding team must make decisions on where to position themselves

Types of Practice (55-59):

1. Massed Practice

* Continuous sessions with limited breaks or rest periods
* Effective for simple skills and suits discrete skills
* Repetitive so it must have motivated performers
* Suits athletes with high levels of fitness
* Advantages
  + Good for learning discrete skills
  + Effective when the execution of the skill is of a short duration
  + Will reinforce the motor program
  + Encourages a habitual response
* Disadvantages
  + Could lead to fatigue and boredom

1. Distributed

* Using breaks between practice sets to allow for rest, mental rehearsal or practising skill
* Most suited for new, complex, dangerous skills where fatigue could result in injury. Suited for when motivation is low.
* Suits athletes with low levels of fitness
* Recovery period can be used to provide feedback or help the performer refocus. Coach can use this time to reinforce otication techniques

1. Fixed Practice

* Repeating the same skill to reinforce learning
* Works well for discrete and closed skills

1. Varied Practice

* Uses a mixture of massed and distributed practices within the one session