INQUIRY QUESTION
How should coaches alter their instruction to cater for individuals with varying skill levels? How should coaches alter their instruction to cater for different types of movement skills?
There are different approaches to coaching and instruction. These reflect different methods of teaching movement skills, as well as sociocultural factors and theories about how people learn.

**KEY KNOWLEDGE**
- Direct and constraints based approaches to coaching and instruction
- Sociocultural factors that have an affect on skill development, and the characteristics of the three stages of learning (cognitive, associative and autonomous)

**KEY SKILLS**
- Explain and apply theories of learning to practical coaching situations
- Explain sociocultural factors that influence movement skill development at different stages of learning

**CHAPTER PREVIEW**

- Gender
- Family
- Socio-economic status
- Peers
- Community
- Cultural beliefs and traditions

Sociocultural influences on skill development

Instruction/coaching

- Approaches to instruction/coaching skills
  - Direct (traditional) approach
  - Constraints-based approach

- Stages of learning
  - Cognitive
  - Autonomous
  - Game sense
  - Associative
3.1 The direct (traditional) approach to instruction

**KEY CONCEPT** The direct approach is an instructor-orientated approach to coaching movement skills, where the learner is told what to do and how to do it.

There are different methods of teaching movement skills. The direct approach to coaching is a ‘skill and drill’, instructor-driven method that is particularly effective at enhancing skill development in the early stages of learning. The constraints-based approach to coaching is a learner-driven method that develops both technical and tactical awareness through involvement in short-sided modified games.

The direct approach involves breaking sports down into technical skill components. For example, in tennis these skill components would consist of the ground strokes, both forehand and backhand, the volley, overhead shots and the serve. Often referred to as ‘skill and drill’ or the progressive part method, this approach dictates that athletes must learn and attempt to master these skill components in isolation, before applying them to a game situation.
Skills are introduced to learners in their simplest form. As the learner becomes more competent through supervised drill practice, the coach introduces more complexity to the skill. For example, once the learner can perform the basic mechanics of a tennis serve, the coach may introduce the concepts of spin, speed and accurate placement. In time, the coach will move the learner from the predictable closed environment, practising the serve in isolation, to the less predictable open environment of serving to an opponent.
3.1 The direct (traditional) approach to instruction

The emphasis is on participants replicating the appropriate textbook technique. Once the learner is deemed suitably competent in these textbook techniques, they are considered ready for a competitive game.

“The traditional (direct) approach teaches the skills isolated from the game before putting the skills and game back together” (Play with Purpose, ACHPER 2009).

The direct approach is based around coach-centred instruction, where the learner is a relatively passive receiver of information. The direct approach emphasises repeated supervised skill sessions in which the learning is **explicit** and the feedback comes from an external source; that is, a coach or teacher.

In a direct learning environment, participants receive explicit instructions about how to interpret visual cues in a game situation. The participants also receive implicit instructions about how to respond to these cues. In the sport of tennis, players are instructed to observe the service ball toss as a means of anticipating the type of serve they are about to receive. For example, a wide service ball toss is likely to suggest a wide swinging serve will be performed. For such a scenario, the receiver is explicitly instructed to adjust their court position to cover the swinging ball and look to strike the return down the sideline.

The direct approach is considered effective at facilitating skill development in the early stages of learning. This can be attributed to its emphasis on initially teaching simple skills in a relatively ‘predictable’ environment but also to a more regimented and instructor-driven approach that keeps the participants ‘on task’ and ensures the maximum use of practice time. In other words, prescribed learning goals are achieved through structured drills in an allotted period of time.

**Explicit** learning is learning that takes place as a result of direct instruction, where the performer is told what to do and when to do it.

**FIGURE 3.4** In direct instruction, the coach provides rules about how to interpret the competitive environment; for example, interpreting Alize Cornet’s ball toss to anticipate the type of serve.

**FIGURE 3.5** Line drills in junior soccer
Advantages of the direct approach

The direct approach has a number of advantages.
- The instructor-centred approach keeps the learners ‘on task’.
- It provides a predictable/closed environment to assist the beginner skill learner.
- It facilitates early-stage skill learning.
- Improvements in practice performance are rapid compared with indirect instruction.
- There is an emphasis on mastering technique.
- The learner is provided with a set of rules to guide decision making.

Direct versus indirect instruction

Instruction or coaching can be classified on a direct/indirect continuum (see figure below). The indirect approach is more closely aligned with the constraints-based approach to coaching, which is discussed later in this chapter. While in the direct instructional approach, the emphasis is on the learner following the coach’s commands toward prescribed learning outcomes, the indirect approach allows the learner to discover effective skills and performance strategies for themselves.

TEST your understanding

1. Explain what is meant by ‘textbook’ technique.
2. In the context of instructional approaches, what does it mean to be “coach orientated”? 
3. List two advantages and two disadvantages of the direct approach to instruction.
4. With the use of a coaching example, explain what is meant by explicit learning.

APPLY your understanding

5. Practical activity: direct coaching of your peers
   The aim of this learning activity is to assess the effectiveness of the direct style of instruction.
   **Equipment:** Relevant to chosen sport.
   **Method:** Work in pairs or small groups. Each pair or group teaches the remainder of the class a sport of their choosing. The practicalities of the sport will have to be discussed with your teacher.
   **Direct coaching method**
   The aim is to put the class through an explicit learning experience; that is, the class is given detailed instructions regarding what to do and how to it.
   Your session should include the following:
   - a structured warm-up with moderate aerobic exercise and stretching
   - individual and/or pair skill work
   - line drills
   - a gradual introduction of skill complexity
   - a gradual introduction of competition to the practice session.
   Finish with a match.

   **Discussion**
   (a) How effective was your direct coaching session in facilitating skill learning within the practice drills?
   (b) How effective was your direct coaching session at transferring learning from practice drills to the competitive game?
   (c) If you were to repeat the exercise, what would you change about your coaching session to make it more effective?
   (d) Did the direct method of instruction help you manage a relatively large class size? Explain.
KEY CONCEPT  The constraints-based approach to instruction encourages the learner to discover effective skill technique and develop tactical awareness through participation in short-sided modified games.

The direct approach encourages the learner to master skills in isolation, in a closed and predictable environment, before applying these skills in a less-predictable game situation. A potential weakness of this approach is that skills developed in isolation may lack the necessary complexity or adaptability to be effective in a game. Furthermore, the learner may not develop sufficient tactical awareness to be an effective competitor.

However, the constraints-based approach to instruction differs from the direct approach by seeking to develop effective movement skills within a game context. Rather than focusing on mastering ‘textbook techniques’ and then attempting to apply them within a game, the constraints-based approach places the learner in a game context as soon as it is practical to do so. There may be some initial rudimentary skill development, however participants are placed in game situations at an early stage of learning, unlike the direct approach that delays game exposure to the latter stages of learning.

In constraints-based instruction, the learner is immediately involved in short-sided, modified games, the purpose of which is to develop both technical and tactical awareness. Through the process of finding solutions to games-based challenges, the learner discovers and develops effective motor skills. Furthermore, the learner develops a sense of when and how to perform these skills within the context of a competitive environment. Hence the constraints-based approach improves the learner’s decision-making as well as their movement skill execution.

The constraints-based approach is an indirect instructional method with an emphasis on learner-centred practice. The coach takes the role of a facilitator in a process of guided discovery where the learning is implicit rather than explicit.
Constraints-based instruction facilitates what is known as **perception-action coupling**. Perception–action coupling describes the reciprocal relationship between what the performer sees (perception) and the actions they take; that is, the performer's perception influences their actions and, in turn, their actions influence what they see. This relationship between perception and action underlines the importance of using games in practice.

For example, a batsman in cricket learns to interpret (perception) a bowler's action and the bowler's grip on the cricket ball to predict the type of delivery before playing the appropriate shot (action). This may not happen if a batsman is only exposed to ‘throw downs’ — a coach throwing the ball to a predetermined length (spot on the cricket pitch) to replicate and perfect a prescribed technique, for example an ‘off drive’.

Central to constraints-based learning is the understanding that all performance is influenced by three fundamental boundaries or constraints. These constraints are:
1. Individual
2. Environmental
3. Task.

The coach manipulates these constraints during practice to achieve a desired learning outcome.

**FIGURE 3.7** A batsman facing bowler Solomon Mire must interpret visual cues, e.g. action, body position and ball grip, and choose the appropriate skill to perform.

**FIGURE 3.8** Skill as a product of three constraints: task, individual and environment.
3.2 The constraints-based approach to instruction

**Individual constraints**

These are the physical, psychological and behavioural characteristics of the individual performer. They include such things as height, weight, fitness, motivation, confidence, decision-making skills and learning styles.

For example, the decision-making skills an individual has developed by playing a particular team sport maybe transferrable to other team sports.

**Environmental constraints**

These are the characteristics of the environment in which the performance takes place. These include physical characteristics such as climate, the playing surface and stadium lighting. Environmental constraints can also include social factors such as the influence of peers and cultural norms. For example, different cultures and nationalities identify with particular sports. In India, cricket is extremely popular and this facilitates the development of skills such as throwing, catching, batting and bowling.
Task constraints
Task describes the defining characteristics of the activity/sport. Task constraints explain the goal of the sport, for example kicking the soccer ball into the goal; task constraints describe the rules of the sport, for example soccer players may not use their hands (apart from the goalie); and task constraints describe the equipment and facilities used, for example the dimensions of a soccer field and the size of the soccer ball.

FIGURE 3.11 Task constraints explain the goal of the sport; for example, hitting the bulls-eye in archery.

Using constraints to teach a skill
The aim of constraints-based instruction is for the coach or teacher to manipulate the constraints, particularly the task constraints, to achieve a desired learning outcome.

For example, a coach wants his junior soccer players to pass more frequently and effectively. Using the constraints-based approach, the coach designs a short-sided game that helps the young soccer players to discover and understand the importance of passing. In this example, the coach manipulates constraints to encourage effective passing and deters the player's natural inclination (Individual) to show off their dribbling skills.

The goal of the game is for the team in possession to move the ball from one side of a defended area to the other. The coach designs/manipulates the game rules (Task) to limit the player's capacity to dribble by adopting a maximum three seconds possession rule. A team that successfully crosses the area also gains a bonus point if every member of their team possesses the ball (Task) — that is, they are encouraged to share the ball.

The young players discover their best chance of success (moving the ball the length of the field) is to employ quick passes, utilising all of their teammates.

The passing game style is further entrenched and encouraged by the coach engendering a team culture (Environment) that rewards selfless play and sharing the ball.
3.2 The constraints-based approach to instruction

Constraint-based instruction facilitates learning through manipulating boundaries or constraints to enable the learner to find a movement solution. The learning is discovery-based and guided by an experienced coach (Renshaw, Chow, Davids & Hammond, 2010).

In constraints-based instruction, such as the previous soccer example, the learning is implicit; that is, the players learn through participating in an activity. Through participation in games, the players discover what is required for successful skill execution and effective decision-making. Furthermore, a player who learns in this implicit manner, whose skills are forged within a competitive environment, is less inclined to compromise their skill execution or ‘choke’ (see explicit vs implicit instruction opposite) under the pressure of competition.

In constraints-based instruction, participants become autonomous or independent learners who are not overly reliant on a coach’s instructions. Independent or autonomous learners are better equipped to solve the unexpected problems and challenges they encounter in competitions.

Another advantage of constraints-based instruction is that practice sessions are more varied and interesting, marking a departure from ‘boring’ repetitious drills associated with direct coach-centred instruction.

Modified junior sports

Task constraints such as equipment, court size and competition rules should be modified to enhance skill acquisition in children. Lighter racquets and bats, smaller court sizes and rules that encourage maximum participation and reduced physical contact are all examples of modifications necessary to ensure children enjoy their sporting experience. These modifications enable children to learn the applicable movement skills as well as begin to understand game tactics. If children use equipment designed for adults, they are less likely to experience performance success. Inappropriately heavy and/or oversized equipment can also lead

FIGURE 3.13 Children’s capacity to learn is compromised if they are forced to use adult-sized sporting equipment.
to children developing skill techniques that compromise future development in their chosen sport. For example, a 7-year-old basketballer using an adult-sized basketball on a full-sized ring may be forced to shoot with two hands or adopt a throwing-like action in order to score. With a smaller ball and a lower ring, the young basketballer can experience success utilising a traditional shooting action — a technique he/she will rely upon to progress to more senior basketball competition.

Many sports have developed modified games, acknowledging the importance of changing task constraints to make the experience more fun for children and to facilitate skill development. Examples of these modified sports include ‘Kanga Cricket’, ‘Netta Netball’, ‘Auskick’ AFL football and ‘Hot Shots’ tennis.

In ‘Hot Shots’ tennis, children use a smaller court and larger, less-bouncy tennis balls. The modified tennis balls encourage the beginner to hit confidently and help to facilitate longer rallies. The smaller court size is more manageable and assists the young learner to start developing tactical awareness.

Explicit vs implicit instruction

Reinvestment — making mistakes under pressure

At times of stress, when the performer is highly invested in their relative success, when the ‘stakes are high’, there is a tendency for the explicit learner to direct too much attention to technical issues (how to perform the skill) at the expense of fluent skill execution.

That is, the learner suffers from what is known as reinvestment: the tendency to consciously attend to the rules and knowledge that underpin the skill in an attempt to control the quality of performance. Reinvestment can reduce the performance of an expert/autonomous performer to the standard of a relative beginner. However, implicit learners, whose skills are developed within the context of a games environment, tend to be less susceptible to the effects of reinvestment.

Implicit instruction — use of metaphors

The use of a metaphoric analogy is an effective implicit coaching strategy as it gives the learner a simple focus and reduces the technical information they need to process. For example, a swim coach tells his young swimmers to make their bodies into the shape of an ‘arrow’ as they push off the end of the pool. Long-winded explicit technical instruction about arm, leg and body position is avoided as this is implicit in the roleplay or analogy of the arrow.

Advantages of the constraints-based approach to instruction

- Practice closely replicates the game environment, facilitating the development of more applicable skills.
- Practice is more varied ensuring the development of versatile skills, as well as providing the learner with a more interesting and engaging learning environment.
- The learning is implicit.
- Implicit learners make better problem solvers and are less likely to choke at times of stress.
- It develops both technical and tactical awareness.
- It engenders independent/autonomous learning.
Game sense approach — a constraints-based approach to instruction

In Australia, the most commonly used constraints-based instruction model is game sense. Game sense is a means of coaching or teaching that uses small-sided modified games to develop tactical and strategic thinking, as well as movement skill performance. Games sense is an Australian adaptation of the Teaching Games for Understanding Model (TGFU) (Thorpe, 1996).

The core elements of game sense

A game sense approach to coaching consists of five core elements:

1. Designing modified short-sided games to simulate the decision-making and movement skill demands found in the relevant sport. These modified games improve a player’s competitive performance by heightening their tactical awareness and improving their ability to apply the relevant movement skills.

[Diagram of the game sense approach]

**FIGURE 3.15** The game sense approach seeks to teach game appreciation and tactical awareness prior to teaching movement skills.


**FIGURE 3.16** Coaches use guiding questions to facilitate learning.

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**Game sense** is a method of teaching tactical awareness and effective skill performance through game constraints modification and the use of guiding, open-ended questions.
2. Coaches use questioning to guide the learning process. For example, in a 2-on-1 game the coach ‘freezes’ (stops) play and asks the participants: How do you draw the defender before passing to your teammate?
   - Questions should be open-ended to encourage the learner to think for themselves.
   - Questions should cover four fundamental concepts:
     1. TIME – when should you……?
     2. SPACE – where should you……?
     3. RISK – which option…….?  
     4. EXECUTION – how should you…….? 
3. Establishing an environment where learning occurs through problem solving. Learners tend to be more motivated in discovery-based instruction as they take ownership of the learning process.
4. Constraints are manipulated to emphasise a particular learning goal regarding tactical/strategic awareness and skill application.
5. Sports are classified into four game categories (see table 3.1):
   - Invasion games (for example, soccer and netball)
   - Striking field games (for example, cricket and basketball)
   - Net/court games (for example, tennis and badminton)
   - Target games (for example, archery and shooting).

All sports have their unique characteristics, however sports grouped in the same games category share common principles of play. Hence the tactical knowledge and decision-making skills you develop in one sport are easily transferred and applied to other sports within the same category. For example, a modified game designed to encourage effective passing in soccer could easily be adapted for use in another invasion game such as netball.

<table>
<thead>
<tr>
<th>Category</th>
<th>Team in possession</th>
<th>Team without possession</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invasion</td>
<td>Use a safe pass</td>
<td>Pressure the ball/receiver</td>
</tr>
<tr>
<td></td>
<td>Move to create or receive a pass</td>
<td>Track a player and the ball</td>
</tr>
<tr>
<td></td>
<td>Advance to score</td>
<td>Use a zone or one-on-one defence to cause a turnover of possession</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Minimise time in the field</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Build pressure</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Minimise unnecessary score</strong> (e.g. leg byes, no balls, four-ball walks)</td>
</tr>
<tr>
<td>Striking/fi elding</td>
<td>Maximise time batting</td>
<td><strong>Minimise time in the field</strong></td>
</tr>
<tr>
<td></td>
<td>Maximise runs scored</td>
<td><strong>Build pressure</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Minimise unnecessary score</strong> (e.g. leg byes, no balls, four-ball walks)</td>
</tr>
<tr>
<td>Net/court</td>
<td>Place object within boundaries where it cannot be returned</td>
<td><strong>Return object within boundaries</strong></td>
</tr>
<tr>
<td>Target</td>
<td>Place object as close as possible to intended target</td>
<td><strong>Prevent or protect object from being placed nearest to the target</strong></td>
</tr>
</tbody>
</table>

In a game sense approach, a coach still has an obligation to identify poor technique. However, while technical faults should be addressed, the fundamental difference to the direct approach is that skill correction and refinement occur within the context of the games environment, ensuring the development of applicable movement skills.
3.2 The constraints-based approach to instruction

Comparing different instructional approaches to the same sport

In this example, the sport is junior basketball and the learning objective is effective passing.

<table>
<thead>
<tr>
<th>TABLE 3.2</th>
<th>Comparison between the game sense approach and the direct approach to instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct approach</strong></td>
<td><strong>Game sense approach</strong></td>
</tr>
<tr>
<td>Warm-up – 10 minutes jog and stretching — Passing in pairs</td>
<td>Warm-up – 3 v 3 Short-sided games – keepings off. The aim is to maintain possession for as long as possible.</td>
</tr>
</tbody>
</table>

**Instruction and demonstration**
Coach gives instruction about how to perform different passing techniques. The coach uses the most accomplished player to demonstrate different passing techniques: bounce pass, overhead ‘soccer’ pass, chest pass and lob pass.

Players return to passing in pairs
Coach provides feedback on players’ passing technique, drawing attention to skill errors and encouraging the necessary modifications.

**Short-sided modified game 1 — ‘Three Point Square’**
The three players in possession of the ball pass along the length of the square, not the diagonal. Players in possession run between cones to ensure the player with the ball always has two passing options. A single defender tries to intercept the passes.

**FIGURE 3.18 Three Point Square**

**Freeze play — play analysis.** Coach question: What have you learnt about making sure your pass hits its intended target?

**Continue Three Point Square with constraint modification to enhance learning objective:**
Reduce the size of the square to make it easier for the defender to intercept the pass, placing more pressure on passing.

**Line drills focusing on passing**
Players organised into opposing single file lines. Players dribble then pass between opposing lines.

Coach modifies line drills to make them more challenging such as criss-crossing the lines or having the players pass the ball in pairs as they ‘run the court’.

Coach instructs players to pass the ball some distance ‘in front’ of the moving receiving player.

**Short-sided modified game 2 — ‘Build the Pressure’**
See figure 3.19. Teams of three attempt to move the ball through three designated areas. With each new area, another defender is added and the task becomes increasingly difficult.

**FIGURE 3.19 Build the Pressure**

**Freeze play — play analysis.** Coach question: What’s the best way to ‘draw’ a defensive player before passing to a teammate?

**Continue ‘Build the Pressure’ with constraint modification to enhance learning objective:**
Add an extra defender to the first square to make the progression: 3 v 2, 3 v 3 then 3 v 4 to make the game more challenging and to encourage fast, decisive passing.

**Freeze play — play analysis**
Coach question: What type of pass worked best in particular game situations?
Direct approach
Coach organises the players into a 2 v 1, introducing a competitive element to the practice.
Coach instructs the players in possession to keep width and encourages the ‘early’ pass.

End game — full court match
Coach and players discuss what they have learnt and where they can make future improvements.

Cool-down
Coach provides feedback on performance and outlines strategies for future development.
Players cool-down

<table>
<thead>
<tr>
<th>Direct approach</th>
<th>Game sense approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>End Game</strong> — 3 v 3 half court game. Team that scores keeps possession. Bonus point awarded for three or more passes before a successful shot or lay-up — an implicit coaching strategy to encourage passing.</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 3.3 Direct versus indirect**

<table>
<thead>
<tr>
<th>Instructional approach</th>
<th>Emphasis</th>
<th>Advantages of the approach</th>
<th>Disadvantages of the approach</th>
</tr>
</thead>
</table>
| Direct (traditional)   | Explicit learning  
Coach/instructor centred  
The learner is a passive receiver of information  
Skill and drill  
Skill learnt in ‘isolation’ prior to game participation  
Learner aspires to textbook technique | Time efficient  
Maximises practice time  
Keeps learner ‘on task’  
Effective in the early stages of learning  
Learning is immediately evident  
Emphasis on developing ‘sound’ technique | Boring repetitious drills  
Risk of learner being unable to apply skills in a game situation  
Learners become overly dependent on coach’s instructions for successful performance  
Does not develop decision-making skills  
Learner is more at risk of choking under pressure |

| Constraints-based (including game sense) | Implicit learning  
Learner centred  
Discovery-based learning  
Learner solves problems  
Small-sided modified games  
Perception–action coupling  
Coach is a facilitator not an instructor  
Game categories, e.g. invasion games | Practice sessions mimic game performance  
Skills developed are applicable to games environment  
Development of tactical/strategic awareness and decision-making skills  
Motivating — participants empowered to find solutions  
Learning transferrable between sports in same categories  
Greater variability in practice  
Skill performance is resilient to competitive pressure  
Cultivates the independent/autonomous learner | Technical skills may lack refinement  
Coaches often less familiar with game sense approach  
A less regimented and structured approach may not suit coaching large groups or younger athletes  
May take longer to achieve results |
TEST your understanding

1. What is perception–action coupling?
2. Name and explain the three performance constraints.
3. Explain the difference between implicit learning and explicit learning.
4. Discuss two advantages and two disadvantages of the constraints-based approach to teaching movement skills.
5. Outline the five core elements of the game sense approach.
6. Explain how a coach uses questioning to guide the learning process.

APPLY your understanding

7. Watch footage of an elite team sport. Choose a position (for example, a striker in soccer) and identify the constraints and how these constraints impact on this player.
   For example: Soccer. Position: Striker
   Task: The striker must time their forward runs carefully so as not to be off-side and taking a ‘shot’ on goal.
   Individual: The striker uses their agility to evade defenders.
   Environment: The striker takes account of the conditions when choosing the type of shot on goal. For example, choosing a low ‘skidding’ shot at goal with a waterlogged ball rather than unsuccessfally attempting to “bend” the ball by imparting spin.
8. Classify the following sports into one of the four games categories: Invasion, Striking/fielding, Net/court or Target.
   croquet, ultimate frisbee, Gaelic football, curling, golf, baseball, hurling
9. Practical activity: designing and teaching a game sense practice session
   The aim of this learning activity is to design and run a game sense practice session with your classmates.
   Equipment: relevant to chosen sport
   Method
   Work in pairs or small groups. Use the form at the Designing and teaching a game sense practice session link in your eBookPLUS to design your session. Remember, game sense uses implicit learning. That is, your classmates should learn the relevant skills through involvement in your modified game rather than receiving direct coach’s instruction.
   For example:
   Aim: improve basketball shooting
   Modify game: team knockout competition
   Guiding question from coach: Is your shooting percentage better or worse when you have a balanced stance?
   Modification: Give each team two balls to increase the speed of the game.

Discussion
(a) Did the students’ skill performance improve during the course of the session?
(b) Were the students actively engaged in this practice session? Outline the influences on the students’ and how the modified games impacted on the students’ motivation.
(c) Speculate as to whether transfer of learning would be more or less from this game sense practice in comparison with a direct coaching session. Discuss.

EXAM practice

10. ACHPER Trial Exam Unit 2 2014
Decision-making in sport
“Sports have traditionally been taught using the ‘skill and drill’ or progressive part method. Sports are broken down into their component skills and these are then taught. This technical approach, developed after World War 2, taught the skills isolated from the game and then the skills and the game are put back together. This method assumes there is only one right way to perform a skill, but we know from observation of elite sportspeople that frequently they don’t kick the ball or swing the racquet like the ideal model. Successful sport athletes often do not have perfect stylised technique, frequently having individual technique differences and successful unorthodoxies. The other problem with this technical approach is that the thinking and problem-solving aspects required for successful game performance are not central to the initial learning as the technical requirements are isolated from the game in skill drills.”
Source: Sports Coaching Magazine, Volume 29 Number 2.
(a) Clearly demonstrate the difference between the above model of teaching a sport and game sense by outlining a typical training session for each for the sport of basketball.
   Traditional method:
   Game sense method:
   (b) Each model has a place in all sports. Briefly discuss an advantage and disadvantage of each of the above models, and in doing so suggest when each model is best used.
   (c) Identify and justify which sport category is appropriate for basketball.
3.3 Stages of learning

KEY CONCEPT The skill learner’s pathway from complete beginner to expert performer is characterised by three distinct stages of learning. Each stage of learning requires different practice and instructional strategies to ensure further skill development.

To design an effective skills training session, a coach needs to take into account the skill level of the learner. That is, the coach must be able to successfully match the learning needs of the performers with the appropriate learning environment. For example, the structure of an effective practice session for a novice performer will be significantly different from a practice session designed for an expert/elite performer.

The stages of learning model classifies learners into three distinct learning stages:

1. Cognitive (Beginner stage)
2. Associative (Practice stage)
3. Autonomous (Expert stage)

Each of these stages describes the characteristics of the learner as they progress from novice performer (cognitive stage) to an intermediate level (associative) and finally to skill mastery (autonomous).

Understanding a performer's stage of learning helps the coach decide on the most appropriate type of instruction and the most effective way to structure the practice session (covered in more detail in topic 4).

![Cognitive Associative Autonomous](image)

**FIGURE 3.20 A continuum from novice to skill mastery**

While the model describes three distinct stages, it's best to think of the stages of learning as a continuum where learners transition gradually from one stage to the next.

How quickly a performer moves through these stages of learning will depend on the skill being taught, the characteristics of the learner and the type of instructional and practice environment. It should also be noted that not all performers will reach the autonomous stage. For example, the demands of the skill may surpass the relative ability of the learner and/or the learner is not exposed to appropriate practice or suitable instruction.

**Cognitive stage**

The cognitive stage of learning describes the novice performer. In the cognitive stage the learner must dedicate a substantial amount of attention to understanding the skill and how to perform it. The performer makes many skill errors and struggles to understand why the errors occur or how to correct them.

Learning in the cognitive stage takes place largely through ‘trial and error’. The cognitive stage is usually the shortest of the three stages, as improvements in skill performance tend to be rapid early in the learning process.

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The cognitive stage of learning is the initial phase of learning of a motor skill where the emphasis is on conscious understanding of the task requirements.

Attention refers to the amount of mental concentration or thought required to complete a task.
Coaching the cognitive stage

- As the performer must dedicate a considerable amount of attention to understanding the skill, it is important the coach does not overload his or her learners with information. Coaches should keep feedback simple, only providing one or a maximum of two teaching points at any one time.
- Performers in the cognitive stage of learning benefit greatly from watching repeated demonstrations of effective technique.
- Verbal instruction should be clear and concise.
- The coach should provide feedback on the relative success of the performance, as well as provide the learner with strategies to correct faults.

Performers in the cognitive stage of learning benefit greatly from watching repeated demonstrations of effective technique.

The associative stage of learning is the second phase in the learning of a new skill, in which movement patterns become more refined and consistent through practice.

The associative stage of learning

Associative stage

Once a learner has progressed to consistently performing the basic mechanics of the skill with relatively few mistakes, they are said to be in the associative stage of learning. In the associative stage, the performer moves away from the ‘trial and error’ style of learning toward refining and replicating the required movement pattern. Hence the associative stage is often referred to as the practice stage; the learner can successfully perform the skill but needs regular practice to eliminate minor errors.

In the associative stage, the learner begins to understand why they make errors and starts to comprehend and adopt strategies to correct these errors. As the learner requires less attention to understand the skill, they are able to pay more attention to the game environment. The learner begins to interpret relevant cues in a game situation and selects the appropriate skill to perform. For example, an AFL footballer who has learnt to handball can use this technique to dispose of the ball quickly prior to being tackled.

Coaching the associative stage

- Coaches must provide regular practice opportunities.
- The learner should be exposed to a more ‘open’ competition environment where they learn to recognise important cues and develop their decision-making capabilities.
- Coaches should continue to assist the learners to recognise why they have made an error and develop their ability to self-correct the error.
Autonomous stage

In the autonomous stage of learning, the learner can perform the skill almost ‘automatically’. The skill is ‘ingrained’ and ‘second-nature’ to the performer, with very little attention required for skill execution. A performer in the autonomous stage is able to multi-task. For example, an elite hockey player is able to execute the skill of dribbling at high speed while simultaneously observing the whereabouts of opposition players.

Performers become further aware of their competitive environment, developing their tactical and strategic awareness and their decision-making capabilities.

Coaching the autonomous stage

- The coach should provide precise feedback to further improve skill execution. Small improvements can make a significant difference at an elite/high level of sport.
- Pay particular attention to keeping the performers motivated to further improve and refine skill level.
- Use match simulation to enhance tactical knowledge and decision-making skills.

**TABLE 3.4 Coaching the stages of learning**

<table>
<thead>
<tr>
<th>Stages of learning</th>
<th>Cognitive</th>
<th>Associative</th>
<th>Autonomous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics of learner</td>
<td>Complete beginner&lt;br&gt;Many errors in performance&lt;br&gt;Learner’s attention is given to understanding the skill&lt;br&gt;Trial and error learning style&lt;br&gt;Unable to detect and correct performance errors</td>
<td>Consistent performance of the basic mechanics of the skill&lt;br&gt;The learner concentrates on skill refinement&lt;br&gt;Improved ability to detect and correct errors&lt;br&gt;Some perception of important cues/information in a game environment</td>
<td>Performance almost automatic&lt;br&gt;Highly skilled&lt;br&gt;Very few errors&lt;br&gt;Multitasking evident&lt;br&gt;Able to adjust skills to games environment&lt;br&gt;Greater tactical and strategic awareness&lt;br&gt;Highly developed ability to detect and correct errors</td>
</tr>
<tr>
<td>Considerations for coaches</td>
<td>‘Keep it Simple’&lt;br&gt;Don’t overload learner with information&lt;br&gt;Verbal instructions should be clear and concise&lt;br&gt;Learner benefits from skill demonstrations&lt;br&gt;Teach learner how to detect and correct errors&lt;br&gt;Skills may be simplified or broken into smaller skill components.</td>
<td>Provide opportunity to practise&lt;br&gt;Learners continue to work on error detection and correction&lt;br&gt;Assist learner to recognise important cues/information in a game environment</td>
<td>Precise feedback&lt;br&gt;Match practice&lt;br&gt;Ensure learner motivation is high through varied and engaging practice&lt;br&gt;Continue to challenge the learner</td>
</tr>
</tbody>
</table>
**3.3 Stages of learning**

**TEST your understanding**

1. Name and discuss the characteristics of the three stages of learning.
2. Why is it important for the coach to understand their performer’s stage of learning?
3. Explain the difference in learning styles between the cognitive stage and the associative stage.
4. (a) Define the term *attention*.
   (b) Explain how the amount of attention given to executing a skill changes as the learner progresses through the three stages of learning: cognitive, associative and autonomous.
   (c) What are the implications of your answer to part (b) regarding coaching an autonomous performer?

**APPLY your understanding**

5. Imagine you’re a hockey coach. You’ve been asked to run two very different training sessions; one for a group of under-10 beginners and one for an elite senior State League club side.
   (a) What’s the most likely stage of learning for the players in the under-10 group?
   (b) What’s the most likely stage of learning for the players in the senior team?
   (c) List some coaching strategies appropriate for the U10’s.
   (d) List some coaching strategies appropriate for the senior team.

6. **Practical activity: learning a new skill**
   The aim of this learning activity is to observe the characteristics of a novice performer and to gain an understanding of the most effective way to coach individuals in the cognitive stage of learning.
   **Equipment:** Class set of footbags (hacky sacks)
   **Method**
   Use the Footbag weblink in your eBookPLUS and choose one or two skills you’d like to learn; for example, juggling the bag with consecutive inside kicks. Working in pairs, one student attempts to practise the skill while the other observes and provides instruction. Each student should spend approximately half the lesson time in each of the roles: coach and learner.
   **Discussion**
   (a) Use your observation of your partner’s performance to describe the characteristics of the cognitive stage of learning.
   (b) As the learner, discuss where the majority of your attention was focused.
   (c) As a coach, reflect on the most effective and least effective means of teaching the new skill.
   (d) From the learner’s perspective, what was your partner’s most effective coaching strategy? Discuss why.

**EXAM practice**

7. **ACHPER Trial Exam Unit 2 2016**
   The local hockey coach has just taken on the task of coaching a junior side with a wide range of skills and experience. She has split the team into three groups based on the stage of learning they are at with trapping and passing.
   (a) Outline one distinct characteristic you would expect to see from each of the groups listed above.
   (b) Discuss the type of environment and method of practice that would best suit the least advanced group.
3.4 Sociocultural influences on skill development

**KEY CONCEPT** Sociocultural factors refer to the specific social and cultural practices, beliefs and traditions within a community or society that encourage or discourage involvement in sport.

We generally consider skill development to be the result of a combination of the learner's genetic traits, the amount of practice undertaken and the availability of expert coaching. However, it's also important to understand sociocultural factors and the impact they have on the skill learner.

Sociocultural factors influence the amount of opportunity to participate in sport, as well as the availability of practice facilities and expert instruction. **Sociocultural influences** also affect the degree to which the learner is motivated to practise and strive for further skill development. Examples of sociocultural factors that influence involvement in sport, physical activity and exercise and the extent to which movement skills are developed include: family, peers, gender, cultural norms, community and socioeconomic status.

![Figure 3.24](image.png)

**FIGURE 3.24** Skill development is influenced by sports prevalent in the local community.

Sociocultural factors have a significant influence on determining future sporting success. For example, an athlete brought up in a ‘sports-mad’ family who receives expert adult guidance from a young age, as well as unrestricted access to training facilities is more likely to reach a higher level of performance than an athlete with more natural ability who grows up in an environment that does not develop and/or value these talents. In this example, the relevant sociocultural influence is the presence, or lack thereof, of a supportive family.

“A growing body of evidence suggests that athletes’ transitions and progressions along the continuum from novices to experts are heavily influenced by their social environments, by the developmental experiences created for participation in play and practice, and by the support provided to assist athletes through key developmental periods.”

(Weissensteiner, Abenethy and Farrow, 2008)
The section that follows outlines the impact of sociocultural factors on skill development. As illustrated in figure 3.26, the influences on the learner are multi-dimensional. The sociocultural factors combine to create an environment that influences the learner's behaviour and subsequent skill development. It's the combination of sociocultural influences and the learner's genetic traits (biological, physiological and psychological characteristics) that determines the type and extent of movement skill learning.
Family

Parents facilitate their children’s involvement in sport by driving them to practice, and buying uniforms and sports equipment, as well as funding registration fees. But more than meeting costs and providing logistical support, parents encourage their children to get involved and to apply themselves to practice. Parents have a significant impact on their children’s values and their attitude towards learning.

Traditionally, the family backyard is a place where children hone their movement skills. The game of ‘backyard cricket’ is an excellent example of deliberate play.

Deliberate play describes an unsupervised learning environment where children devise their own interpretation of competition rules and experiment performing different types of skills.
Deliberate play, as opposed to deliberate practice, describes an unsupervised learning environment where children devise their own interpretation of competition rules and experiment performing different types of skills. Deliberate play allows the learner to take ownership of the learning experience and it provides the opportunity to trial different techniques free from the pressure of more formal sporting fixtures.

<table>
<thead>
<tr>
<th>FTEM stage</th>
<th>Foundation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td><strong>Active lifestyle</strong></td>
<td>Learning and acquisition of basic movement</td>
</tr>
<tr>
<td></td>
<td><strong>Sport</strong></td>
<td>Extension and refinement of movement</td>
</tr>
<tr>
<td></td>
<td><strong>Sport excellence</strong></td>
<td>Sport specific commitment and/or competition</td>
</tr>
<tr>
<td><strong>T1</strong></td>
<td><strong>T2</strong></td>
<td>Talent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Demonstration of potential</td>
</tr>
<tr>
<td></td>
<td><strong>T3</strong></td>
<td>Verification</td>
</tr>
<tr>
<td></td>
<td><strong>T4</strong></td>
<td>Practising and achieving</td>
</tr>
<tr>
<td></td>
<td><strong>E1</strong></td>
<td>Breakthrough and reward</td>
</tr>
<tr>
<td></td>
<td><strong>E2</strong></td>
<td>Representation</td>
</tr>
<tr>
<td></td>
<td><strong>M-1</strong></td>
<td>Success</td>
</tr>
</tbody>
</table>

**FIGURE 3.29** Foundation Talent Elite Mastery (FTEM) Framework

The AIS recognised the important role family plays in developing young talent when, as part of their AIS Pathways Connect program, it released the document *Top Tips for parents to nurture and support your child’s foundation sporting development* (author Dr Juanita Weissensteiner). The document is based largely on the Foundation Talent Elite Mastery (FTEM) Framework (figure 3.29), a framework to facilitate sports development in ‘three worlds’: active lifestyle, sport participation and sport excellence. The AIS recommendations regarding nurturing talent emphasise the need to establish fundamental movement skills in the young learner as these will form the foundation for lifelong involvement and development in sport. These fundamental movement skills are achieved by such things as:

- sampling many sports at a young age rather than specialising too early
- ensuring children participate in deliberate play as well as age-appropriate modified sports
- providing observational learning opportunities such as watching live or televised sport
- ensuring children work with a suitably qualified and experienced coach.
Cultural norms, traditions and beliefs

Different nationalities identify with different sports. The prevalence of a particular sport in a community can have a significant impact on skill development. For example, swimming is a high-profile sport in Australia. Our national swimmers receive a great deal of attention in the media and are afforded celebrity status. These high-profile swimmers become idols to Australian children and this, in turn, leads to greater participation in the sport of competitive swimming. Combine this with the natural environmental advantages of a warm climate and an abundance of beaches and pools and it’s not difficult to understand why the standard of swimming skills in Australia is comparatively high.

Other examples of sports we associate with particular nationalities include Kenya with distance running, Canada with ice hockey and Brazil with football. Furthermore, nationalities may influence the style of play. For example, compare the attacking and flamboyant style of a South American football team to the more systematic and disciplined approach of the German national team.

FIGURE 3.30 Different nationalities identify with different sports.

When a culture values a particular sport, it leads to an increase in the standard of performance in that sport.

FIGURE 3.31
3.4 Sociocultural influences on skill development

Barriers to involvement in sport and physical activity

Cultural and religious beliefs can also be a barrier to sports participation and potential skill development. For example, some conservative societies may be opposed to women being involved in sport or particular types of sport. Likewise, opportunities to be involved in sport and recreational pursuits can be seriously compromised in countries that suffer from political instability and civil unrest.

![Image showing a person stretching]

**FIGURE 3.32** Do some cultural and religious beliefs present a barrier to involvement in sport and physical activity?

Ethnic minorities in society and/or recent refugees may encounter many barriers to involvement in sport and the opportunity to develop fundamental movement skills. These include:
- language barriers in accessing important information regarding organised sport
- lack of culturally appropriate venues and facilities
- encountering discrimination and racism
- cultural and religious standards of modesty may be at odds with a sport’s dress code/uniform expectations
- lack of appropriate role models.

**Peers**

Friends play an important role in influencing the type of sport children participate in and therefore the type of skills they develop. Younger athletes are generally motivated to play with their friends and will consequently choose and work on the sports popular with their social group. In peer groups, the concept of ‘deliberate play’, as explained previously, may also be an important factor in the learner’s development; that is, backyard or playground sport is fertile ground for developing movement skills. However, if a peer group has a tendency toward sedentary behaviour, such as playing computer games, then this can present a barrier to physical activity and movement skill development.
Gender stereotypes

Girls and boys will be socialised into different sports. Some sports such as netball, softball and gymnastics can be seen as girls’ sports, while sports such as AFL football, rugby and boxing are considered more masculine and therefore more suitable for boys. In recent times, many gender stereotypes in regard to sporting participation have been challenged, with an increasing number of women playing traditionally male-orientated sports. However, differences in the types of sports played by girls and boys still exist and this, in turn, leads to differences in skill development. For example, girls are more likely to develop coordination, balance and flexibility associated with such sports as gymnastics and dance.
Barriers to involvement in sport and physical activity

Historically, women have experienced significantly more barriers to participation in sport, recreation and physical activity. The factors listed below help to explain the inequity regarding sporting opportunities for women and consequently the detrimental impact on potential skill development.

- Lack of appropriate, accessible, affordable and acceptable facilities; for example, sport gymnasiums that do not have adequate female change rooms.
- Lack of media coverage. Male sport enjoys far more media coverage, which helps to bolster participation rates as well as provide prominent role models.
- Lack of role models. Young female learners need senior mentors to facilitate skill learning and sports expertise.
- Social stereotyping. In society, there can be a perception that sport is unfeminine. This perception can prevent young girls from participating in sport.
- There are fewer opportunities for girls to participate in sport. In schools, local sports clubs and gymnasiums there are often fewer sporting programs and competitions afforded to females.
- Sporting organisations have fewer women sitting on managerial boards. Hence, there is a lack of advocacy for women's sporting issues.
- Negative peer pressure and a lack of confidence. Attitudes towards involvement in sport are heavily influenced by peers and family.

Socioeconomic status

Socioeconomic factors describe the social and economic status of a participant or their family based on income, occupation and education. Socioeconomic factors can have a strong influence on the type of sports people choose to play and consequently the skills they develop.

People considered socially disadvantaged or from a low socioeconomic background often record lower levels of physical activity and sporting participation. The cost of uniforms, transport and registration fees may be a deterrent to involvement in sport to those who are financially challenged.

Also, socially disadvantaged communities, for example remote outback communities, may lack adequate facilities such as indoor stadiums and heated pools required for some organised sport.
Socioeconomic status can influence the type of sport in which an individual chooses to participate. For example, a sport such as rugby league has a working class background and, to an extent, this is still evident in the current demographic of participants. Those who pride themselves as coming from a working class background may also identify with the defining characteristics of a sport such as rugby league: tough, hard-working and no-frills.

Other sports are more closely aligned with middle-class participants or those from a more privileged background. For example, the sport of sailing has extremely high associated equipment and logistical costs. These costs are a potential barrier to those from relatively low socioeconomic backgrounds.

Other sports such as rowing are associated with privilege and entitlement. Rowing, along with being an expensive sport, is often associated with prestigious private schools and universities.

**Local community**

As with previously mentioned sociocultural factors, the local community facilitates sporting development via the prevalence of suitable positive role models, conducive climatic conditions and natural resources, ease of access to safe training facilities and readily available coaching.

An interesting phenomenon is the overrepresentation of elite sportspeople who grew up and developed their sporting prowess in small country towns. One explanation of this phenomenon is that sporting clubs are highly prominent in country towns. For example, a high proportion of young people in rural settings are involved in their local netball or football club. Furthermore, access to training facilities in rural communities may be better than in urban communities. Urban sporting facilities have to cater for larger populations, which potentially limits the time available for a team or an individual to partake in practice sessions. Also, country towns can struggle to find sufficient participants to fill their various sports teams. A young sportsperson in a rural community may find themselves playing in a number of different sports, as well as participating in various age groups. This kind of experience can create a highly stimulating learning environment conducive to developing fundamental movement skills and game sense.

Regardless of the reason behind the overrepresentation of elite sportspeople in rural areas, it is clearly evident the defining characteristics of local communities have a significant bearing on sporting prowess and the development of movement skill.

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**TEST your understanding**

1. Make a list of the sociocultural influences that can impact movement skill development.
2. Draw up two columns, labelling one ‘Barriers to skill development’ and the other ‘Enablers of skill development’. Based on your list for part (a), give examples of sociocultural influences and classify them as either barriers or enablers.
3. Explain the difference between deliberate play and deliberate practice.
4. What is meant by observational learning?

**APPLY your understanding**

4. Analyse your own sporting achievements. Name the sociocultural influences that apply to your involvement in sport and explain how they impacted on your skill development and performance.

5. **Analysis activity: female and male participation rates in sport**

   **Aim:** Conduct a statistical analysis of male and female participation rates in sport and discuss the potential impact on skill development.

   **Resources**

### 3.4 Sociocultural influences on skill development

**Method**
Using the Australian Bureau of Statistics weblink in your eBookPLUS, analyse the data on the website and answer the following questions.

**Discussion**
(a) What are the most popular sports for female children in Victoria?
(b) What are the most popular sports for male children in Victoria?
(c) Identify and discuss the potential sociocultural influences that may have led to the differences in sporting preferences between girls and boys.
(d) What impact do these sociocultural influences have on skill development in both girls and boys?
(e) Record the difference in overall sporting participation rates between girls and boys in Victoria. Identify and discuss the potential sociocultural influences that contributed to the disparity in participation rates between girls and boys.

**FIGURE 3.36** An international game of Kabaddi

### 6 Physical activity: Kabaddi

**Participate in a game of Kabaddi.**

**Method**
Research the rules of the game Kabaddi using the Rules of Kabaddi weblink in your eBookPLUS.
(a) Play a game with your classmates using the school oval or the school gym (using protective mats).
(b) Spend some time researching the origins of the game and the history of Kabaddi.

**Discussion**
(c) Where did the game of Kabaddi originate?
(d) How has this country’s culture and mythology helped to shape/create the game of Kabaddi?
(e) How could you make the game of Kabaddi more available in your local community?

**EXAM practice**
7 Outline three measures a local council could put in place to encourage greater participation in sport and physical activity for ethnic minority groups.  

6 marks
**KEY SKILLS**

- Explain and apply theories of learning to practical coaching situations
- Explain sociocultural factors that influence movement skill development at different stages of learning

**UNDERSTANDING THE KEY SKILLS**

To address these key skills, it is important to remember the following:

- Recognise a skill learner’s stage of learning and apply appropriate and effective instructional strategies.
- The constraints-based approach and the direct approach both have their relative strengths and weaknesses. The coach should choose an instructional approach based on the participant’s stage of learning (individual) and the nature of the movement skill (task).
- Understand how manipulating task constraints can assist in learning applicable movement skills.
- There are a range of sociocultural factors that influence the type and extent of movement skill development.
- Sociocultural factors influence the prevalence of learning opportunities and the learner’s motivation to apply themselves to practice through a range of mechanisms including socialisation, role modelling, observational learning and structured play, as well as availability of resources and expert coaching.

**PRACTICE QUESTION**

1. Ben is an under-12 AFL footballer who demonstrates effective technique when executing a drop-punt kick during uncontested line drills. His kicks generally hit their intended targets but lack consistency and fluid skill execution. However, when Ben is involved in match practice, his kicking skills deteriorate significantly.

   a. Name the stage of learning most applicable to Ben’s kicking skills and provide two instructional strategies applicable to this stage of learning (3 marks).
   b. Name the instructional approach that would most likely enhance Ben’s kicking skills in a match. Explain how this instructional approach facilitates the execution of effective skills under match conditions. Provide an example to support your answer. (4 marks)

**SAMPLE RESPONSE**

a. Ben’s kicking is in the associative stage of learning. Firstly, Ben needs regular supervised kicking practice and secondly, the coach should assist Ben to understand why he has made a kicking error, as well as develop strategies to correct skill errors.

b. A constraints-based approach to instruction. The constraints-based approach places the learner in a small-sided game modified to simulate match conditions and hence develop applicable movement skills; for example, a game of ‘keepings off’, in which Ben and three other teammates try to maintain possession by kicking the ball to each other within a defined space and avoid being intercepted by two designated defenders.

   The game implicitly teaches important and applicable kicking skills that are generally not developed in line drills. For example:
   - kicking the ball out ‘in front’ of the leading teammate
   - being able to kick with either leg is an advantage
   - attending to cues important to skill execution and blocking out distractions
   - practising externally paced skills.

**STRATEGIES TO DECODE THE QUESTION**

- Identify the action words:
  - Name — identify or state
  - Provide — give or state
  - Explain — to make the meaning of something clear and understandable

- Key terminology:
  - Applicable — most relevant or appropriate
  - Instructional strategies — considerations for coaching or ways of coaching/teaching
  - Enhance — improve
  - Match — competitive game
  - Execution of effective skills — performing skills that achieve intended outcomes
  - Match conditions — performing skills in an open, less predictable environment

- Key concepts:
  - Stage of learning — the learner’s relative level of performance
  - Instructional approach — constraints-based or direct-based approach to instruction

- Marking scheme:
  - a. 3 marks
  - b. 4 marks — always check marking scheme for the depth of response required, linking to key information highlighted in the question

**HOW THE MARKS ARE AWARDED**

a. 1 mark: name associative stage of learning as being applicable to Ben’s level of performance

2 marks: name two instructional strategies — supervised practice, and skill error recognition and correction strategies

b. 1 mark: name the constraints-based approach as the most effective way of developing skills resilient to competitive pressure

2 marks: explain how the constraints-based approach simulates match conditions (1 mark) to produce applicable movement skills (1 mark)

1 mark: for relevant example; in this case, ‘keepings off’ game
CHAPTER REVIEW  COACHING AND INSTRUCTION

CHAPTER SUMMARY

Instructional models
- There are two prevalent instructional models: the direct approach to instruction and the constraints-based approach to instruction. The direct approach is a coach-orientated, autocratic style of instruction where the learning outcomes are prescribed and the learner is given explicit instruction as to how and when to perform movement skills. The constraints-based approach is a discovery-based, learner-orientated model in which coaches guide the learner to technical competence and tactical awareness via the use of short-sided modified games.
- The direct approach encourages skill mastery in isolation prior to taking part in a game. The direct approach dictates that skill learning should first take place in a predictable/closed environment before the learner is forced to endure the less predictable/open environment of a game.
- The constraints-based approach encourages early involvement in modified games. In the constraints-based approach the coach modifies the game constraints (task, individual and environment) to enable the learner to discover applicable movement skills and tactical awareness.
- Explicit learning is the result of direct verbal instruction from a teacher or coach, where the learner is told how and when to perform a movement skill. We associate explicit learning with the direct approach to instruction.
- Implicit learning is the learning that takes place as a result of completing a task or, in the case of skill development, taking part in a game. We associate implicit learning with the constraints-based approach to instruction.
- Game sense is a constraints-based approach to learning that is utilised in Australia. The game sense approach involves short-sided games where constraints are modified to facilitate learning. In game sense instruction, the coach uses guiding questions to engender a discovery-based learning environment and sports are classified into four game categories based on common principles of play.

Stages of learning
- There are three stages of learning. In order progressing from novice learner to expert performer, the stages of learning are: the cognitive stage, the associative stage and the autonomous stage.
- The cognitive stage of learning is characterised by the novice learner directing most of their attention to understanding the relevant movement skill and the prevalence of many skill execution errors. In the associative stage of learning, the learner successfully performs the fundamental components of the movement skill but requires regular practice to refine skill executions and eliminate minor errors. In the autonomous stage of learning, the learner has mastered the skill, directs very little attention to skill execution and is able to multi-task.
- Knowing the stage of learning enables the coach to tailor more effective instructional and practice strategies.

Sociocultural influences on skill development
- Sociocultural factors are social and cultural practices, beliefs and traditions that encourage or discourage involvement in sport and thereby influence the type and extent of movement skill development.
- Sociocultural factors include such things as the influence of peers and family, socioeconomic status, gender issues, nationality, cultural traditions and beliefs.
- Sociocultural factors impact the learner’s opportunity to be involved in sport, as well as their motivation to learn movement skills through a range of influences such as: socialisation, role modelling, observational learning, deliberate play, support and encouragement, and the availability of practice facilities as well as expert coaching.
- For some groups in society, sociocultural factors can present a significant barrier to involvement in sport and the subsequent development of fundamental movement skills. Traditionally there has been an inequity toward women, socially disadvantaged and ethnic minority groups regarding opportunities to be involved in sporting programs, access to appropriate facilities and the presence of positive role models.
MULTIPLE-CHOICE QUESTIONS

1. Which of the following is NOT an example of a sociocultural factor that presents a barrier to sports participation for ethnic minority groups?
   (A) Lack of role models
   (B) Racism
   (C) Language barrier
   (D) Talent identification

2. Deliberate play is best described as
   (A) highly structured drill practice.
   (B) explicit learning.
   (C) coach-driven practice designed to develop relevant movement skills.
   (D) an unstructured discovery-based learning environment.

3. Skill development results from a combination of
   (A) genetics and coaching,
   (B) psychological, biological and physiological traits, as well as the opportunity to learn.
   (C) socioeconomic status and opportunities it affords to the novice learner.
   (D) genetic traits, expert coaching and sociocultural factors that encourage and facilitate learning opportunities.

4. David performs his tennis serve successfully 60 per cent of the time. His service action looks technically sound but lacks rhythm and fluent execution. Identify David's stage of learning.
   (A) Cognitive
   (B) Associative
   (C) Autonomous
   (D) Elite

5. A consideration for coaching the autonomous performer is
   (A) keep instruction simple.
   (B) provide precise feedback and games practice.
   (C) teach correctional strategies.
   (D) overload the performer with information.

6. Which of the following instructional characteristics is NOT associated with the direct approach?
   (A) Autocratic
   (B) Prescribed
   (C) Coach-orientated
   (D) Discovery-based

7. Canada has a relatively high number of outdoor ice rinks that are used by children to play ice hockey. This is an example of which kind of skill learning constraint?
   (A) Environment
   (B) Task
   (C) Individual
   (D) Performance

8. An example of a task constraint modification specifically designed to enhance skill learning in children is
   (A) lighter racquets.
   (B) a tennis-specific fitness program.
   (C) senior role models.
   (D) video analysis of ground strokes.

9. The basketball coaching analogy comparing the action of ‘shooting’ to ‘putting your hand in the cookie jar’, is an example of
   (A) psychological imagery.
   (B) an implicit-based instructional strategy that reduces the amount of information required to process and execute the skill.
   (C) a coaching strategy designed to provide detailed and precise instruction.
   (D) an explicit-based instructional strategy.

10. An advantage that game sense has over a direct approach to instruction is that it
    (A) is effective at quickly developing movement skills in the novice learner.
    (B) doesn’t put the learner in a game until individual skills are mastered.
    (C) develops applicable movement skills, tactical awareness and decision-making skills.
    (D) has prescribed learning outcomes.
TRIAL EXAM QUESTIONS

Question 1
(adapted from ACHPER Trial Exam Unit 2, 2015, question 7)

a. i. State which stage of learning the players participating in the NBA would be in. 1 mark

ii. Outline two characteristics that the players display to support your choice in part a. i. 2 marks

b. i. State the stage of learning most 5–10 year olds would be in when they first begin the Aussie Hoops program. 1 mark

ii. Outline two strategies a coach or teacher would utilise to cater for the children within the stage identified in part b. i. 2 marks

Question 2

Two 9-year-old girls take up netball at the same time. Stephanie receives direct (traditional) instruction whereas her friend Molly is taught via a game sense approach.

In early practice sessions, Stephanie displays more rapid skill development than Molly in regard to passing and shooting. However, as the season goes on, Molly’s technical competence steadily improves and she outperforms Stephanie on match days.

a. Explain the two girls’ relative skill development and match day performances in the context of the instructional model they have received. 6 marks

b. As coach of a large squad of junior novice netballers, discuss the most effective and pragmatic instructional model. 4 marks
Question 3
Examine the figure below that outlines Hoop Ball, a small-sided modified game suitable for use in game sense instruction.

The aim of the game is to keep possession of the ball and to score by passing to a teammate standing in one of the four available hoops. The defensive team attempts to intercept the offensive team’s passes.

![Hoop Ball Diagram]

a. Identify the game category to which this modified game is most applicable. 1 mark

b. The game is designed to teach the learner how to make position to receive a pass. Provide an example of a ‘guiding question’ the coach may ask to facilitate this learning goal. 1 mark

c. Suggest a modification you could make to this game to further develop effective passing. 2 marks

Question 4
A recent research paper investigating sociocultural influences on international cricketers found that many elite performers attributed their early skill development to ‘backyard cricket’ with family and friends.

a. Name this type of skill development session. 1 mark

b. Explain how these types of practice sessions help the learner to develop into an effective competitor. 3 marks

Question 5
a. Design a short-sided game that enhances the skill of dribbling in hockey. 2 marks

b. Explain a potential task constraint modification to your game that is designed to further improve the players’ dribbling. 2 marks