Developing game sense in physical education – exploring invasion games.

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Melbourne, Australia
INTRODUCTION

Session Purpose:
(1) Reflect on current practices
(2) Challenge our thinking and program
(3) Understand the game sense approach – pedagogy
(4) Develop some game ideas

PART 1 – The Game Sense (Tactical) Method
PART 2 – Game Sense Pedagogy
PART 3 – Applying the Pedagogy to Invasion Games
PART 4 – Simple Assessment Examples

Reference:
PART 1: THE GAME SENSE MODEL

Game sense is an instructional approach for teaching and learning that aims to develop student:

- Skills – tactical, technical and strategic
- Knowledge – game categories, skills transfer
- Personal, social & relationships – emotive, affective

*Breed & Spittle (2021)*
PART 1: THE GAME SENSE MODEL

THE GAME SENSE MODEL (Breed & Spittle, 2020)

CONTENT

THEMATIC APPROACH

GAME CATEGORIES
Teaching skill transfer within:
- Invasion Games
- Striking/Fielding Games
- Net/Wall Games

SMALL-SIDED DESIGNER GAMES

PEDAGOGY

OUTCOME BASED APPROACH

1. Developing clear Outcomes
2. Questioning
3. Modifying Task-Constraints

Evaluation & Assessment
PART 1: THE GAME SENSE MODEL

SKILL EXECUTION IN GAMES

TECHNICAL SKILL
E.g. striking the ball with power and accuracy

TACTICAL SKILL
E.g. knowing when and where to hit the ball

Performed under Pressure

DEVELOPING SKILL

PRACTICE
INSTRUCTION
FEEDBACK
PART 2: GAME SENSE PEDAGOGY

(1) GAME OUTCOMES
- Develop clear aims and objectives
- Focus on 1-2 outcomes each game
- Clearly state the outcomes to the learners

(2) QUESTIONING
- Use open-ended questions
- Ask 3-4 key questions in each game break
- Ask individual questions throughout

(3) MODIFY TASK-CONSTRAINTS
- Change 1 task-constraint at a time
- Constraint could be an aim, rule, equipment
- Constraint should address game outcomes
## PART 2: THE GAME SENSE PEDAGOGY

<table>
<thead>
<tr>
<th>Focus area</th>
<th>Game Outcome</th>
<th>Outcome questions</th>
</tr>
</thead>
</table>
| Technical  | • Develop the ability to pass accurately to a teammate.  
• Develop the ability to catch a low and high ball. | • How should you pass the ball? What is the best type of pass to use?  
• How should you position your hands to catch a high ball? |
| Tactical   | • Develop the ability to keep possession of the ball.  
• Develop the ability to identify and create space. | • When should you pass?  
• Where should you pass?  
• Where should you run or move?  
• How can you create space in the attack? |
| Strategic  | • Develop the ability to move the ball faster in attack.  
• Develop the ability to adapt team play to the stage of the game. | • How can your team create an overlap?  
• How might using width be effective?  
• What should your team do when they are 2 points up, 30 seconds are left, and they are in possession? |
PART 2: THE GAME SENSE PEDAGOGY

Start with

- When?
- What?
- Where?
- Why?
- Which?
- How?

Types of Questions in Game Sense

- Technical-Guiding Questions
  - Assist individual players with selection of techniques for movement solution
  - Help skill execution within game context

- Tactical-Guiding Questions
  - Assist individual players with tactical decision-making within games
  - Help skill execution within game context

- Strategy-Guiding Questions
  - Aimed at developing an understanding of team strategies
  - Help learners and teams with strategic decision-making

- Scenario Questions
  - Set a particular game scenario then ask questions related to it
  - e.g., What do you do if the team is 2-points up, 30-seconds left?

- Sport-Linking Questions
  - Relate the small-sided games to different sports within the same game category
  - Helps learners transfer their skills
### Task Constraints: Classifications

<table>
<thead>
<tr>
<th>Learner constraints</th>
<th>Environmental constraints</th>
<th>Task constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Height, weight, body type</td>
<td>• Court surface</td>
<td>• Level of pressure</td>
</tr>
<tr>
<td>• Strength, power, endurance</td>
<td>• Temperature, weather</td>
<td>• Rules (e.g. contact, offside)</td>
</tr>
<tr>
<td>• Motivation, confidence</td>
<td>• Background noise</td>
<td>• Size of court or field</td>
</tr>
<tr>
<td>• Mental (e.g., anxiety)</td>
<td>• Motivation of peers</td>
<td>• Number of players</td>
</tr>
<tr>
<td>• Technical skill level</td>
<td>• Crowd, spectators</td>
<td>• Time in possession or in play</td>
</tr>
<tr>
<td>• Tactical skill level</td>
<td>• Peers and teachers watching</td>
<td>• Scoring method</td>
</tr>
<tr>
<td>• Experience</td>
<td>• Cultural factors</td>
<td>• Zones or areas</td>
</tr>
</tbody>
</table>

- Equipment material, size, weight
PART 2: THE GAME SENSE PEDAGOGY

- **Task constraints**
  - **Aim**: e.g., getting the ball in the goal, maintaining possession, hitting into space, scoring as many runs as possible
  - **Rules**: e.g., off-side, contact, number of passes, goal size, number of players, number of steps allowed
  - **Equipment**: e.g., court or field size, racquet or bat, ball size, ball compression, goal, size
PART 2: THE GAME SENSE PEDAGOGY

PLAY SMALL-SIDED GAME
- Develop a small-sided game
- Clear outcomes e.g. when to pass
- Maximise participation
- Present only the main rules (concise)

QUESTIONING (Tactics, Techniques, Strategies)
- Use open-ended questions
- Eg: When/where/how should you pass? Where should you run/move?
- Individually (during) or Team (breaks)

REPLAY GAME
- After asking 2-3 questions
- Work on strategies based on responses
- Repeat a number of times, asking questions between each play (breaks)

MODIFICATION TO GAME
- Change 1 task-constraint at a time
- Modifications could be to aims, rules, equipment
- E.g. increase area, change ball to disk
PART 3: INVASION GAMES

- What is an invasion game?
- Phases of possession
- Tactics and strategies common to all invasion games

*Breed & Spittle (2021)*

Further classifying Invasion Games:

1. Field type:
   - (a) court games
   - (b) Field games
   - (c) End-zone games

2. Technical (FMS) skill type:
   - (a) Throwing & Catching
   - (b) Striking & Kicking

Planning to teach Invasion Games:

- Group/team sizes
- Court or field size
- Combining SEPEP concepts
- Game formats e.g. half-court, continuous
- Emphasise key invasion principles
- Focus on attacking tactics and strategies until competent:

*E.G. Attacking team starts with ball from centre each time a turnover/error occurs:*
  - (a) for time limit
  - (b) for no. of plays e.g. 10 turns (score /10)
PART 3: INVASION GAMES

Invasion Game Concepts – framing tactical questions.

- **Time** (when to...)
  - When to run
  - When to pass
  - When to shoot

- **Space** (where to...)
  - Where to run to create space for the team
  - Where to run to create a passing option

- **Risk** (what to do...)
  - Which option to take (pass, run, dribble, or shoot)
  - Where to pass
  - The option chosen should take into account the probability of success and the score and stage of the game

- **Execution** (how to...)
  - How to pass, dribble, or shoot
  - This is the technical component of decision-making
  - Easily measurable based on the outcome (e.g., does the team keep possession or score?)
## PART 3: INVASION GAMES

**Invasion Game Questioning Examples.**

1. **Technical-guiding questions:**
   - How should you pass the ball?
   - What type of pass is best to use?
   - How can you improve your accuracy when passing?

2. **Tactical-guiding questions:**
   - When should you run? When should you pass? When should you shoot?
   - Where should you run? Where should you pass?
   - Why did you choose that option?

3. **Strategy-guiding questions:**
   - Where was the best place on court to attack from?
   - How can you work together to create space?
   - What are 2 strategies/plays can you develop to score more?
   - What is the best way to defend?

4. **Scenario questions:**
   - What would you do if your team has possession of the ball with 30-seconds left, and is 1-point ahead?
     - If you are defending the above scenario, how would you change your strategy?

5. **Sport-linking questions:**
   - What tactics are similar in all invasion sports? What strategies are similar?
   - What tactics are similar between ‘hockey’ and ‘football’? How are they different?
   - How have rule changes altered the sport? e.g., 21-second shot clock in basketball; no offside in hockey. Why are rules often changed in sports?
## PART 3: INVASION GAMES

<table>
<thead>
<tr>
<th>Task constraint</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Player numbers</td>
<td>Increase the number of attackers or decrease the number of defenders to make attacking easier.</td>
</tr>
<tr>
<td>Playing area</td>
<td>Increase size to emphasise more space to decrease the time and pressure on the attacking team.</td>
</tr>
<tr>
<td>Equipment</td>
<td>Change the ball or implement used.</td>
</tr>
<tr>
<td>Positioning</td>
<td>Set positions or create zones or areas for players to stay within.</td>
</tr>
<tr>
<td>Scoring method</td>
<td>Use a variety of equipment for scoring: basket, goal posts, cones, end zone and hoops. Award points for rebounding and catching, hitting a cone or bin, or completing a defined number of passes. Add bonus points for a particular scoring method.</td>
</tr>
<tr>
<td>Method of starting play</td>
<td>Change the way each play is started (e.g., toss, possession, contest, kick-off).</td>
</tr>
<tr>
<td>Rules</td>
<td>Change a rule to change the focus—for example, type of pass used, level of pressure and tackling, time in possession.</td>
</tr>
</tbody>
</table>
PART 3: INVASION GAMES – Game examples

The Gauntlet

(1) Game Outcomes

To develop knowledge and skills relating to keeping possession of the ball:
- when to pass/when to run
- how to pass the ball
- where to run to receive (assist the ball carrier)
PART 3: INVASION GAMES – Game examples

The Gauntlet

(2) Key Questions

When should you pass the ball? *(When you draw the defender.)*

When should you run with the ball? *(When the defender stays back.)*

Where is the best place on the court to pass the ball? *(Halfway between the zones.)*

What other strategies did you use to get the ball over the end line? *(e.g., fake, long pass.)*

Where can the receiver move to assist the ball carrier? *(Into space, away from the defenders.)*

If the game is too easy for the attackers, how could you modify it? *(Decrease space by shortening or narrowing the area.)*

(3) Task Constraint Modifications

No running with the ball
Attacker can dribble the ball to move
Attacker must pass the ball backwards
Use a variety of implements (e.g., football, basketball, netball, disc, rugby ball), then match the rules to the implement
Place a goal (e.g., basketball ring, handball goal) at the end of the gauntlet. The two attackers attempt to score once they have passed through the gauntlet.
Change to 3v2. Defensive lines are the same with a defender who can move anywhere
PART 3: INVASION GAMES – Game examples

Prison Break

(1) Game Outcomes
To develop knowledge and skills relating to:

• when to pass/where to pass
• when to run/where to run
• attacking strategies (identifying space in zone, outnumbering opposition, moving ball quickly)
• defensive strategies (denying space, when/where to move, communication)
PART 3: INVASION GAMES – Game examples

Prison Break

(2) Key Questions
How did you decide whether to run with the ball or pass it? (pass if a teammate is in a better attacking position or in space.)
Is it more effective to move the ball quickly or slowly? Why? (Quickly so the defence doesn’t have as much time to move and fill the gaps and deny the space.)
How do you create a gap (or space) in the defensive zone? (Draw the defender. Run at the defender. Create 2v1 and outnumber.)
Defenders, how do you work together in order to prevent space for the attacking team? (Communication. Shift the defenders around.)
What type of defence is this called? (Zone.) Why is it called this? (Guarding an area or space rather than a direct opponent.)

(3) Task Constraint Modifications
Add a defender to the inside square to put pressure on passes (can intercept ball for 1 point, then place ball on ground).
Start the game with just three defenders, and then add one after each score.
Change area e.g. circle, size.
Change from rugby ball to basketball – must dribble ball over line to score.
## PART 4: ASSESSMENT EXAMPLES

### Assessment Rubric (Summative)

#### SKILLS (THE ABILITY TO PERFORM A TASK WITHIN AN INVASION GAME: TECHNIQUES, TACTICS AND STRATEGIES)

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skill execution</strong></td>
<td>Always passes the ball accurately to teammates and demonstrates excellent catching skills in games</td>
<td>Often passes the ball accurately to teammates and demonstrates very good catching skills in games</td>
<td>Sometimes passes the ball accurately to teammates and demonstrates good catching skills in games</td>
<td>Occasionally passes the ball accurately to teammates and demonstrates reasonable catching skills in games</td>
<td>Rarely passes the ball accurately to teammates and needs to improve catching skills to become competent in games</td>
</tr>
<tr>
<td><strong>Tactical skills</strong></td>
<td>Always applies tactics effectively and makes excellent decisions when in possession of the ball</td>
<td>Often applies tactics effectively and makes very good decisions when in possession of the ball</td>
<td>Sometimes applies tactics effectively and makes good decisions when in possession of the ball</td>
<td>Occasionally applies tactics effectively and makes reasonable decisions when in possession of the ball</td>
<td>Rarely applies tactics effectively and needs to improve decision making when in possession of the ball</td>
</tr>
<tr>
<td><strong>Strategic skills</strong></td>
<td>Always applies plans, rules and strategies effectively in games to help the team gain an advantage</td>
<td>Often applies plans, rules and strategies effectively in games to help the team gain an advantage</td>
<td>Sometimes applies plans, rules and strategies effectively in games to help the team gain an advantage</td>
<td>Occasionally applies plans, rules and strategies effectively in games to help the team gain an advantage</td>
<td>Rarely applies plans, rules and strategies effectively in games to help the team gain an advantage</td>
</tr>
</tbody>
</table>

#### KNOWLEDGE (UNDERSTANDING RULES, TECHNIQUES, TACTICS AND STRATEGIES IN INVASION GAMES)

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skill transfer</strong></td>
<td>Demonstrates a comprehensive understanding of skill transfer and similarities between invasion games</td>
<td>Demonstrates a very good understanding of skill transfer and similarities between invasion games</td>
<td>Demonstrates a good understanding of skill transfer and similarities between invasion games</td>
<td>Demonstrates a reasonable understanding of skill transfer and similarities between invasion games</td>
<td>Is unable to understand skill transfer and identify similarities between invasion games</td>
</tr>
<tr>
<td><strong>Technical and tactical knowledge</strong></td>
<td>Can clearly and accurately explain all of the key techniques and tactics involved in keeping possession of the ball</td>
<td>Can clearly and accurately explain most of the key techniques and tactics involved in keeping possession of the ball</td>
<td>Can explain some of the key techniques and tactics involved in keeping possession of the ball</td>
<td>Can state some of the key techniques and tactics involved in keeping possession of the ball</td>
<td>Is unable to state any of the key techniques and tactics involved in keeping possession of the ball</td>
</tr>
</tbody>
</table>
### PART 4: ASSESSMENT EXAMPLES

#### Assessment Rubric (Summative)

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active engagement</strong></td>
<td>Always actively involved and demonstrates excellent enthusiasm to improve in each game</td>
<td>Often actively involved and demonstrates very good enthusiasm to improve in each game</td>
<td>Sometimes actively involved and demonstrates some enthusiasm to improve in each game</td>
<td>Occasionally actively involved and demonstrates a little enthusiasm to improve in each game</td>
<td>Rarely actively involved and demonstrates little enthusiasm to improve in each game</td>
</tr>
<tr>
<td><strong>Fair play</strong></td>
<td>Always demonstrates fair play and exemplary sportsmanship in all games</td>
<td>Often demonstrates fair play and very good sportsmanship in all games</td>
<td>Sometimes demonstrates fair play and good sportsmanship in all games</td>
<td>Occasionally demonstrates fair play and reasonable sportsmanship in games</td>
<td>Rarely demonstrates fair play or sportsmanship in games</td>
</tr>
<tr>
<td><strong>Respect</strong></td>
<td>Always respects the opinions and abilities of others and assists all others in small-team situations</td>
<td>Often respects the opinions and abilities of others and usually assists others in small-team situations</td>
<td>Sometimes respects the opinions and abilities of others and at times assists others in small-team situations</td>
<td>Occasionally respects the opinions and abilities of others and generally supports others in small-team situations</td>
<td>Rarely respects the opinions and abilities of others and does not support or help others in small-team situations</td>
</tr>
</tbody>
</table>

**Total / 40**
## PART 4: ASSESSMENT EXAMPLES

### Self-reflection (Formative)

**Self-Reflection Tool**

<table>
<thead>
<tr>
<th>Name: ____________________________</th>
<th>Date: ____________________________</th>
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</thead>
</table>

Circle a number from 1 to 5 for each of the statements. These are linked to skills, knowledge, and personal and social relationships.

- 1 = strongly agree
- 2 = agree
- 3 = neither agree nor disagree
- 4 = disagree
- 5 = strongly disagree.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am able to pass a ball accurately during games</td>
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<tr>
<td>I can consistently catch a ball under pressure during games</td>
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<tr>
<td>I understand the concept of invasion games</td>
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<td>I can apply key tactics during games</td>
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<td>I understand the difference between tactics and strategies</td>
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<td>I understand the importance of teamwork and working together</td>
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<td>I feel comfortable answering questions</td>
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<td>I am confident during games and not concerned about making mistakes</td>
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<td>I accept that everyone has different abilities</td>
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<td>I really enjoyed the unit</td>
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<td>I feel that I learned a lot during the unit</td>
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<td>I liked playing with my friends</td>
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</tbody>
</table>

### Table A.13  In-Game Performance Assessment Tool for Invasion Games

<table>
<thead>
<tr>
<th>Player name</th>
<th>PASSING ACCURACY</th>
<th>CATCHING EFFICIENCY</th>
<th>SHOOTING ACCURACY</th>
<th>INTERCEPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Success</td>
<td>%</td>
<td>Total</td>
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</table>

Team totals

Place a mark in each box every time a player demonstrates a skill, then place a mark if it is successful. Calculate the percentage for success afterwards.

A successful pass is one first touched by a teammate. A catch is successful when the player keeps possession of ball. An interception is when a player gets possession of the ball from an opponent.
CONCLUSION

- Game sense is a tactical teaching and learning approach
- Thematic e.g. invasion games
- Small-sided designer games
- Developmentally appropriate
- Pedagogy of:
  - Outcomes
  - Questioning
  - Task-constraint modifications

Addresses key outcomes:
- Skills (technical, tactical, strategic)
- Knowledge
- Personal, social and relationships