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IIHF Coachingsymposium
WHEN ARE WE GOING TO PLAY A GAME?

- Any child, anywhere, any time

„Teach through the game and in the game!“
LEARNING AT AN EARLY AGE
THE GAME TODAY

• New interpretation of the rules

• Less interference

• More room

• Continuous play

• More power plays and penalty kills

• Transition
THE MODERN PLAYER

• Anticipate and read the game (reaction time)

• Play in all four roles (reaction time)

• Skating skills

• Passing and receiving under pressure

• Win 1-1 defensive or offensive

• Get the puck to the front of the net

• Get into traffic without the puck

• Score on rebounds or close shots
TRANSITION

To be faster than the opponent in:

- Decision Making
- Executing skills
- Skating
- Changing the roles
- Cooperation between the players
Traditional Approach

• A typical practice will start with a warm-up, proceed to isolated practice of these techniques (after using drills of various kinds) and finish with a full game.

• This practice occurs completely outside any real game context and invariably without any defenders.

• Techniques practiced in isolation, that is, outside the context of the game, are unlikely to transfer into the real game, where a combination of pressure from defenders and the need to make appropriate decisions while receiving, controlling and directing the puck will lead to a rapid breakdown in whatever technical ability the players have gained in the calm isolated practice.
• The real problem with many drills is that they teach a stereotyped response to situations that in the real game demand flexible responses.

• Drills must be aligned with the real game and must stimulate or replicate a specific aspect of that game. Ideally they should gradually become more complex and game like as the players progress.
SKILL vs TECHNIQUE

• One of the major weaknesses of traditional approaches to teaching games is that they are based on the belief that skill in hockey is the skill of controlling and directing the puck. This becomes the focus of instruction and other important elements of skilled play are ignored.

• It is obvious that the ability to control and direct the puck is of critical importance to players in hockey, coaches who appreciate that technical ability is only one aspect of skilled performance are more likely to include other critical aspects of skill play in their practices.

• Skill is based on a combination of technical ability and effective decision making.
FREE PLAY

• The very informality of pickup games means that even when players are playing with great intensity, mistakes are not crucial. This gives players the freedom to experiment, to try on new roles, all without the threat of criticism from authority figures if they fail.
Succes factors in making quick decisions

• The availability of creative action patterns with high movement dynamics and optimal Situations timing is a crucial success factor in team sports.
Hagar makes a game out of everything!
WHY PLAY PRACTICE?

- Where does the game take place?
- How many players are directly involved?
- Players like competition
- Team sport
- Battles
- Where is the game decided?
- Training the roles
- Closer contact to the players
- Verbal instructions
- Skills are learned in the game
- Being accountable
- Game situations
- Conditioning
- Goaltending
GAME SENSE

• The ability to use an understanding of the rules; of strategy; of tactics and most importantly, of oneself to solve the problems posed by the game or by one's opponents.
The role and the task of the player will be determined by the playing situation in the game:

**DEFENSIVE PLAY**
1. Covering the player without the puck
2. Covering the puck carrier

**OFFENSIVE PLAY**
1. Without the puck
2. With the puck

The role of the player is changing continuously according to the playing situation.
Process Phase in Decision Making

<table>
<thead>
<tr>
<th>Experience</th>
<th>Decision Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stimulus</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>identification</td>
<td>selection</td>
</tr>
<tr>
<td>(Perception)</td>
<td>(Decision)</td>
</tr>
<tr>
<td>and analyze</td>
<td></td>
</tr>
</tbody>
</table>

Anticipation Phase

Response Programming (Action)

Expectation

Game situation
**Time-Frames in decision making**

<table>
<thead>
<tr>
<th>Information-</th>
<th>Data processing</th>
<th>Motor Execution = Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>taken in = Perception</td>
<td>(Interpretation, Decision)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thinking process</td>
<td>Quality</td>
</tr>
<tr>
<td>X 0,1s</td>
<td>X 0,15 – 0,25s</td>
<td>X 0,15s</td>
</tr>
</tbody>
</table>

**Signal**

Signal perceived

**Conclusion of action**

Investing in quicker and better decision making is very worthwhile!
WARM-UP

• Tag games

• 1 – 1 small area

• 2 – 2, 3 – 2, - 3 – 3 half zone

• 3 – 3 one goal, defense 4 – 4 cross ice neutral zone

• 5 – 5 one goal
WARM-UP GAMES
Play Practice in action is based on three fundamental processes, which are:

- **Shaping play**
  - teaching through the game

- **Focusing play**
  - teaching in the game

- **Enhancing play**
  - make improved performance appear to be important and meaningful
The Process of Shaping Applied to Invasion Games

- Attacker / defender Ratio
- Altering the Size and Shape of the Playing Area
- The Nature of the Goal
- Primary and Secondary Goals
- Conditions Applied to the Game
- Control and Development of the “Good Players”
- Differential Scoring
- Playing Time
- Tactical Time-Outs
**LITERATURE**

- **Play Practice**: Alan G. Lauder, Human Kinetics
- **Dynamics of Skill Acquisition**: Davids, Button, Bennett, Human Kinetics
- **Motor Learning and Performance**: Schmidt, Wrisberg, Human Kinetics
- **Teaching and Learning Team Sports and Games**: Grehaigne, Richard, Griffin, Routledge
- **Coaching Youth Hockey**: 2nd Edition, Human Kinetics
- **Learn Through Play**: Saku Martikainen, IIHF Presentation
- **Playing without the Puck**: Erkka Westerlund, International Coaching Conference, 2004
- **Kleine Spiele**: Doebler, Volkseigener Verlag Berlin
- **Koordinatives Anforderungsprofil und Koordinationstraining**: Neumaier, Sport & Buch Strauss
- **Presentation**: Stefan Lottermann, ´“A“ Coaches Certification, Cologne
- **Presentation**: Mike Johnston, World Ice Hockey Championships, Vienna, 2006
- **Presentation**: Mike Sullivian, USA Hockey
- **Small Games**: Mike Eaves, Flexx Coach
THANK YOU FOR YOUR ATTENTION
How did he learn to do that?
Optimal Decision-Making in Ice Hockey

- Perception and evaluation of game situations based on few characteristics
- Quick decisions under pressure (opponent, time, precision...)
- Early and fast execution of decisions
- High precision in the execution
- Combination of Individual and Team decisions with high precision, dynamic and variation (element of surprise).
Perceptive Pressure Factors

- **Optical pressure:** game/practice with several pucks or changing goals
- **Acoustic pressure:** game/practice with constant calling out and/or permanent background noise
- **Agility stress:** game/practice under less favorable Environmental condition:
- **Coordination stress:** game/practice where the movement patterns are changed (ex. on one ice skate, holding the stick with the other hand).
- **Reaction pressure:** game/practice with different reaction choices (ex. continuation, contact and signal rules)
- **Variation pressure:** Linkage of several pressure factors
Physical Pressure Factors

• **Time pressure:** more Pucks, limited Time

• **Opponent pressure:** more pressure on the puck carrier

• **Physiological stress:** more pressure through tiredness

• **Area pressure:** change the size of the playing area and / or increase the number of players

• **Precision pressure:** rules for number of passes, types of shots.

• **Complex pressure:** a combination of a number of goals
THE MODERN PLAYER

• Bigger
• Stronger
• Faster
• Smarter
Conditions for achievement of quick decisions

- Information processing
- Quick decision making
- Motor Action
- Technical/Tactical Talents
  - Coupling ability
- Differentiation ability
  - Balance ability
- Orientation ability
  - Balance ability
- Rhythm ability
  - Reaction ability
  - Adaptation ability
- Basic Tactical abilities
- Basic Technical skills
- Cyclic Acyclic Speed Skating Shooting
- Conditional abilities
- Coordinative abilities
Factors influencing quick decision making

- Perception speed
- Anticipation speed
- Decision speed
- Reaction speed
- Movement speed
- Action speed

Information retention
Prognosis ability
Decision processes
Initialization processes
Quickness without the Puck
Quickness with the Puck
Decision making = Quickness + Precision + Control of movements through perception and anticipation with fast decision making.

Decision creativity = Availability of effective + efficient + unexpected movement patterns.

Tactical decision making = Selection + Timing of movement patterns in the game situation.
Perception and initialization phase

- Perception anticipation (e.x. drawing back movement)
- Situation anticipation (ex. Face off)

Decision and execution phase

- Selection and anticipation phase = conscious selection and adjustment of action programs (e.x. pass)
- Association and reflex mode =
  intuitive (instinctive) reaction of unconscious Perceptions (e.x. shot)
Current Sport science knowledge

- Improved quickness does not necessarily increase the ability to make faster decisions.
- A player with good “game” reading skills is not necessarily good at decision-making.
- Action speed runs off in two action modes (intuitive, selective)
- Decision-making can be improved in only a few weeks
- Not every player improves (learns) decision-making with the same quality or at the same speed
- Decision-making profits from game and practice experience
- Decision-making is unstable due to physical and psychological factors
Development and selection of optimal decisions for each game situation

Not the fastest skater but the player who can make the quickest decisions, will be first on the puck.
Problems in Decision-Making

• Flood of information, longer or intermittent decision-making processes are typically for beginners.

• Perception overload = too general or too fine, has negative effects on further decisions.

• Action dilemma = too much or little time to contemplate, increases the pressure to make the right decision.

• Decision dilemma = during the decision-making process the player does not have the chance to adapt his/her decision to the situation. (“see the big picture”)
FUTURE OF THE GAME

• 4 – 4

• Larger ice surface (North America)

• New rules

• International

• Better Athletes

• 5 – 0 System
Presenting the task is an important aspect of instruction.
Methodical aspects in training decision making

• Teaching ability understanding the principles

• Continuity principle constantly training

• Versatility principle individual and group training

• Repetition principle sufficient repetitions

• Variation principle method, contents & difficulty
VIDEO 1:1
Transfer in Ice Hockey

**Situation:**
- Pressure situations such as opponents, time, space, stress, precision and other components have become more dynamic and intensive
- Time window for perception and decisions is smaller

**Consequence:**
- In practice, change the demand on the players quickly and constantly.
- Train the players mentally through short and individual (intuitive vs. selective) video sequences
- Video sequences from decision making situations to integrate in the 2010 practice
GOALS

Olympics / World Championships

18,0% / 13,3%
33,5% / 24,7%
41,3% / 50,6%
2,9% / 7,4%
4,4% / 4,1%
Disadvantages of Small Games

- Far greater demands on coaches

- The coach needs to accurately observe and analyze play, and to select, modify, condition or even create a progressive series of play practices for his/her players

- Play practices will often appear chaotic compared to the orderly formations of drills.
VIDEO
VIDEO
Does Hagar have a clear understanding or model of what he has to master?
Does Hagar have a clear understanding or model of what he has to master?
The Four Roles in Ice Hockey

- Offensive Player with the Puck
- Offensive Player without the Puck
- Defensive Player defending against the Puck carrier
- Defensive Player defending against the opponent without the puck
Game Performance Model

Coordination factors

Game decision-making

Tactical decision-making abilities

Decision-making speed Decision-making creativity

Physical (Condition) abilities Technical abilities

Coordination factors

Psychological factors

Physical (Biological) factors Sensory-cognitive factors Social factors
Special aspects of training decision making

- Conformity principle
- Divide the decisions into the correct offensive and defensive sequences
- Support the decision-making process with video training.
- Pressure factors such as opponents, time, space, physical stress, precision and other demands must be considered
- Time factor for new programming (= patience)
WOW! YOU DID IT! BULL’S-EYE!

ALL YOU NEED IS CONFIDENCE! NOW TRY IT AGAIN.

STEADY...

GOOD! NOW YOU ALL KNOW WHAT TO DO!

I'VE GOT A BAD FEELING ABOUT THIS

READY... SET... GO!!

I'VE GOT IT! I'VE GOT IT!

I'VE GOT THE FLAG!

GANGWAY!

HE DOESN'T QUITE "GET" GOLF, DOES HE?

NO... BUT HE'S HAPPY

I WON!
Unrelated drills and minor games

Many popular drills

No alignment and therefore no possibility of transfer

Alignment and an increasing possibility of transfer

"Soccer Baseball" and games of this kind

Completely unaligned and therefore the possibility of negative transfer or interference with play in the real game
How important is technical ability in checkers?
First, I put the arrow in the bow and slowly draw it back...

No! No! Let him alone!

That's the only way he'll learn!

Is this the only way he can learn?
HÅGAR The Horrible by Dik Browne

HOT, ISN’T IT?

AREN’T YOU WARM IN THAT SUIT?

YES, BUT IT’S THE PRICE OF KNIGHTHOOD

COME ON IN, SIR KNIGHT, DON’T YOU KNOW HOW TO SWIM?

WELL, I DID KNOW HOW TO WADE BUT I’M A BIT RUSTY

COME ON! I’LL TEACH YOU HOW TO FLOAT!

ALL YOU HAVE TO DO IS LEAN BACK AND RELAX

NOW I’M GOING TO LET YOU GO ... JUST RELAX AND FLOAT!

PLOP!

YOU DIDN’T RELAX!

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It is important to provide usable and meaningful feedback.
Most Coaches hang on to what they know and feel comfortable with, especially if they have little access to new ideas or to mentors who might help them improve.

Coaches will often fall back the methods they experienced when they themselves were taught and coached as young players. These experiences can have a powerful and long lasting impact on both the philosophies and methods of coaches, but it can also lead to the continued use of old ideas.
Reading the Game and Applying Game Sense

While an understanding of the rules, tactics and strategy provides a foundation for game sense, players must also process a vast amount of realtime data as they make the decisions that bridge the gap between knowing and action. To do this they must be able to “read” the game.
Thank you!

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