

Dr. Frowin Fasold, Christina Carl, Ralf Rascher, Alexander Gehrer





1. INTRODUCTION

As an Olympic sport, handball is a fundamental part of the sports culture in Central Europe and is also widely practiced in other parts of the continent. Although handball is not present to this extent in other parts of the world, a strong regional participation in the game of handball is also visible in other continents. Handball is not only taught in clubs, but at universities and in schools, and is thus anchored in society as both a cultural and educational asset. Such an asset must be maintained and further developed (*Binnenbruck et al., 2018*). In part, this further development is due to the fact that, in addition to established indoor handball, wheelchair handball and especially beach handball have proven their worth internationally as competitive disciplines (*Fasold et al., 2022*). In addition to various rule adjustments, the discipline of beach handball is characterised above all by the fact that it is played on sand. Regardless of the surface, however, the game of beach handball has distinct characteristics that can be transferred to other forms of handball.

These universally applicable characteristics are as follows:

- 1. Fair play: fairness is the foundation of every game and every playing activity.
- 2. Principles of the game:
 - a. The idea:
 - i. Play in teams.
 - ii. Scoring points by throwing a ball into a goal.
 - iii. Reconquering the ball.
 - b. Power-play in offense.
 - c. Playing with little body contact, only the ball may be attacked in defence.
 - d. Playing with a soft, nonslip and easily palpable ball.
 - e. Playing in sets.

The application of these principles and characteristics offers great potential, especially with children and beginners, as it helps promote enjoyment of the sport and, as a result, sports participation in adolescents (*Fasold & Gehrer, 2019*). Additionally, the game of handball can be introduced to learners in a playful way.

BEACH HANDBALL AND INDOOR HANDBALL AT SCHOOL

The implementation of the game of handball in a school context, based on the official international rules, does not seem to make sense — from an organisational perspective, nor from a pedagogical, psychosocial or physiological point of view. Regarding these aspects, there are difficulties that impede teachers in schools from including handball in physical education (*Hierlemann et al., 2017*). To counteract this, numerous functional concepts and recommendations for the implementation of handball in schools have been developed (*e.g. Eisele & Hahn, n.d.; Estriga, 2019; GOALCHATM; Hapková et al., 2019; Knobloch et al., 2020; Koekoek et al., 2022*) and there are now a large number of nationally and internationally published concepts for the teaching of handball. In addition, the discipline of beach handball has offered different modified game forms (mini and ultimate beach handball), as well for potential application in the school context (*Fasold et al., 2022*).



Building on this, the here presented guide to ultimate school handball aims to apply the universal characteristics of beach handball to teaching handball in school and to ultimately foster the development of school handball. For implementation in sports halls, and thus independent of the surface of the playing field, aspects of different methodological and didactic approaches are combined (*e.g., Eisele & Hahn, n.d.; GOALCHATM; Fasold & Gehrer, 2019; Fasold & Koch, 2019*). Even though the game ultimate school handball is based on the characteristics of beach handball, it is intended to create a foundation for both indoor handball and beach handball.





2. ULTIMATE SCHOOL HANDBALL

Ultimate school handball is intended to meet the requirements of physical education on an educational, psycho-social and physiological level. The main aims are:

- to create opportunities to play in mixed-gender teams.
- to increase safety and confidence when playing the ball by using soft balls.
- to reduce physical contact and the resulting conflicts and fears by focusing on ballwinning defensive behaviour when outnumbered.
- to reduce the technical-tactical demands in the offensive game through power play.
- to promote the possibility of a positive perception of competence by playing in sets.
- to encourage social interaction and support through short sets or the shootout.
- to promote the autonomy of learners through deliberate and free play.

The game of ultimate school handball consists of two modules, which can be used individually or in combination. These modules are intended to teach basic technicaltactical handball skills, which enable students to start a handball game, secure it in its course and resume it if it is interrupted.

These technical-tactical skills refer to passing/throwing and catching the ball in play, conquering open spaces and owning a basic position in defence and offence. Additionally, aspects of cooperative play (e.g. passing, helping out) are trained. Other basic handball skills, such as individually playing around defenders, bouncing the ball or playing with physical contact should not be in focus; rather, these skills can be supplemented in advanced lessons based on the game of ultimate school handball.

ORGANISATIONAL REQUIREMENTS

In addition to the pedagogical advantages of the game, the concept of ultimate school handball is primarily intended to serve the organisational peculiarities that occur in the school context. The game should also be feasible with large groups in confined spaces (one-third of a sports hall). Above all, the block-change principle (described later) makes it possible to simultaneously involve many students in a playing situation. Furthermore, the organisational form of the shootout can not only be used as a form of competition but to playfully focus on teaching technical elements.

MATERIALS

For the implementation of the methodical game series and the shootout module, a certain basic stock of material and space conditions is proposed:

Ball material: So-called methodic balls (street handball) are recommended. Other balls can be used, but all balls must be soft and easy to grab for all participants. Bouncing possibilities are negligible.



Playing field: Any lines available in the hall can be used to mark the playing field and supplemented or optimised with floor markings (e.g. rubber plates, tape). Official beach handball line systems are also possibilities. Cones, benches and/or small mats can be used to mark the substitution zones. These zones for the teams are located on opposite sides of the field, analogous to beach handball, so that players can substitute along the entire length of the field without interference.

Goals: Existing hall goals and goal systems, but also cones, poles, soft floors or markings on walls, can be used as goals. If soft floors are used as goals, they should be set up in such a way that they are prevented from falling over. The size of the goals should roughly correspond to the level of development of the participants. There must be a good chance that a goal can be scored, but not every throw must be a hit.

Team markings: Vests, marking bands or jerseys can be used to separate the teams by colour.

Signals: To simplify game management, the use of a hand whistle or referee whistle is recommended.

STRUCTURE OF THE LESSONS

In the following section, exemplary lessons are explained. These lessons should follow a similar structure throughout. After an introduction at the beginning of the lesson, the focus is on playing. In short phases of deliberate practice, relevant technical-tactical elements, which are then to be implemented in the game, can be focused in between the playing phases. But the focus of each lesson should be on playing. Each lesson should end with a short reflection on the newly taught content (max. 3 min), whereby the teacher should control the conversation in such a way that the students become aware of their learning process and progress during the lesson.





2.1 MODULE 1 — THE GAME 4:3+1

The core of the module is the 4:3+1 game. The universal basic principles of beach handball and fair play apply (see above). The game can be developed in a methodical order and further differentiated depending on the level of development of the group. Here, the methodical order is proposed via various evaluated progression levels, but this is not necessary to be adhered to. Depending on the level of the participating group, content can be added, or progression levels can be skipped or omitted.

A basic element of the methodical series is the block-change principle. A team always consists of players who are on the field and players waiting in the substitution area. If the players on the field throw at the goal, they must change as a complete team (block). The players in the substitution area enter the field of play accordingly as a block, try to win the ball and substitute again as a block after a throw at the goal.

From an organisational point of view, there are other aspects to consider in the blockchange principle. Depending on the level, a certain number of players per team must fulfil a complete block change. If there are fewer players, the change can be reduced to the throwers, or the last players involved (last passing player). If the number of players is more than required, more sit on the bench and substitute in a rotation (whoever substituted last stays the longest).

Step 1 (90min) — The Game 2:0+2

OBJECTIVES:

- Score goals as a team in the 2:0+2 game and block the shots from the opposing team.
- Substitute after a goal throw (block-change principle).
- Gain initial experience with simple rules and specifications (e.g. playing field boundaries, fair play).
- Learn basic aspects of throwing consciously and in variable game situations.
- Defend and block shots in a conscious manner.

STRUCTURE OF THE LESSON:

a. Introduction

In a short welcome (max. 5 min), the sport of handball is discussed. It is a good idea to use the video teaser for ultimate beach handball and/or ultimate school handball. Students' experiences and expectations can also be requested.



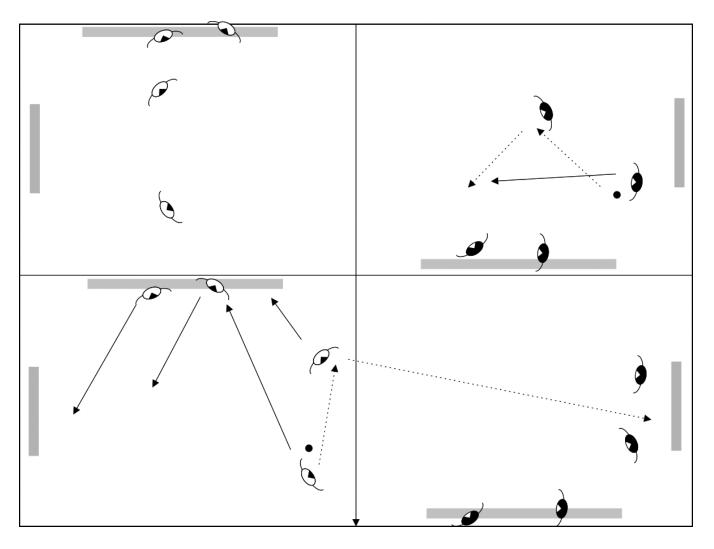
Ultimate Beach Handball Video



Ultimate School Handball Video



b. Play



In the sense of a confrontation, the 2:0+2 is played on two or three courts at the same time.

The rules and specifications for the game are reduced to the following: two players from one team always play against two other players and try to score a point with a throw at the opponents' goal. Attacking players may approach the opponents' goal up to the middle line. After a throw at the goal, the block-change principle is applied: Both players in the attacking team must be substituted.

Organisational information for the game:

- Eight players per field is optimal.
- The first rules (e.g. substitution rule, game continuation after losing the ball, scoring, steps rule) can be introduced at the beginning or bit by bit. For example, it makes sense to introduce the steps rule only after the first rule violation.
- The use of fair play can be discussed during the game.



c. Practice

In the practical phase, the focus should be on throwing. Starting with a short reflection phase (max. 5 min), the most relevant aspects of throwing should be worked out with all students. However, the implementation of the content and methodology is the responsibility of the teacher and therefore no concrete recommendation is made at this point.

d. Play

The lesson ends with the game form 2:0+2. In several competitions (play at least two sets), all students can apply their learned skills in the game again.

Step 2 (90min) - The Game 2:1+1

OBJECTIVES:

- The game 2:1+1 involves scoring goals as a team and defending shots from the opposing team. Here, a clear assignment of tasks is to be learned in defence: One player defends offensively; one player acts as the goalkeeper.
- The block-change after a throw on the goal is consolidated.
- The application of the rules of the game introduced in step 1 is automated.
- The throwing actions are to be improved through a high number of repetitions and variable applications in the game under light pressure from opponents.
- A basic principle of the game should be introduced in defence: "I always position myself between the ball and my goal."
- Basic elements of the game can be introduced for the goalkeeper position.

STRUCTURE OF THE LESSON:

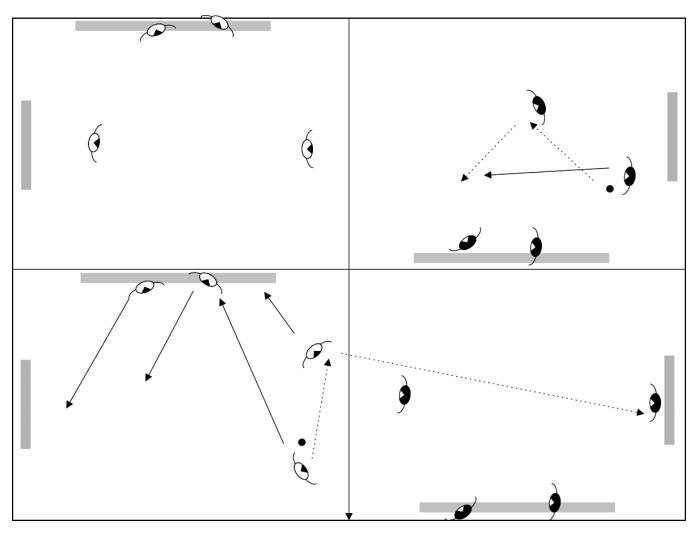
a. Introduction

In a short welcome (max. 5 min), the contents of the first unit should be reflected on and an outlook on the new content given. The focus here is on the distribution of tasks (defence/goalkeeper).



b. Play

The 2:1+1 game can again be played on two or three courts at the same time. The rules and specifications are taken from the 2:0+2 game and supplemented (additions in **bold**).



Rules:

Two teams play against each other and try to score points with throws on the opponents' goal. Approaching the opponents' goal is allowed up to the middle line. **At least one pass must be played before the throw on goal**. After a goal has been thrown, both players in the attacking team must be substituted.

Organisational information for the game:

- The same information applies as in step 1.
- In the teams, there is a clear distribution of tasks: "I defend on the middle line" and "I act as the goalkeeper."
- Interruptions in play can be used to reflect on the behaviour of the players (e.g. "Did you position yourself between the ball and the goal? When does a pass make sense? When does a throw make sense?").



c. Practice

In the practice phase, the focus is on the basic position of defending. The goalkeeper situation can also be discussed.

d. Play

The lesson ends with the 2:1+1 game form played again in several sets.





Step 3 (90min) – The Game 3:2+1

OBJECTIVES:

- Score goals as a team, and actively defend against the ball and conquer it.
- Create scoring opportunities together.
- In defence, do not attack the bodies of the opponents attack only the ball.
- Apply the tasks in relation to the new playing situation ("Who defends against the ball in the field? Who acts as the goalkeeper?").
- Get to know basic elements of playing attack (e.g. recognising open spaces, passing) and defence (e.g. intercept passes, helping out).

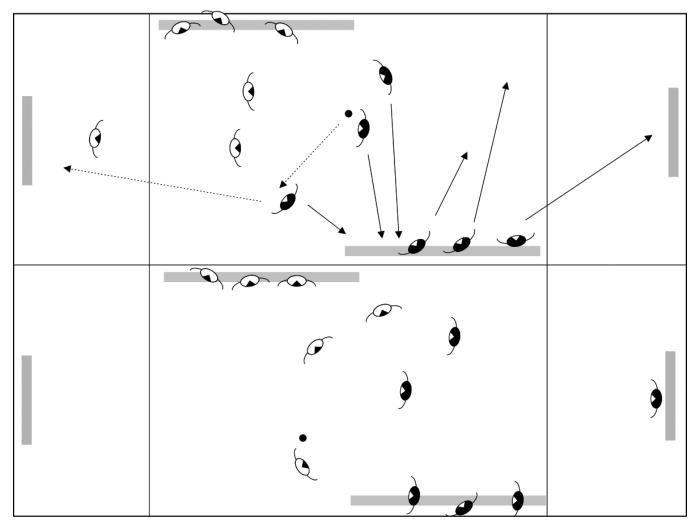
STRUCTURE OF THE LESSON:

a. Introduction

In a short welcome (max. 5 min), the focus is on the substitution system as well as defending and attacking together.

b. Play

The 3:2+1 game form can be played on one field of play, or, if enough space is available, on several fields at the same time.





Rules:

The rules and specifications are taken from the 2:1+1 game and supplemented (additions in **bold**). **Three players** from a team always play against another team and try to score a point with a throw at the opponents' goal. **The attacking team may approach the opponents' goal all the way to the goal area line**. The block-change rule stays in place. **One member of the defending team is allowed to enter their own goal area and act as a goalkeeper**.

Organisational information for the game:

- Six players per team is optimal. If there are more or fewer players, the block-change system can be adjusted as described in the introduction.
- The playing fields should be enlarged, as there are now six players on the field instead of four and enough space is needed for the zone between the two goal areas. Passing in forward movement should be possible.
- In the teams, a clear distribution of tasks is made: "I defend" and "I act as the goalkeeper."
- In possession of the ball, the goalkeeper always supports the offensive game outside of their own goal area.
- If no goal is scored after several attacks, substitutions may be made.

c. Reflection

In a short reflection phase (5 min), the learning objectives should be addressed ("What doesn't work yet? What works? What can we change? Are we playing as a team? Are we attacking the ball only?"). The focus is again on the students' solutions.

d. Play

After the reflection, competitions are played over several sets. A small tournament form is also possible. From this level on, sets can no longer end in a draw. If there is a draw at the end of a game, a golden goal decides the set (whoever scores the next goal after a referee throw wins).

Important:

Depending on the level of performance and development or the organisational possibilities (extremely little space), the 3:2+1 game can be the target game form in Module 1.



Step 4 (90min) – The Game 4:3+1

OBJECTIVES:

- Score goals as a team, and actively defend against the ball and conquer it.
- Create good scoring opportunities together.
- In defence, keep the focus on attacking and reconquering the ball.
- Improve basic elements of playing together in offence (e.g. attacking open spaces, passing) and in defence (e.g. attacking passes, helping out).
- Get to know additional tactical options with the higher number of players in offence and defence.
- Get to know playing positions in offence and defence for the first time.

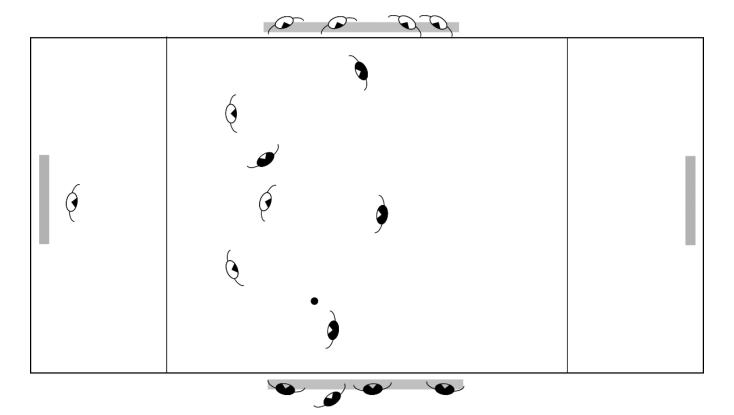
STRUCTURE OF THE LESSON:

a. Introduction

In a short welcome (max. 5 min), the contents of the previous lesson can be reflected upon. An outlook on the changes due to the addition of players and the newly emerging possibilities in interaction can also be given.

b. Play

The 4:3+1 form of play must now be played on a further enlarged playing field. The rules and specifications are taken from the 3:2+1 game, with the only change being that 4:3+1 is now played.





Organisational information for the game:

- Eight players per team are optimal for implementation.
- The playing fields are enlarged, as there are now eight players on the field. One-third of a regular sports hall is needed for a playing field.
- The teams can now make the first divisions of space on the playing field (e.g. "I play on the left; you on the right," and "I'm playing near the goal line"). This space division can be further developed into positions, where the position designations may come from the students.

c. Reflection

In a short reflection phase (5 min), the learning objectives are addressed. The focus should be on which actions make sense to successfully implement the game.

d. Play

After the reflection, competitions are played in several sets. A tournament form can represent successful completion of the learning levels in Module 1.





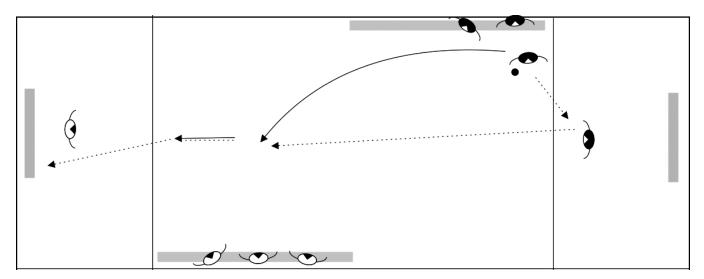
2.2 MODULE 2 - THE SHOOT-OUT

The core of the module is the implementation of the shootout on a spatially reduced playing field. The shootout is used as a form of exercise (practice/train together) and as a separate form of competition (two teams compete against each other). For the shootout, the field layout of the 3:2+1 or 4:3+1 game forms is used. However, the first forms of shootout can also be implemented in the 2:0+2 and 2:1+1 steps (e.g. pass-back pass, throw from the middle line).

STRUCTURE, PROCEDURE AND RULES OF THE SHOOT-OUT

Two players from the offensive team compete against one player from the defending team. One player from the offensive team is in their own goal area (goalkeeper), while the other has the ball in their hand and stands in the field of play at their own goal line. The task begins with a pass from the attacking player in the field to their own goalkeeper, after which the attacker moves towards the opponent's goal, receives a back pass and tries to score a goal with a throw (without entering the opponent's goal area). The defending player remains in the goal area and tries to defend the throw as a goalkeeper.

The task is always carried out in alternate, with first one team attacking, then the other.



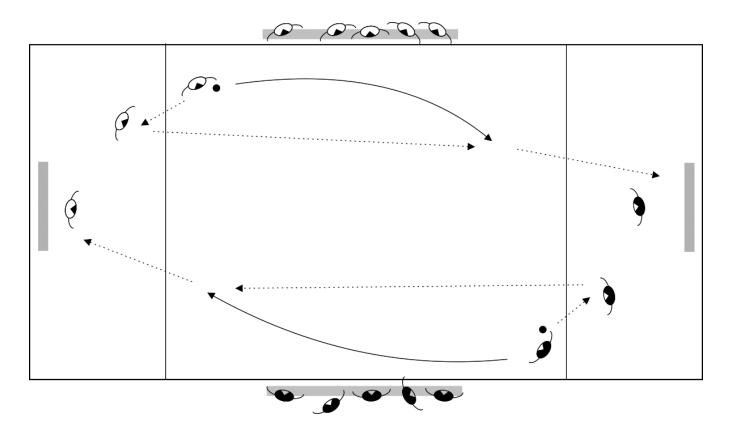
From a teaching perspective, it makes sense for each team to fulfil their tasks in rotation, where whoever has thrown goes to the bench. Whoever played the pass then defends the opponent's action as a goalkeeper, and next becomes the thrower. A new player then comes from the bench into the goal area for passing.

In the shootout, all existing rules known to the participants from Module 1 are applied (e.g. step limits). Furthermore, the shootout can be used to introduce new rules. For example, after playing in the game forms from step 1 and 2, the shootout could be used to introduce the enlargement of the playing field (from one middle line to two goal areas).



SHOOT-OUT AS PRACTICE

The general organisational form of the shootout can be used as a variable and game-oriented form of practice to train basic technical-tactical skills (e.g. passing in motion, throwing, playing as the goalkeeper) in a game based manner. For this purpose, several side-by-side fields may be used simultaneously. To achieve more repetitions, in the practice stage, shootout actions from both teams can also be carried out on one playing field at the same time, where one player is active as a passing player and one as a goalkeeper in each goal area.



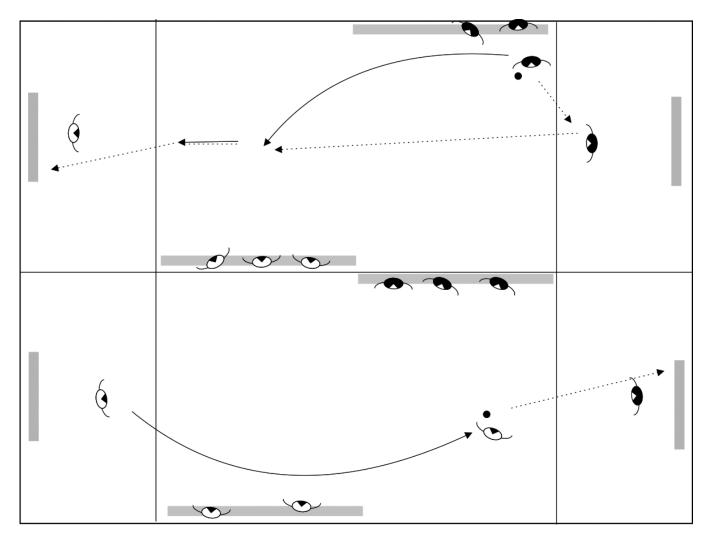
The exercise phases in steps 1 and 2, even integrated into steps 3 and 4, can be carried out in the organisational form of the shootout. However, specific lessons can also be designated for the shootout.



SHOOT-OUT AS COMPETITION

If a shootout is carried out as a form of competition, it can be based on the specifications in mini and ultimate beach handball. All members of each team take turns as throwers, and the team that has scored more goals at the end wins. If the number of players in the teams is unequal (a team has one player less), one player may compete twice. If there is a tie after all players have competed, one player from each team will compete against another until one team wins.

The shootout can be carried out as a single competition at the end of a lesson or played over several shootout sets or as a shootout tournament.





2.3 THE COMBINATION OF MODULES

With appropriate development of the necessary skills and in relation to group behaviour, both modules can be combined. As in mini and ultimate beach handball, in 4:3+1 (or 3:2+1), it is recommended to always play two sets and one set as a shootout. According to the rules of mini and ultimate beach handball, matches can end 2:0 or 2:1. However, in 4:3+1, if a team wins both sets, it must confirm the 2:0 by winning the shootout.

A playing time of 5–7 minutes is recommended for the games in Module 1. Since the shootout is not subject to any time restrictions, timing must be observed in the context of a school lesson.





3. OUTLOOK

The game ultimate school handball is intended to promote basic sports motor and psychosocial skills, which enable an easy transition to the games of indoor handball and beach handball. The game does not claim to train students in all the basic skills of the sport of handball. When it comes to applying the acquired skills in beach handball on the sandy surface, further methodological and didactical steps must be taken (e.g., trick shots). Concerning getting started in indoor handball, an examination of the regular playing equipment and the elements of bouncing or dealing with the specifically permissible physical contact are indispensable and must be initiated.

In ultimate school handball, basic skills in passing/throwing and catching, simple cooperative passing, recognising open spaces in offense, orientation towards the ball and opponents, the first cooperative elements (give-and-go) and footwork in defensive play are to be stimulated in a playful manner. Due to the block-change system in all game forms, many students can be simultaneously integrated into the game in a small space and Module 2 (shootout) offers the opportunity to practice basic technical-tactical actions in a goal-oriented manner under simple but game-like conditions.

Above all, the game is intended to enhance enjoyment of sport on the part of students in order to increase the probability of lifelong participation in sport and handball.





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