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Master 's Thesis

The effectiveness of combined technical-tactical didactic approach in teaching basketball at secondary schools

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Study program: Učitelství tělesné výchovy pro 2. stupeň ZŠ a SŠ se specializacemi

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Supervisor: Mgr. Karel Hůlka, Ph.D.

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I declare that I have prepared a diploma thesis on the topic: The effectiveness of combined technical-tactical didactic approach in teaching basketball at secondary schools independently using the sources and literature mentioned in the work under the supervision of Mgr. Karel Hůlka, Ph.D.

Date

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I would like to thank my supervisor, Professor Karel Hůlka, whose expertise was invaluable in formulating the research questions and methodology. Your insightful feedback pushed me to sharpen my thinking and brought my work to a higher level.

Bibliographical identification

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The effectiveness of combined technical-tactical didactic approach in teaching basketball at secondary schools

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ABSTRACT:

The main purpose of this study was to assess the effectiveness of a combined technical-tactical didactic approach in teaching basketball at secondary schools on a) student's four game performance basketball scores (decision-making, skill execution, off the ball support and defense), b) basketball skills (dribbling, shooting, passing) and c) enjoyment. The sample was composed of 71 students aged 14.1 ± 0.9 years from ZŠ Nečín divided by sex and grades into four groups. A descriptive analysis of the learning indicators, a Shapiro-Wilk test to test normality of the study was performed. To test the effectivity of technical-tactical model over time on student's game performance, skills and enjoyment, a mixed ANOVA for repeated measurements was conducted, across the didactic unit. Both programs were found effective over time on student's game performance and skills. The differences were found in the situations of dribbling, passing, and shooting, decision-making, skill execution, player support, off and on the ball defense, and total points in the GPAI assessment instrument. For the students to learn basketball properly and improve, it is recommended to implement both technical and tactical model into the teaching curriculum.

KEYWORDS:

Technical skills approach, tactical skills approach, TGFU, motor learning, basketball, physical education

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Bibliografická identifikace

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Analýza efektivit kombinovaného technicko – taktického didaktického přístupů ve výuce basketbalu na II. st. ZŠ.

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ABSTRAKT:

Hlavním cílem této studie bylo posoudit efektivitu technicko – taktického didaktického přístupu ve výuce basketbalu na II. st. ZŠ se zaměřením na: a) výkon a skóre studentů ve čtyřech herních složkách basketbalu (správné rozhodování se, provádění basketbalových dovedností, uvolnění hráče s míčem, bez míče a obranu), b) basketbalové dovednosti (driblování, střelbu, přihrávky), c) požitek ze hry.

Populační vzorek byl složen ze 71 studentů ze ZŠ Nečín ve věku $14,1 \pm 0,9$ let, rozdělených podle pohlaví a ročníků do čtyř skupin. Byla provedena deskriptivní analýza indikátorů učení, Shapiro-Wilkův test pro testování normality studie. Pro testování efektivit technicko – taktického modelu v průběhu času na herní výkon, dovednosti a požitek ze hry studentů, byla napříč didaktickou jednotkou provedena smíšená ANOVA pro opakovaná měření. Oba programy byly shledány účinnými v průběhu času na herní výkon a dovednosti studentů. Rozdíly byly zjištěny při testování driblingu, přihrávky, střelby, rozhodování se, provádění basketbalových dovedností, podpory hráče s míčem a bez míče, obrany na míči i mimo něj a celkového počtu bodů v hodnocení GPAI.

Závěrem této studie je doporučení začlenit do osnov basketbalu technicko – taktický model výuky, aby se žáci naučili basketbal správně a stále se v něm zdokonalovali.

KLÍČOVÁ SLOVA: technicko – dovednostní přístup, taktický přístup, TGFU, motorické učení, basketbal, tělesná výchova

Souhlasím s půjčováním práce v rámci knihovnických služeb.

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Introduction

As a physical education teacher, basketball coach and ex professional basketball player for 13 years, I found myself wondering “Why a technical skills approach does not seem to work with secondary class students in regular schools and why is it so popular amongst PE teachers in Czech Republic?”. It has been noted over 20 years ago that “teaching games focusing primarily on technique is an approach that dominates most physical education programs” (Hopper, 1998, p.4). I noticed, in my coaching and engaging in PE classes and as a professional basketball player that it is true to this day. It creates an actual problem and students are discouraged when they hear basketball, rugby, handball and any invasion team sport other than soccer. Many students don’t find enjoyment in games, don’t engage in team sports outside the school environment and most of all don’t have the desire to learn new techniques, skills and decision-making process that comes with learning new sports games. I hope an introduction of combined technical – tactical didactic approach in our school might bring back the interests of students by “student’s better understanding of the game of basketball, tactical awareness and development of game appreciation” (Hodges, 2018, p.100).

Still basketball is in top 10 most popular amongst sport games played and watched by fans (Czech Union Sports, 2020). In every school gym we can find two basket boards, a drawn court lines and couple of basketballs. It’s popularity slowly decreases tough, first, due to a lack of qualified teachers that can transfer the essence of playing this game to unknowing students, secondly, due to lack of time during the school year for properly learning the game. As I mentioned earlier teachers tend to stick to the curriculum and technical skill methods that where kids are taught skills for games performance only, moving fast from game to game, not stopping to learn the essence of invasion games. It’s a rigid, structured style (warm-up activity, teaching a skill for performance in a structured, out of game context setting, small-sided game with less players and structured game at the end), that I find my students don’t enjoy, they don’t understand why they are doing particular exercise and they don’t improve their level of performance over time. This leads to high percentage of kids that a) don’t experience success due to performance pressure, b) by the end of 9th grade know very little about invasion games (especially basketball) and c) have poor decision-making process and their game style is dependent on a teacher (Bunker & Thorpe, 1986). Most off all, students don’t improve in time.

The invasion games (soccer, handball, basketball, rugby) curriculum, takes up to one-fourth of our school syllabus so I find it beneficial to try to change my teaching strategy and

possibly impact the student's attitude towards physical education in general, in invasion game playing and most of all, that it will lead to healthy habits and healthy lifestyle choices. Using combined technical – tactical didactic approach with emphasis on Teaching Games for Understanding model (play, perception of play, tactical awareness, decision making, technical execution and performance), I will teach students skills for skill performance. By simulating a real problem-solving exercise, they will be taught better communication, cooperation, and decision – making (Capel, 1991). The decision – making process is crucial to invasion games and it occurs before choosing the right technique (skill) to act upon. Overall, students find enjoyment in solving real problems within a game setting, thus they learn and improve (Bunker & Thorpe, 1986).

Limited research on the combined technical – tactical didactic approach model is available in school context, so it is hard to describe how effective this approach is in improving game performance variables (decision-making, skill execution, off the ball support and defense) and game performance skills (dribbling, passing, and shooting), (Gouveia, 2019, p.963). Finally, limited research explores the level of enjoyment with the combined technical – tactical model in ČR secondary school settings.

1. Characteristics of the basketball game

Basketball is a team based, invasive sport. Both teams participating in the game are competing for the same object – basketball. The team consists of 10 to 12 players in a team, 5 players in a field. The aim of the game is to gain a higher number of points by throwing the ball into the opponent's basket and prevent the other team to do the same. The game is played for four ten-minute quarters, with a break of 15 minutes between the 2nd and 3rd quarter (NBA 4 x 12 min). Hoop height above the surface is 305 cm, the area of play is 28 m x 15 m. Moving the player with the ball requires dribbling with one hand. The ball can also be moved by passing or shooting at the basketball board. Basketball positions are point guard, shooting guard, small forward, power forward and center. Main characteristics of the basketball game are teamwork, speed, physical fitness and level of skills and abilities players have (Štumbauer, Maleček & Šimberová, 2013).

Anthropometric characteristics of players highly dependent on the game positions: centers and forwards are taller and heavier than guards. The most stressed muscle groups and injuries are ankle and knee joint distortion, sprains and bumps or distortions of the fingers, stretching or tearing of the quadriceps, stretching, or tearing of the Achilles tendon, dislocation of the shoulder, fractures of the upper limbs (fingers, wrists). Fitness characteristics emphasize on cardiovascular endurance, flexibility, body composition, muscle strength and endurance (Botek, M. (2021).

Basketball is intermittent sport, the proportion of metabolic coverage is mixed - 15 % ~ high intensity (sprints), 65 % ~ medium intensity (running, moving), 20 % ~ low (walking, jogging). There are high requirements for aerobic metabolism for urgent ATP regeneration (sprints, jumps, rebounds, blocks). The load depends on the post. The player that has the highest load intensity is point guard and both wing players. In 40 minutes there about 135.44 ± 29.46 sprints (up to 2 s), 53.69 ± 14.67 sprints (up to 4 s) and 21.69 ± 9.36 sprints (over 4 s). During the match the average HR = 167.47 ± 13.01 beats / min⁻¹ = 85.06 ± 6.40 % HR_{max}. Aerobic capacity for basketball players ranges from 50 to 60 ml•kg•min⁻¹, significantly affected by the game post. The higher the aerobic capacity a player has, the more time he spends on the move during the match. 65 % VO₂ - running at speeds 9 - 10 kg•min⁻¹ (Bělka & Hůlka, Teorie a didaktika sport. her, 2021).

Basketball is one of the sports in which athletes continuously seek to jump higher whether it is a rebound, lay-up, jump-shot or defensive position to block an opponents' shot. The rebound is a classic example of a basketball movement that requires production of a

maximal muscular force in short amount of time. Additionally, basketball requires quick, powerful movements and changes in direction in all planes to compete successfully. The combination of concentric and eccentric muscle contraction, the so-called stretch-shortening cycle (SSC), is conditioned by a high level of muscle elasticity, contractility, and neuromuscular coordination. Plyometric training provides a natural form of training for athletes who must project their bodies upward. Lower body plyometrics training will allow basketball players to produce more force in shorter time; thereby allowing a higher jump. That is why the importance of a vertical jump and good conditioning practices for basketball cannot be overemphasized (Baechle & Roger, 2000).

The average distance the basketball covers during a basketball game ranges from 5880.9 ± 831.01 with average speed 8.64 ± 0.81 (Bělka & Hůlka, Teorie a didaktika sport. her, 2021).

The game of basketball consists of both technical and tactical training – from individual game activities to team systematics. Some of the offensive skills that we teach players consist of: dribbling with the ball in motion: by changing speed or direction (crossover, between legs, behind the back, turn, etc.), dribbling with the ball in place (using turns), choice of turning foot, getting open without the ball, gaining a suitable position for yourself or your teammates – behind the back, cut hard in front of the player, square cut, dip when playing defender, V, L, S, I, C, "throw and run", rebounding - offensive and defensive, passing and catching the ball (one-handed, both handed pass, overhead pass, bounce pass), shooting (in motion, after dribble, after a pass, free throws, at one and two tempos, lay – ups), screening (in place without the ball, for players with the ball, for players without the ball, horizontal, vertical and diagonal screening). Defensive skills: covering the player with the ball – in place, in motion, covering the player without the ball – on the spot, in motion, defensive rebounding – blocking out the attacker after shooting (Bělka & Hůlka, Teorie a didaktika sport. her, 2021).

1.1 Technical skills approach

The aim of the technical skills approach (teacher-centered approach) is technique: you must perform a certain basketball skill in an out of game context before you can play the game of basketball. Students are required to imitate the teacher with the same speed and rhythm. The problem arrives when less skilled students have trouble performing certain tasks (shooting, dribbling, passing), then they get discouraged and bored. The reason for this kind of teaching method is that it is easier to evaluate and grade students, it is easy and quick to prepare for the class by the teacher. This method leads to higher skills level (more time spent on drill game

technique) but lower decision – making process level. The students understand less the essence of basketball game and therefore can't choose the proper skill to be performed at the right time during the game (Bunker & Thorpe, 1986).

In this model the information is delivered directly to students in a structured and clear manner based on different class levels. It is very important for a teacher to be authoritarian in this model and guide students through the teaching process by showing examples of a skill step-by-step visually while constantly providing feedback. Most of the time within a class students follow instructions of the teacher with less opportunity given for students to make their own decisions. The communication is one – sided, from the teacher to the student (Capel, 1991).

The key to the teacher – centered approach is presentation and correctly structuring the tasks in hand. The aspects for improving and accurately administering this method are: „making instructions explicit, emphasizing the usefulness of the content being presented, structuring new content, signaling student's attention, summarizing and repeating the information, checking for understanding, creating a productive climate for learning and presenting accountability measures “(González-Espinosa, 2021).

When teaching a game of basketball, the basic technical skills methodology consists of demonstration and explanation basic rules of basketball by the teacher to the students, safety, and additional information – interesting facts about the game.

We usually start with basic manipulation with the ball, "dribble alphabet", guiding the ball (on the spot, walking, running) in different ways, passes on the wall and in pairs (on the spot, walking, on the run) in different ways – two-handed, one-handed, etc., passes with three players (on the spot, walking, running) in different ways, shooting on the spot, from walking, from running, after receiving a pass (alone under stable conditions). Then, when players begin to handle the basics, we repeat everything but under difficult conditions, situations 1 on 1, 2 on 1, 3 on 1, 3 on 2 with passive defense, then with active defense. Only after individual activities have been mastered, we train offensive and defensive game combinations. For low – organizational games – depending on a conditions and players, we lower number of players on the field, play on a smaller area, with smaller and lighter balls and put the boards and rims lower for younger and less experienced players. The corrective feedback is given during the tasks and in between the tasks.

1.2 TGfU – Teaching games for understanding – tactical skills approach

Of course, one of the basic forms of teaching, great for motivation is the game itself. I believe that there are times when telling and showing is appropriate, however, students are most empowered when they are involved in games.

TGfU is a learner – and game – centered approach (Griffin & Butler, 2005). It was first introduced by Bunker and Thorpe in 1982 in the Bulletin of Physical Education. It was later expanded by Thorpe, Bunker and Almond in 1984 (Hopper, 2002 p.44). TGfU approach was put into plan after noticing that technique-oriented method produces skills that are practiced in isolation and doesn't transfer to game settings. It focuses on „why" we are playing particular game, the students are taught to appropriately choose the right decision, at the right moment about „what to do" and „how to do" it. It offers students learning environment that includes observation and critical thinking. Teaching Games for Understanding model has 6 stages: 1. Playing the game, 2. Game appreciation (rules, equipment, players, boundaries), 3. Tactical awareness (offensive and defensive strategies and concepts), 4. Decision making (what to do – selective attention, perception and anticipation, how to do it – skills in context), 5. Skill execution (developing control of the object – sending, receiving, carrying the ball, propelling actions, and complex control and combinations of skills) and 6. Elevating performance (spiral curriculum, sampling techniques), (Bunker & Thorpe. 1982).

The educational philosophy underlying TGfU model is based on constructivism (Griffin & Butler, 2005). By gradually building experiences and using contexts within game situations we advocate comprehension and meaning into that particular game. It is a progressive education model, based on integration of body, mind and spirit. It focuses on joining together school and community sports. Its basic purpose is construction of meaning, basic objective is to discover what we don't know yet, and to apply what we already know. The main outcome of this teaching method is thinking and decision making. It is taught by playing modified games that are simplified by: reducing number of players on the field, playing on a smaller area, with smaller and lighter balls and putting the boards and rims lower, adapting rules to player's needs. During participation students are asked to solve problems related to the game (Hopper, 2002, po.45). It is a concept-based model, where there is a multidimensional interaction between players. The teacher has a role as a facilitator of problem solving. The evaluation is done by demonstration of understanding and contributions to process (Butler, Griffin & Nastasi, 2003).

As for innovative approaches and methods, they are very effective, but more demanding in terms of teacher training and implementation. The benefit of these methods is the acquisition

of knowledge, skills, abilities, development of logical, creative thinking, development of independence, increased self-confidence, increased pupils' interest in the curriculum. They also have their disadvantages: they are difficult to prepare, they are not suitable for some types of classes (indiscipline, lack of motivation), insufficient drill technique in short time, requirement of a skilled and professional teacher, who is also highly motivated,

Thorpe, Bunker and Almond classified basketball as a territorial game in 1982. The main purpose of territorial games in TGfU model is to invade the opponents' defending area to score a goal while simultaneously protecting own goal. When teaching a game of basketball the basic tactical methodology consists of 3 concepts: 1. Offensive – keeping possession of the ball (skills required: passing, receiving, moving with and without the ball), penetration, dribbling, invading (skills required: passing, receiving, change of speed, direction with and without the ball), 2. Defensive – zoning, defending players in area (skills required: shuffle, change of speed, running in different directions), defending a specific player (skill required: footwork) and 3. Transposition concepts that require peripheral vision, footwork, running and quick change of directions. We usually start with basic dribble tag games, situations of offensive advantage, moving to the basket in 1 on 1 situations, decision making to shot or dribble in 1 on 1 situation, discovery of placement and position in on - ball defense, decision making with offensive numerical superiority 2 on 1, team play 2 on 2, tag with different passes, decision making with offensive numerical superiority 3 on 2, team play 3 on 3, placement and position in on - ball defense (González-Espinosa, 2021). We prepare a questioning protocol: What is going wrong? Where does the problem occur? When does the problem occur? Why does the problem occur? Who owns the problem? How can it be fixed?

2. Aim of the study

The main aim of this study was to examine the effectiveness of a combined technical and tactical teaching model on basketball performance in youth students at elementary school.

2.1 Additional research questions

2.2.1 PARTIAL GOAL 1

Whether or not there would be a difference over time on improved game performance (decision-making, skill execution, off the ball support and defense), skills (dribbling, shooting, passing), and enjoyment level after application of combined technical-tactical teaching model?

2.2.2 PARTIAL GOAL 2

Whether or not there would be a difference between sexes over time on improved game performance (decision-making, skill execution, off the ball support and defense), skills (dribbling, shooting, passing), and enjoyment level after application of combined technical-tactical teaching model?

2.2.3 PARTIAL GOAL 3

Whether or not there would be a difference between grades over time on improved game performance (decision-making, skill execution, off the ball support and defense), skills (dribbling, shooting, passing), and enjoyment level after application of combined technical-tactical teaching model?

2.2.4 PARTIAL GOAL 4

Whether or not there would be a difference between sex and grades over time on improved game performance (decision-making, skill execution, off the ball support and defense), skills (dribbling, shooting, passing), and enjoyment level after application of combined technical-tactical teaching model?

2.2.5 PARTIAL GOAL 5

Did the participants improve more in game performance and skills level after first – technical method or second – tactical didactic unit?

3. Material and methods


3.1 Design study

In the design of my study, more than one data collection method was used to provide for better reliability.

A pre-test – post-test design, based on intact groups was conducted to compare participant’s psychomotor performance scores (decision-making, skill execution, off-the-ball support, and defense) over time using the Game Performance Assessment Instrument (GPAI), (Mitchell et al., 2006; Oslin, Mitchell & Griffin, 1998).

GPAI: Basketball

Game Performance Assessment Instrument



Team _____ Class _____ Evaluator _____

Observation Dates (1) _____ (2) _____ (3) _____ (4) _____ (5) _____

| | |
|--|---|
| <p>Components and Criteria:</p> <p>Decision-Making Player passes to open teammate. Player shoots when appropriate.</p> <p>Skill Execution Passing – <i>ball reaches target.</i> Receiving – <i>controls pass & setup.</i> Dribbling – <i>ball below waist and in control.</i> Shooting – <i>ball above head & on target.</i></p> <p>Support Moves to open position to get pass.</p> <p>Prevent Scoring Guards opponent well (on-the-ball). Supports teammates (off-the-ball).</p> | <p>Scoring Key: A = Appropriate, or IA = Inappropriate, E = Efficient, or IE = Inefficient</p> <p>Overall Performance Key: 5 = Very effective performance (always seen) 4 = Effective performance (usually) 3 = Moderately effective performance (sometimes) 2 = Weak performance (rarely) 1 = Very weak performance (never)</p> |
|--|---|

| Criteria/Scoring | Decision-Making | | Skill Execution | | Support | | Prevent Scoring | | Scores |
|-------------------------|-----------------|---|-----------------|----|---------|---|-----------------|----|--------------------------------|
| | A | I | E | IE | A | I | E | IE | 4 to 20 |
| Name/Number: | | | | | | | | | DM: SE: SU: PS: T: |
| Comments: | | | | | | | | | |
| Name/Number | | | | | | | | | DM: SE: SU: PS: T: |
| Comments: | | | | | | | | | |
| Analysis of Tactic: | | | | | | | | | |
| Suggested Improvements: | | | | | | | | | |
| Summary: | | | | | | | | | |

Figure 1. GPAI – Game Performance Assessment Instrument

A pre-test – post-test design, based on intact groups was conducted to assess participant’s skills over time using a Johnson’s Basketball Test Battery (Usman, 2016). The three measured components included: field goal speed test, dribbling test and basketball passing for accuracy (Figure 1).

Field goal test consisted of starting at any position under the basket the students desired. I was counting as many baskets as student’s could made in 30 sec. I counted 1 basket for 1 point.

Dribbling test consisted of eight cones placed in a line 1.80 m apart and at 3.65 m from starting line. The subject started from one end of the starting line and dribbled around through the hurdles and back to the other end of the starting line. I counted the number of zones crossed in 30 sec.

Basketball throws for accuracy test consisted of a series of rectangles arranged one inside of the other on the wall 0.35 m above the floor. The dimensions of the rectangles are as follows: 1: 1.52 m x 1 m, 2: 1 m x 0.63 m, 3: 0.50 m x 0.25 m (Figure 1).

The subject was given 10 trials from a distance of 12 m, using baseball pass or hook pass. I counted 3 points for inner rectangle, 2 points for the middle and 1 point in the outer rectangle.

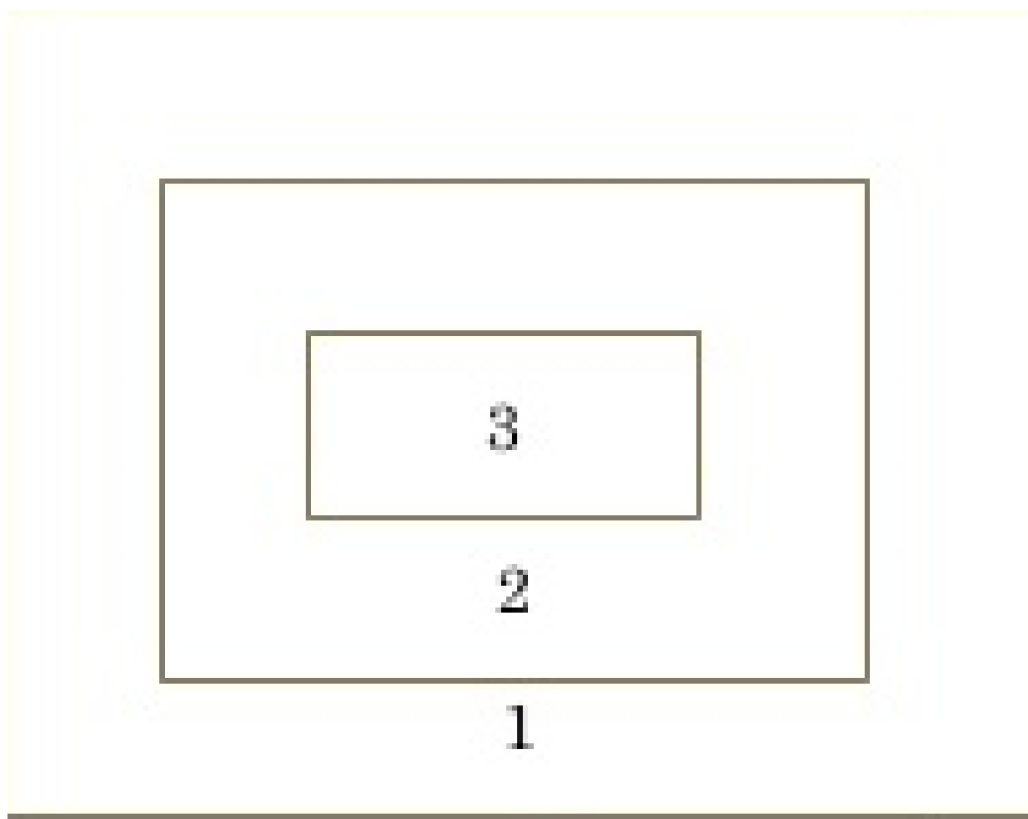


Figure 2. Basketball throws for accuracy test

A post traditional and post TGFU experimental Physical Activity Enjoyment Scale (PACES), based on intact groups was conducted to compare the subjective level of enjoyment of students over time (Hůlka, et al., 2014).

Students were asked to rate how do they feel *at the moment* about the physical activity they have been doing for the past 4 weeks; mark (1) for „disagree a lot “...to (7) Agree a lot.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|--|
| * I enjoy it | 1 | 2 | 3 | 4 | 5 | 6 | 7 | I hate it |
| I feel bored | 1 | 2 | 3 | 4 | 5 | 6 | 7 | I feel interested |
| I dislike it | 1 | 2 | 3 | 4 | 5 | 6 | 7 | I like it |
| * I find it pleasurable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | I don't find it pleasurable |
| * I am very absorbed in this activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | I am not at all absorbed in this activity |
| It's no fun at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | It's a lot of fun |
| * I find it energizing | 1 | 2 | 3 | 4 | 5 | 6 | 7 | I find it tiring |
| It makes me depressed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | It makes me happy |
| * It's very pleasant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | It's very unpleasant |
| * I feel good physically while doing it | 1 | 2 | 3 | 4 | 5 | 6 | 7 | I feel bad physically while doing it |
| * It's very invigorating | 1 | 2 | 3 | 4 | 5 | 6 | 7 | It's not at all invigorating |
| I am very frustrated by it | 1 | 2 | 3 | 4 | 5 | 6 | 7 | I am not at all frustrated by it |
| * It's very gratifying | 1 | 2 | 3 | 4 | 5 | 6 | 7 | It's not at all gratifying |
| * It's very exhilarating | 1 | 2 | 3 | 4 | 5 | 6 | 7 | It's not at all exhilarating |
| It's not at all stimulating | 1 | 2 | 3 | 4 | 5 | 6 | 7 | It's very stimulating |
| * It gives me a strong sense of accomplishment | 1 | 2 | 3 | 4 | 5 | 6 | 7 | It doesn't give me a strong sense of accomplishment |
| * It's very refreshing | 1 | 2 | 3 | 4 | 5 | 6 | 7 | It's not at all refreshing |
| I felt as though I would rather be doing something else | 1 | 2 | 3 | 4 | 5 | 6 | 7 | I felt as though there is nothing else I would rather be doing |

* Denotes reversal when scoring.

Figure 3. PACES – Physical Activity Enjoyment Scale

3.2 Participants

Seventy-one students aged 14.1 ± 0.9 years (36 boys and 35 girls) participated in this study. The sample was composed of students from four classes: 6th, 7th, 8th, and 9th graders in ZŠ Nečín, at where I am PE teacher. All from the sample were novice basketball players (they had little experience and poor basketball skills). Informed consents were obtained from all participants and their parents.

All classes were divided into girls and boys. First, they received a 4-week traditional skills PE classes two times a week for 4 weeks – 8 technical training sessions (warm-up, the learning of skills and short game at the end of each lesson). The main goal of these lessons was primarily development of offensive and defensive skills (ball handling, passing, receiving, shooting, getting open, one on one defense). After that, they received the same amount of TGFU model sessions (tactical oriented approach) for 4 weeks, 2 times a week – 8 TGFU training sessions (modified games situations, presenting a tactical problem to the students).

3.3 Methodology and organization of data collection

I started with a video recording of basketball game 2 x 5 min in the PE setting for all classes. I then, used the recording off-line for a pre – evaluation of all players using the Game Performance Assessment Instrument (GPAI). I measured decision-making, skill execution, off-the-ball support, and defense for assessment.

Video recording was being followed with a pre-test of basketball field performance test using a Johnson’s Basketball Test Battery.

First block was composed of 8 traditional training sessions, technique oriented, two times a week for four weeks for all classes. After that the students were video recorded again for 2 x 5 min for post – evaluation using the Game Performance Assessment Instrument (GPAI), with the same measurements as in pre- evaluation.

The evaluation was followed with a post-test of basketball field performance test using a Johnson’s Basketball Test Battery.

After first block of training students also obtained a questionnaire based on Physical Activity Enjoyment Scale (PACES), to assess their subjective level of enjoyment with traditional model of teaching basketball they just went through. I asked them about their level of enjoyment and their feelings during those 8 sessions.

The second block 8 TGFU model sessions (tactical oriented approach) followed - 4 weeks, 2 times a week. After that the students were video recorded again for 2 x 5 min for post – evaluation using the Game Performance Assessment Instrument (GPAI), with the same measurements as in pre- evaluation.

The evaluation was followed with a post-test of basketball field performance test using a Johnson’s Basketball Test Battery.

After second block of training students also obtained a questionnaire based on Physical Activity Enjoyment Scale (PACES), to access their subjective level of enjoyment with TGFU model of teaching basketball they just went through. I asked them about their level of enjoyment and their feelings during those 8 sessions.

3.4 Statistical analysis

To answer the hypothesis about effectivity of traditional and TGFU model over time on young student's four game performance scores (decision-making, skill execution, off the ball support and defense), I used the Game Performance Assessment Instrument (GPAI). I used a clipboard with list of names, that I could assign a score to each student in class by watching a video (Harvey, 2007).

To answer the hypothesis about effectivity of traditional and TGFU model over time on young student's game performance skills a pre-test – post-test design, based on intact groups was conducted to assess participant's skills using a Johnson's Basketball Test Battery. The three measured components included: field goal speed test, basketball passing for accuracy and dribbling.

To answer the hypothesis about effectivity of traditional and TGFU model over time on young student's level of enjoyment, I used a questionnaire based on Physical Activity Enjoyment Scale (PACES).

Initial descriptive statistics of means, standard deviation and percentages were performed. To test a normality of my study I used Shapiro-Wilk test. To test the effectivity of traditional and TGFU model over time on student's game performance and skills a mixed ANOVA for repeated measurements was conducted, across the didactic unit (from pre-test, to in between test, to post-test). To test the effectivity of traditional and TGFU model over time on student's level of enjoyment a 3x4 mixed ANOVA for repeated measurements was conducted, across the didactic unit (from in between test, to post-test). The level of significance in all the statistical analyses was accepted to be $p < 0.05$.

4. Results

4.1 Descriptive analysis

A total of 71 students were assessed for potential enrolment. All students completed all the assessments: IG n=71 aged 14.1 ± 0.9 years.

Table 1 shows the effectiveness of a traditional and TGFU model from pre-test (1) to in between programs test (2) to post-test (3).

Table 1. Effectiveness of a traditional and TGFU model from pre-test (1) to in between programs test (2) to post-test (3). All subjects, all grades.

| Variable | Mean \pm SD | Min. | Max. | St. deviation |
|----------|-------------------|-------|--------|---------------|
| DM1 | 2.01 \pm 0.79 | 1.00 | 4.00 | 0.79 |
| DM2 | 2.61 \pm 0.59 | 2.00 | 4.00 | 0.59 |
| DM3 | 3.00 \pm 0.62 | 2.00 | 4.00 | 0.62 |
| SE1 | 1.97 \pm 0.76 | 1.00 | 3.00 | 0.76 |
| SE2 | 2.64 \pm 0.71 | 1.00 | 4.00 | 0.71 |
| SE3 | 3.14 \pm 0.77 | 2.00 | 5.00 | 0.77 |
| SU1 | 1.63 \pm 0.75 | 1.00 | 4.00 | 0.75 |
| SU2 | 2.43 \pm 0.68 | 1.00 | 4.00 | 0.68 |
| SU3 | 2.87 \pm 0.80 | 2.00 | 5.00 | 0.80 |
| PS1 | 1.85 \pm 0.81 | 1.00 | 4.00 | 0.81 |
| PS2 | 2.57 \pm 0.81 | 1.00 | 4.00 | 0.81 |
| PS3 | 3.46 \pm 1.00 | 2.00 | 5.00 | 1.00 |
| T1 | 7.47 \pm 2.88 | 4.00 | 15.00 | 2.88 |
| T2 | 10.28 \pm 2.34 | 5.00 | 16.00 | 2.34 |
| T3 | 12.47 \pm 2.67 | 8.00 | 18.00 | 2.67 |
| FGT1 | 2.78 \pm 2.44 | 0.00 | 12.00 | 2.44 |
| FGT2 | 3.76 \pm 2.06 | 0.00 | 9.00 | 2.06 |
| FGT3 | 5.21 \pm 2.33 | 1.00 | 12.00 | 2.33 |
| D1 | 14.18 \pm 2.19 | 10.00 | 20.00 | 2.19 |
| D2 | 15.88 \pm 2.01 | 11.00 | 22.00 | 2.01 |
| D3 | 16.66 \pm 2.25 | 12.00 | 22.00 | 2.25 |
| P1 | 1.87 \pm 2.94 | 0.00 | 15.00 | 2.94 |
| P2 | 2.84 \pm 4.22 | 0.00 | 22.00 | 4.22 |
| P3 | 3.64 \pm 4.80 | 0.00 | 20.00 | 4.80 |
| PACES 2 | 85.52 \pm 19.44 | 27.00 | 126.00 | 19.44 |
| PACES 3 | 86.49 \pm 21.15 | 33.00 | 125.00 | 21.15 |

NOTES: DM = decision making, SE = skill execution, SU = support, PS = prevent scoring, T = total points GPAI, FGT = field goal test, D = dribble test, P = passes test, PACES = Physical Activity Enjoyment Scale

Psychomotor performance score as decision making significantly improved from 2.01 ± 0.79 to 3 ± 0.62 points ($F = 109.70, p = .001$), which means from weak performance -player rarely passes to open teammate and player rarely shoots when appropriate to moderately effective performance – player sometimes passes to open teammate and player sometimes shoots when appropriate. Figure 4 shows psychomotor performance score – decision making over time after combined technical-tactical didactic intervention. Figure 4 shows that, collapsed across three measurements, students had better decision making with combined technical-tactical didactic approach over time.

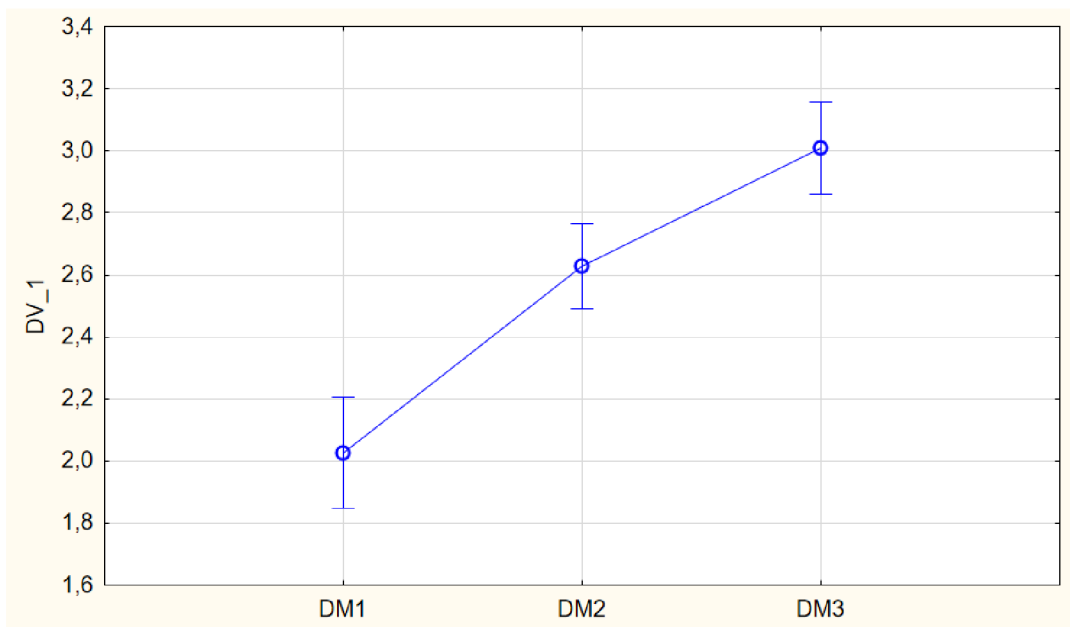


FIGURE 4. Decision making over time

NOTES: DM – decision making

Table 2 shows the validity of the decision-making test in students over time. It was found to be $R1 = 2.01$, $R2 = 2.61$ and $R3 = 3.00$ respectively.

Table 2. Validity of the decision-making test over time.

| | DM1 | DM2 | DM3 |
|-----|-------|-------|-------|
| DM1 | 1.000 | 0.001 | 0.001 |
| DM2 | | 1.000 | 0.001 |
| DM3 | | | 1.000 |

NOTES: DM – decision making

Psychomotor performance score as skill execution significantly improved from 1.97 ± 0.76 to 3.14 ± 0.77 points ($F = 179.73$, $p = .001$), which means from weak performance – when passing the ball rarely reaches the target, when receiving the player rarely controls pass and setup, when dribbling the player rarely keeps the ball below waist and is in control of the ball and when shooting the player rarely has ball above his/her head and aims at target to moderately effective performance – when passing the ball sometimes reaches the target, when receiving the player sometimes controls pass and setup, when dribbling the player sometimes keeps the ball below waist and is in control of the ball and when shooting the player sometimes has ball above his/her head and aims at target. Figure 5 shows psychomotor performance score – skill execution over time after combined technical-tactical didactic intervention. Figure 4 shows that, collapsed across three measurements, students had better skill execution with combined technical-tactical didactic approach over time.

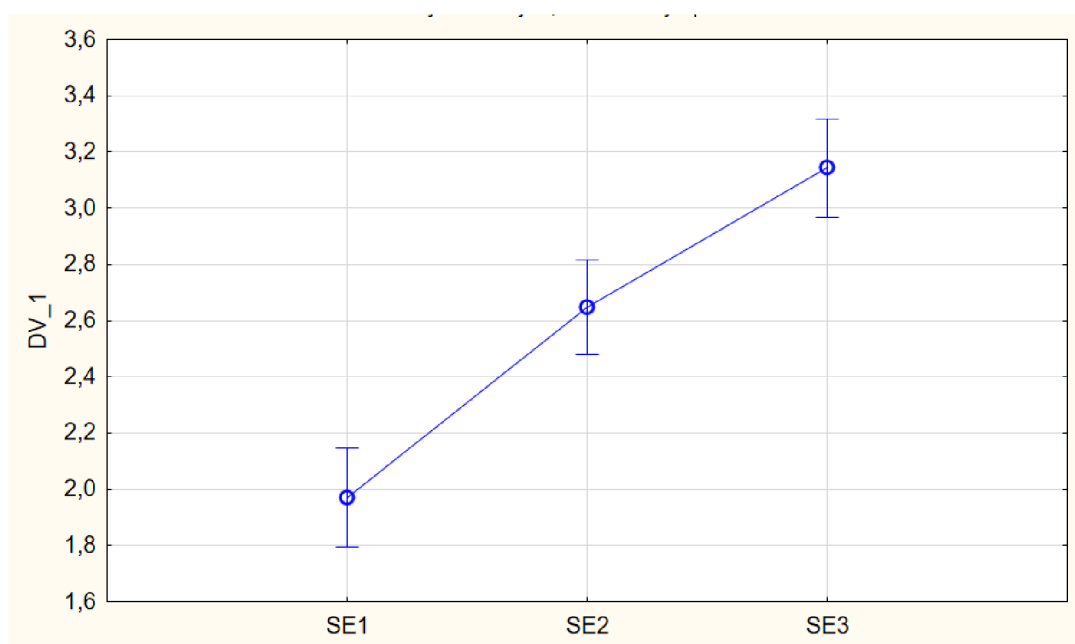


FIGURE 5. Skill execution over time

NOTES: SE – skill execution

Table 3 shows the validity of the skill execution test in students over time. It was found to be $R1 = 1.95$, $R2 = 2.64$ and $R3 = 3.12$ respectively.

Table 3. Validity of the skill execution test over time.

| | SE1 | SE2 | SE3 |
|-----|-------|-------|-------|
| SE1 | 1.000 | 0.001 | 0.001 |
| SE2 | | 1.000 | 0.001 |
| SE3 | | | 1.000 |

NOTES: SE – skill execution

Psychomotor performance score as support significantly improved from 1.63 ± 0.75 to 2.87 ± 0.80 points ($F = 190.75$, $p = .001$), which means from weak performance – player rarely or never moves to open position to get pass to moderately effective performance – player sometimes moves to open position to get pass.

Table 4 shows the validity of the player support test in students over time. It was found to be $R1 = 1.63$, $R2 = 2.43$ and $R3 = 2.87$ respectively.

Table 4. Validity of the player support test over time.

| | SU1 | SU2 | SU3 |
|-----|-------|-------|-------|
| SU1 | 1.000 | 0.001 | 0.001 |
| SU2 | | 1.000 | 0.001 |
| SU3 | | | 1.000 |

NOTES: SU - player support

Psychomotor performance score as defense – prevent scoring significantly improved from 1.85 ± 0.81 to 3.46 ± 1.00 points ($F = 212.67$, $p = .001$), which means from weak performance – player rarely or never guards opponent well (on the ball) and supports teammates on defense (off the ball) to moderately effective performance – player sometimes or usually guards opponent well (on the ball) and supports teammates on defense (off the ball).

Table 5 shows the validity of the defense test in students over time. It was found to be $R1 = 1.85$, $R2 = 2.57$ and $R3 = 3.46$ respectively.

Table 5. Validity of the defense – prevent scoring test over time.

| | PS1 | PS2 | PS3 |
|-----|-------|-------|-------|
| PS1 | 1.000 | 0.001 | 0.001 |
| PS2 | | 1.000 | 0.001 |
| PS3 | | | 1.000 |

NOTES: PS - prevent scoring

The total points from GPAI and overall performance of a player significantly improved from 7.47 ± 2.80 to 12.47 ± 2.67 ($F = 417.07$, $p = .001$), where the maximum points received can be 20.

Table 6 shows the validity of total points GPAI test in students over time. It was found to be $R_1 = 7.47$, $R_2 = 10.28$ and $R_3 = 12.47$ respectively.

Table 6. Validity of the total points GPAI test over time.

| | T1 | T2 | T3 |
|----|-------|-------|-------|
| T1 | 1.000 | 2.174 | 2.174 |
| T2 | | 1.000 | 2.174 |
| T3 | | | 1.000 |

NOTES: T - Total points GPAI

Skills performance test for shooting (number of field goals scored from underneath the basketball in 30 sec.) significantly improved from 2.78 ± 2.44 to 5.21 ± 2.33 ($F = 54.73$, $p = .001$), which means the player's ability to consistently score field goals as quickly as possible under time pressure got better.

Table 7 shows the validity of the field goal test in students over time. It was found to be $R_1 = 2.78$, $R_2 = 3.76$ and $R_3 = 5.21$ respectively.

Table 7. Validity of the field goal test over time.

| | FGT1 | FGT2 | FGT3 |
|------|-------|-------|-------|
| FGT1 | 1.000 | 0.001 | 0.001 |
| FGT2 | | 1.000 | 0.001 |
| FGT3 | | | 1.000 |

NOTES: FGT – field goal test

Skills performance test for dribbling (number of zones crossed in 30 sec.) significantly improved from 14.18 ± 2.19 to 16.66 ± 2.25 ($F = 138.64$, $p = .001$), which means the ability to control the ball and level of agility of players got better.

Table 8 shows the validity of the dribbling test in students over time. It was found to be $R_1 = 14.18$, $R_2 = 15.88$ and $R_3 = 16.66$ respectively.

Table 8. Validity of the dribbling test over time.

| | D1 | D2 | D3 |
|----|-------|-------|-------|
| D1 | 1.000 | 0.001 | 0.001 |
| D2 | | 1.000 | 0.001 |
| D3 | | | 1.000 |

NOTES: D – dribbling

Skills performance test for passing (number of points in 10 trials) significantly improved from 1.87 ± 2.94 to 3.64 ± 4.80 ($F = 13.56$, $p = .001$), which means the player's ability to consistently throw accurately at the wall as well as shoulder strength got better.

Table 9 shows the validity of the passing test in students over time. It was found to be $R1 = 1.87$, $R2 = 2.84$ and $R3 = 3.64$ respectively.

Table 9. Validity of the passing test over time.

| | | | |
|----|-------|-------|-------|
| | P1 | P2 | P3 |
| P1 | 1.000 | 0.010 | 0.001 |
| P2 | | 1.000 | 0.043 |
| P3 | | | 1.000 |

NOTES: P – passing

The subjective level of enjoyment off all subjects measured in PACES questionnaire was not significant - from 85.52 ± 19.44 points after technical method to 86.49 ± 21.15 points after TGFU (max. score was 126 points).

Table 10 shows the effectiveness of a traditional and TGFU model from pre-test (1) to in between programs test (2) to post-test (3) in females, grades 6 and 7.

Table 10. Effectiveness of a traditional and TGFU model from pre-test (1) to in between programs test (2) to post-test (3). Females, Grade 6 and 7.

| Variable | Mean \pm SD | Min. | Max. | St. deviation |
|----------|-----------------|------|-------|---------------|
| DM1 | 1.77 \pm 0.64 | 1.00 | 3.00 | 0.64 |
| DM2 | 2.50 \pm 0.51 | 2.00 | 3.00 | 0.51 |
| DM3 | 3.05 \pm 0.53 | 2.00 | 4.00 | 0.53 |
| SE1 | 1.72 \pm 0.57 | 1.00 | 3.00 | 0.57 |
| SE2 | 2.50 \pm 0.61 | 2.00 | 4.00 | 0.61 |
| SE3 | 2.94 \pm 0.72 | 2.00 | 4.00 | 0.72 |
| SU1 | 1.33 \pm 0.48 | 1.00 | 2.00 | 0.48 |
| SU2 | 2.38 \pm 0.60 | 1.00 | 3.00 | 0.60 |
| SU3 | 2.72 \pm 0.57 | 2.00 | 4.00 | 0.57 |
| PS1 | 1.44 \pm 0.70 | 1.00 | 3.00 | 0.70 |
| PS2 | 2.22 \pm 0.80 | 1.00 | 3.00 | 0.80 |
| PS3 | 3.11 \pm 0.83 | 2.00 | 4.00 | 0.83 |
| T1 | 6.27 \pm 2.13 | 4.00 | 11.00 | 2.13 |

| | | | | |
|---------|-------------|-------|--------|-------|
| T2 | 9.61±2.00 | 6.00 | 13.00 | 2.00 |
| T3 | 11.83±2.12 | 9.00 | 15.00 | 2.12 |
| FGT1 | 2.05±1.92 | 0.00 | 6.00 | 1.92 |
| FGT2 | 2.83±1.42 | 1.00 | 6.00 | 1.42 |
| FGT3 | 4.44±1.24 | 2.00 | 7.00 | 1.24 |
| D1 | 12.83±1.54 | 11.00 | 17.00 | 1.54 |
| D2 | 15.22±1.39 | 11.00 | 17.00 | 1.39 |
| D3 | 15.27±1.48 | 12.00 | 18.00 | 1.48 |
| P1 | 0.66±1.02 | 0.00 | 3.00 | 1.02 |
| P2 | 1.66±2.35 | 0.00 | 6.00 | 2.35 |
| P3 | 2.66±3.10 | 0.00 | 9.00 | 3.10 |
| PACES 2 | 82.77±13.72 | 49.00 | 108.00 | 13.72 |
| PACES 3 | 97.38±12.06 | 80.00 | 117.00 | 12.06 |

NOTES: DM = decision making, SE = skill execution, SU = support, PS = prevent scoring, T = total points GPAI, FGT = field goal test, D = dribble test, P = passes test, PACES = Physical Activity Enjoyment Scale

Psychomotor performance score as decision making significantly improved from 1.77 ± 0.64 to 3.05 ± 0.53 ($F = 109.70$, $p=.001$), points which means from very weak performance – player rarely or never passes to open teammate and player rarely or never shoots when appropriate to moderately effective performance – player sometimes passes to open teammate and player sometimes shoots when appropriate.

Psychomotor performance score as skill execution significantly improved from 1.72 ± 0.57 to 2.94 ± 0.72 points ($F = 179.73$, $p=.001$), which means from very weak performance – when passing the ball rarely or never reaches the target, when receiving the player rarely or never controls pass and setup, when dribbling the player rarely or never keeps the ball below waist and is in control of the ball and when shooting the player rarely or never has ball above his/her head and aims at target to moderately effective performance – when passing the ball sometimes reaches the target, when receiving the player sometimes controls pass and setup, when dribbling the player sometimes keeps the ball below waist and is in control of the ball and when shooting the player sometimes has ball above his/her head and aims at target.

Psychomotor performance score as support significantly improved from 1.33 ± 0.48 to 2.72 ± 0.57 points ($F = 190.75$, $p=.001$), which means from very weak performance – player never moves to open position to get pass to moderately effective performance – player sometimes moves to open position to get pass.

Psychomotor performance score as defense – prevent scoring significantly improved from 1.44 ± 0.70 to 3.11 ± 0.83 points ($F = 212.67$, $p=.001$), which means from very weak performance – player never guards opponent well (on the ball) and supports teammates on

defense (off the ball) to moderately effective performance – player sometimes guards opponent well (on the ball) and supports teammates on defense (off the ball).

The total points from GPAI and overall performance of a player significantly improved from 6.27 ± 2.13 to 11.83 ± 2.12 , ($F = 417.07$, $p = .001$), where the maximum points received can be 20.

Skills performance test for shooting (number of field goals scored from underneath the basketball in 30 sec.) significantly improved from 2.05 ± 1.92 to 4.44 ± 1.24 , ($F = 54.73$, $p = .001$), which means the player’s ability to consistently score field goals as quickly as possible under time pressure got better.

Skills performance test for dribbling (number of zones crossed in 30 sec.) significantly improved from 12.83 ± 1.54 to 15.27 ± 1.48 , ($F = 138.64$, $p = .001$), which means the ability to control the ball and level of agility of players got better.

Skills performance test for passing (number of points in 10 trials) significantly improved from 0.66 ± 1.02 to 2.66 ± 3.10 , ($F = 13.56$, $p = .001$), which means the player’s ability to consistently throw accurately at the wall as well as shoulder strength got better.

The subjective level of enjoyment off all female players in grades 6-7 measured in PACES questionnaire significantly improved from 82.77 ± 13.72 points after technical method to 97.38 ± 12.06 points after TGFU (max. score was 126 points), ($F = 6.61$, $p = .01$), which means that group enjoyed basketball the best, especially the TGFU part and felt as though there is nothing else, they would rather be doing.

Table 11 shows the effectiveness of a traditional and TGFU model from pre-test (1) to in between programs test (2) to post-test (3) in males, grades 6 and 7.

Table 11. Effectiveness of a traditional and TGFU model from pre-test (1) to in between programs test (2) to post-test (3). Males, Grade 6 and 7.

| Variable | Mean±SD | Min. | Max. | St. deviation |
|----------|-----------|------|------|---------------|
| DM1 | 1.68±0.74 | 1.00 | 3.00 | 0.74 |
| DM2 | 2.42±0.50 | 2.00 | 3.00 | 0.50 |
| DM3 | 2.73±0.65 | 2.00 | 4.00 | 0.65 |
| SE1 | 1.73±0.87 | 1.00 | 3.00 | 0.87 |
| SE2 | 2.52±0.69 | 2.00 | 4.00 | 0.69 |
| SE3 | 2.78±0.78 | 2.00 | 4.00 | 0.78 |

| | | | | |
|---------|-------------|-------|--------|-------|
| SU1 | 1.57±0.76 | 1.00 | 3.00 | 0.76 |
| SU2 | 2.31±0.67 | 1.00 | 3.00 | 0.67 |
| SU3 | 2.63±0.76 | 2.00 | 4.00 | 0.76 |
| PS1 | 1.68±0.82 | 1.00 | 3.00 | 0.82 |
| PS2 | 2.47±0.77 | 1.00 | 4.00 | 0.77 |
| PS3 | 3.05±0.84 | 2.00 | 5.00 | 0.84 |
| T1 | 6.68±2.86 | 4.00 | 12.00 | 2.86 |
| T2 | 9.73±2.30 | 6.00 | 13.00 | 2.30 |
| T3 | 11.21±2.48 | 8.00 | 15.00 | 2.48 |
| FGT1 | 2.84±2.47 | 0.00 | 8.00 | 2.47 |
| FGT2 | 3.52±1.98 | 2.00 | 9.00 | 1.98 |
| FGT3 | 4.78±3.04 | 1.00 | 12.00 | 3.04 |
| D1 | 13.78±2.12 | 10.00 | 18.00 | 2.12 |
| D2 | 15.42±2.16 | 11.00 | 18.00 | 2.16 |
| D3 | 16.31±2.51 | 12.00 | 20.00 | 2.51 |
| P1 | 1.36±2.38 | 0.00 | 7.00 | 2.38 |
| P2 | 2.63±3.51 | 0.00 | 10.00 | 3.51 |
| P3 | 3.63±4.21 | 0.00 | 13.00 | 4.21 |
| PACES 2 | 88.57±19.13 | 61.00 | 126.00 | 19.13 |
| PACES 3 | 81.15±25.98 | 33.00 | 125.00 | 25.98 |

NOTES: DM = decision making, SE = skill execution, SU = support, PS = prevent scoring, T = total points GPAI, FGT = field goal test, D = dribble test, P = passes test, PACES = Physical Activity Enjoyment Scale

Psychomotor performance score as decision making significantly improved from 1.68±0.74 to 2.73±0.65 points ($F = 109.70$, $p=.001$), which means from weak performance – player rarely or never passes to open teammate and player rarely or never shoots when appropriate to moderately effective performance – player sometimes passes to open teammate and player sometimes shoots when appropriate.

Psychomotor performance score as skill execution significantly improved from 1.73±0.87 to 2.78±0.78 points ($F = 179.73$, $p=.001$), which means from very weak performance – when passing the ball rarely or never reaches the target, when receiving the player rarely or never controls pass and setup, when dribbling the player rarely or never keeps the ball below waist and is in control of the ball and when shooting the player rarely or never has ball above his/her head and aims at target to moderately effective performance – when passing the ball sometimes reaches the target, when receiving the player sometimes controls pass and setup, when dribbling the player sometimes keeps the ball below waist and is in control of the ball and when shooting the player sometimes has ball above his/her head and aims at target.

Psychomotor performance score as support significantly improved from 1.57±0.76 to 2.63±0.76 points ($F = 190.75$, $p=.001$), which means from very weak performance – player

rarely or never moves to open position to get pass to moderately effective performance – player sometimes moves to open position to get pass.

Psychomotor performance score as defense – prevent scoring significantly improved from 1.68 ± 0.82 to 3.05 ± 0.84 points ($F = 212.67$, $p = .001$), which means from very weak performance – player rarely or never guards opponent well (on the ball) and supports teammates on defense (off the ball) to moderately effective performance – player sometimes guards opponent well (on the ball) and supports teammates on defense (off the ball).

The total points from GPAI and overall performance of a player significantly improved from 6.68 ± 2.86 to 11.21 ± 2.48 , ($F = 417.07$, $p = .001$), where the maximum points received can be 20.

Skills performance test for shooting (number of field goals scored from underneath the basketball in 30 sec.) significantly improved from 2.84 ± 2.47 to 4.78 ± 3.04 , ($F = 54.73$, $p = .001$), which means the player's ability to consistently score field goals as quickly as possible under time pressure got better.

Skills performance test for dribbling (number of zones crossed in 30 sec.) significantly improved from 13.78 ± 2.12 to 16.31 ± 2.51 , ($F = 138.64$, $p = .001$), which means the ability to control the ball and level of agility of players got better.

Skills performance test for passing (number of points in 10 trials) significantly improved from 1.36 ± 2.38 to 3.63 ± 4.21 , ($F = 13.56$, $p = .001$), which means the player's ability to consistently throw accurately at the wall as well as shoulder strength got better.

The subjective level of enjoyment of all male players in grades 6-7 measured in PACES questionnaire was not significant - from 88.57 ± 19.13 points after technical method to 81.15 ± 25.98 points after TGFU (max. score was 126 points), which means that this group enjoyed basketball less with time and felt as they would rather be doing something else. However, with 18 questions 7 points each this is very negligible number and still shows me that the level of enjoyment was very high and or comparable to post technical method of teaching.

Table 12 shows the effectiveness of a traditional and TGFU model from pre-test (1) to in between programs test (2) to post-test (3) in females, grades 8 and 9.

Table 12. Effectiveness of a traditional and TGFU model from pre-test (1) to in between programs test (2) to post-test (3). Females, Grade 8 and 9.

| Variable | Mean±SD | Min. | Max. | St. deviation |
|----------|-------------|-------|--------|---------------|
| DM1 | 2.47±0.71 | 1.00 | 3.00 | 0.71 |
| DM2 | 2.94±0.65 | 2.00 | 4.00 | 0.65 |
| DM3 | 3.17±0.63 | 2.00 | 4.00 | 0.63 |
| SE1 | 2.65±0.60 | 1.00 | 3.00 | 0.60 |
| SE2 | 3.00±0.79 | 2.00 | 4.00 | 0.79 |
| SE3 | 3.58±0.71 | 2.00 | 5.00 | 0.71 |
| SU1 | 1.64±0.70 | 1.00 | 3.00 | 0.70 |
| SU2 | 2.47±0.62 | 2.00 | 4.00 | 0.62 |
| SU3 | 2.94±0.82 | 2.00 | 5.00 | 0.82 |
| PS1 | 2.17±0.72 | 1.00 | 3.00 | 0.72 |
| PS2 | 2.70±0.68 | 2.00 | 4.00 | 0.68 |
| PS3 | 3.58±1.12 | 2.00 | 5.00 | 1.12 |
| T1 | 8.64±2.34 | 5.00 | 12.00 | 2.34 |
| T2 | 11.11±2.08 | 8.00 | 15.00 | 2.08 |
| T3 | 13.29±2.71 | 8.00 | 18.00 | 2.71 |
| FGT1 | 2.94±1.98 | 0.00 | 7.00 | 1.98 |
| FGT2 | 4.52±2.00 | 1.00 | 8.00 | 2.00 |
| FGT3 | 5.41±1.90 | 3.00 | 9.00 | 1.90 |
| D1 | 15.05±1.67 | 12.00 | 18.00 | 1.67 |
| D2 | 16.35±1.57 | 13.00 | 19.00 | 1.57 |
| D3 | 17.82±1.59 | 14.00 | 21.00 | 1.59 |
| P1 | 2.05±2.65 | 0.00 | 7.00 | 2.65 |
| P2 | 2.11±3.33 | 0.00 | 10.00 | 3.33 |
| P3 | 3.05±4.23 | 0.00 | 12.00 | 4.23 |
| PACES 2 | 85.00±25.93 | 27.00 | 113.00 | 25.93 |
| PACES 3 | 83.47±20.62 | 40.00 | 114.00 | 20.62 |

NOTES: DM = decision making, SE = skill execution, SU = support, PS = prevent scoring, T = total points GPAI, FGT = field goal test, D = dribble test, P = passes test, PACES = Physical Activity Enjoyment Scale

Psychomotor performance score as decision making significantly improved from 2.47±0.71 to 3.17±0.63 points ($F = 109.70$, $p=.001$), which means from weak performance – player rarely passes to open teammate and player rarely shoots when appropriate to moderately effective performance – player sometimes passes to open teammate and player sometimes shoots when appropriate.

Psychomotor performance score as skill execution significantly improved from 2.35±0.60 to 3.58±0.71 points ($F = 179.73$, $p=.001$), which means from weak performance – when passing the ball rarely reaches the target, when receiving the player rarely controls pass and setup, when dribbling the player rarely keeps the ball below waist and is in control of the ball and when

shooting the player rarely has ball above his/her head and aims at target to moderately effective performance – when passing the ball sometimes and usually reaches the target, when receiving the player sometimes and usually controls pass and setup, when dribbling the player sometimes and usually keeps the ball below waist and is in control of the ball and when shooting the player sometimes and usually has ball above his/her head and aims at target.

Psychomotor performance score as support significantly improved from 1.64 ± 0.70 to 2.94 ± 0.82 points ($F = 190.75$, $p = .001$), which means from very weak performance – player rarely or never moves to open position to get pass to moderately effective performance – player sometimes moves to open position to get pass.

Psychomotor performance score as defense – prevent scoring significantly improved from 2.17 ± 0.72 to 3.58 ± 1.12 points ($F = 212.67$, $p = .001$), which means from weak performance – player rarely guards opponent well (on the ball) and supports teammates on defense (off the ball) to moderately effective performance – player sometimes and usually guards opponent well (on the ball) and supports teammates on defense (off the ball).

The total points from GPAI and overall performance of a player significantly improved from 8.64 ± 2.34 to 13.29 ± 2.71 , ($F = 417.07$, $p = .001$), where the maximum points received can be 20.

Skills performance test for shooting (number of field goals scored from underneath the basketball in 30 sec.) significantly improved from 2.94 ± 1.98 to 5.41 ± 1.90 , ($F = 54.73$, $p = .001$), which means the player's ability to consistently score field goals as quickly as possible under time pressure got better.

Skills performance test for dribbling (number of zones crossed in 30 sec.) significantly improved from 15.05 ± 1.67 to 17.82 ± 1.59 , ($F = 138.64$, $p = .001$), which means the ability to control the ball and level of agility of players got better.

Skills performance test for passing (number of points in 10 trials) significantly improved from 2.05 ± 2.65 to 3.05 ± 4.23 , ($F = 13.56$, $p = .001$), which means the player's ability to consistently throw accurately at the wall as well as shoulder strength got better.

The subjective level of enjoyment of all female players in grades 8-9 measured in PACES questionnaire was not significant - from 85.00 ± 25.93 points after technical method to 83.47 ± 20.62 points after TGFU (max. score was 126 points), which means that this group enjoyed basketball less with time and felt as they would rather be doing something else. However, with 18 questions 7 points each this is very negligible number and still shows me that the level of enjoyment was very high and or comparable to post technical method of teaching.

Table 13 shows the effectiveness of a traditional and TGFU model from pre-test (1) to in between programs test (2) to post-test (3) in males, grades 8 and 9.

Table 13. Effectiveness of a traditional and TGFU model from pre-test (1) to in between programs test (2) to post-test (3). Males, Grade 8 and 9.

| Variable | Mean±SD | Min. | Max. | St. deviation |
|----------|-------------|-------|--------|---------------|
| DM1 | 2.17±0.88 | 1.00 | 4.00 | 0.88 |
| DM2 | 2.64±0.60 | 2.00 | 4.00 | 0.60 |
| DM3 | 3.05±0.65 | 2.00 | 4.00 | 0.65 |
| SE1 | 2.11±0.85 | 1.00 | 3.00 | 0.85 |
| SE2 | 2.56±0.72 | 1.00 | 4.00 | 0.72 |
| SE3 | 3.29±0.68 | 2.00 | 4.00 | 0.68 |
| SU1 | 2.00±0.93 | 1.00 | 4.00 | 0.93 |
| SU2 | 2.58±0.87 | 1.00 | 4.00 | 0.87 |
| SU3 | 3.23±0.97 | 2.00 | 5.00 | 0.97 |
| PS1 | 2.17±0.80 | 1.00 | 4.00 | 0.80 |
| PS2 | 2.94±0.89 | 1.00 | 4.00 | 0.89 |
| PS3 | 4.17±0.88 | 2.00 | 5.00 | 0.88 |
| T1 | 8.47±3.22 | 4.00 | 15.00 | 3.22 |
| T2 | 10.76±2.81 | 5.00 | 16.00 | 2.81 |
| T3 | 13.76±2.79 | 8.00 | 18.00 | 2.79 |
| FGT1 | 3.35±3.27 | 0.00 | 12.00 | 3.27 |
| FGT2 | 4.23±2.53 | 0.00 | 9.00 | 2.53 |
| FGT3 | 6.29±2.51 | 3.00 | 11.00 | 2.51 |
| D1 | 15.17±2.60 | 11.00 | 20.00 | 2.60 |
| D2 | 16.64±2.54 | 13.00 | 22.00 | 2.54 |
| D3 | 17.35±2.49 | 12.00 | 22.00 | 2.49 |
| P1 | 3.52±4.37 | 0.00 | 15.00 | 4.37 |
| P2 | 5.05±6.38 | 0.00 | 22.00 | 6.38 |
| P3 | 5.29±7.06 | 0.00 | 20.00 | 7.06 |
| PACES 2 | 85.52±19.31 | 54.00 | 123.00 | 19.31 |
| PACES 3 | 83.94±21.49 | 34.00 | 120.00 | 21.49 |

NOTES: DM = decision making, SE = skill execution, SU = support, PS = prevent scoring, T = total points GPAI, FGT = field goal test, D = dribble test, P = passes test, PACES = Physical Activity Enjoyment Scale

Psychomotor performance score as decision making significantly improved from 2.17±0.88 to 3.05±0.65 points ($F = 109.70$, $p=.001$), which means from weak performance – player rarely passes to open teammate and player rarely shoots when appropriate to moderately

effective performance – player sometimes passes to open teammate and player sometimes shoots when appropriate.

Psychomotor performance score as skill execution significantly improved from 2.11 ± 0.85 to 3.29 ± 0.68 points ($F = 179.73$, $p = .001$), which means from weak performance – when passing the ball rarely reaches the target, when receiving the player rarely controls pass and setup, when dribbling the player rarely keeps the ball below waist and is in control of the ball and when shooting the player rarely has ball above his/her head and aims at target to moderately effective performance – when passing the ball sometimes and usually reaches the target, when receiving the player sometimes and usually controls pass and setup, when dribbling the player sometimes and usually keeps the ball below waist and is in control of the ball and when shooting the player sometimes and usually has ball above his/her head and aims at target.

Psychomotor performance score as support significantly improved from 2 ± 0.68 to 3.23 ± 0.97 points ($F = 190.75$, $p = .001$), which means from weak performance – player rarely moves to open position to get pass to moderately effective performance – player sometimes moves to open position to get pass.

Psychomotor performance score as defense – prevent scoring significantly improved from 2.17 ± 0.80 to 4.17 ± 0.88 points ($F = 212.67$, $p = .001$), which means from weak performance – player rarely guards opponent well (on the ball) and supports teammates on defense (off the ball) to effective performance – player usually guards opponent well (on the ball) and supports teammates on defense (off the ball).

The total points from GPAI and overall performance of a player significantly improved from 8.47 ± 3.22 to 13.76 ± 2.79 , ($F = 417.07$, $p = .001$), where the maximum points received can be 20.

Skills performance test for shooting (number of field goals scored from underneath the basketball in 30 sec.) significantly improved from 3.35 ± 3.27 to 6.29 ± 2.51 , ($F = 54.73$, $p = .001$), which means the player's ability to consistently score field goals as quickly as possible under time pressure got better.

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The subjective level of enjoyment off all male players in grades 8-9 measured in PACES questionnaire was not significant - from 85.52 ± 19.31 points after technical method to 83.94 ± 21.49 points after TGFU (max. score was 126 points), which means that this group enjoyed basketball less with time and felt as they would rather be doing something else. However, with 18 questions 7 points each this is very negligible number and still shows me that the level of enjoyment was very high and or comparable to post technical method of teaching.

4.2 Influence of time and grade on results

Figure 6 shows psychomotor performance score – decision making over time after combined technical-tactical didactic intervention. Figure 6 shows that, collapsed across three measurements, 6th and 7th grade students had better decision making with combined technical-tactical didactic approach over time than 8th and 9th graders.

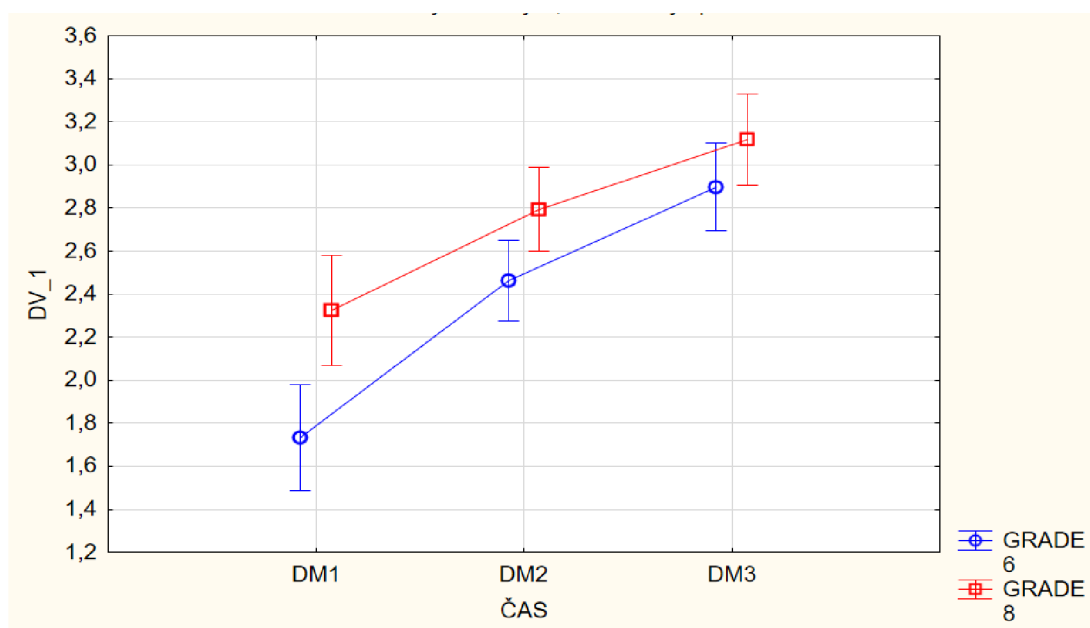


FIGURE 6. Decision making over time and between grades

NOTES: DM – decision making

Figure 7 shows psychomotor performance score – total points GPAI over time after combined technical-tactical didactic intervention. Figure 7 shows that, collapsed across three measurements, 6th and 7th grade students had better total points GPAI with combined technical-tactical didactic approach over time than 8th and 9th graders.

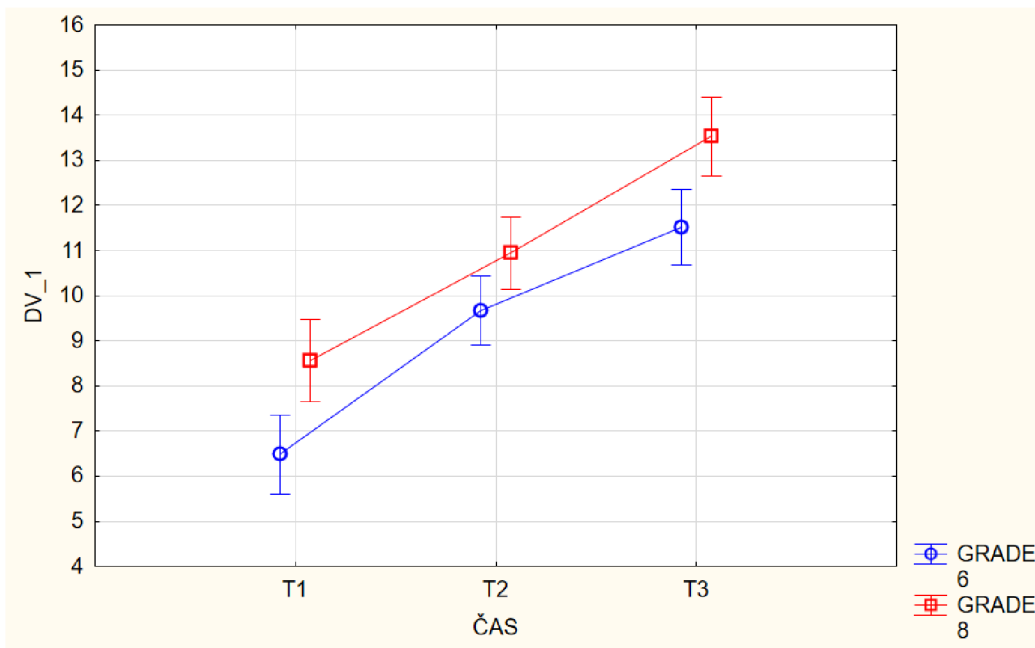


FIGURE 7. Total points GPAI over time and between grades

NOTES: T – Total points GPAI

4.3 Influence of time and sex on results

Figure 8 shows psychomotor performance score – PACES scores over time after combined technical-tactical didactic intervention. Figure 8 shows that, collapsed across two measurements, female students had better PACES scores with combined technical-tactical didactic approach over time than man.

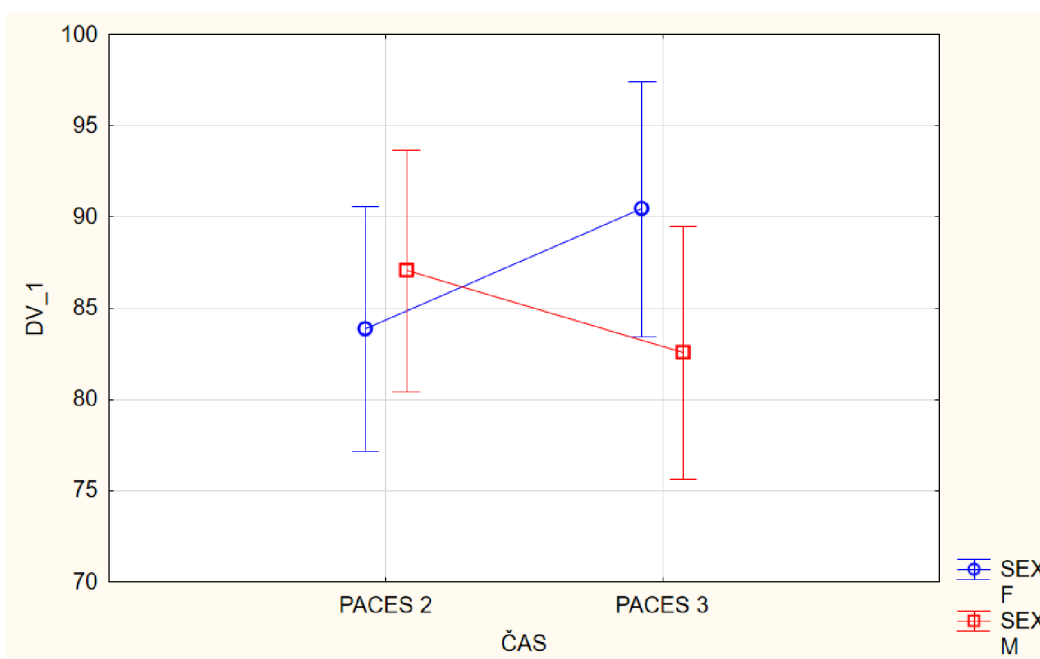


FIGURE 8. PACES over time and in between the sexes

NOTES: PACES – physical activity enjoyment scale

4.4 Influence of time, sex, and grade on results

Figure 9 shows psychomotor performance score – defense over time after combined technical-tactical didactic intervention. Figure 9 shows that, collapsed across three measurements, 8th and 9th grade male students had better defense with combined technical-tactical didactic approach over time 8th and 9th grade female students and both 6th and 7th grade groups. Additionally, 6th and 7th grade female students had higher defense scores after combined technical-tactical didactic approach over time than 6th and 7th grade male students and 8th and 9th grade female students.

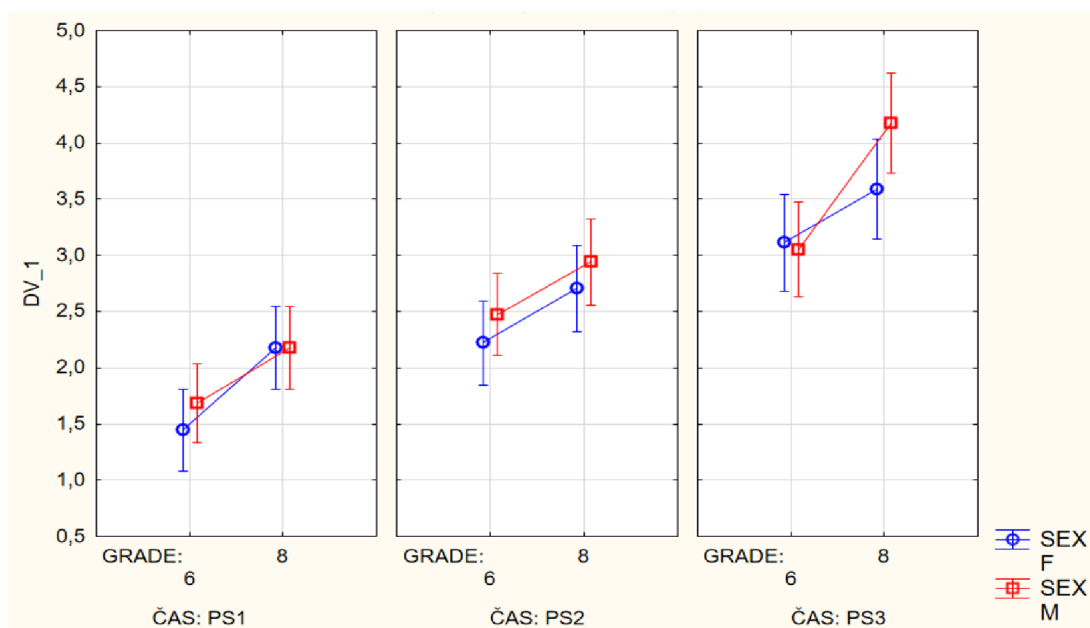


FIGURE 9. Defense – prevent scoring test over time and in between the sexes and grades

NOTES: PS – prevent scoring

Figure 10 shows psychomotor performance score – total points GPAI over time after combined technical-tactical didactic intervention. Figure 10 shows that, collapsed across three measurements, 6th and 7th grade female students had better total points GPAI with combined technical-tactical didactic approach over time than 6th and 7th grade male students and both 8th

and 9th grade groups. Additionally, 8th and 9th grade male students had higher GPAI total points scores with combined technical-tactical didactic approach over time than 8th and 9th grade female students and 6th and 7th grade male students.

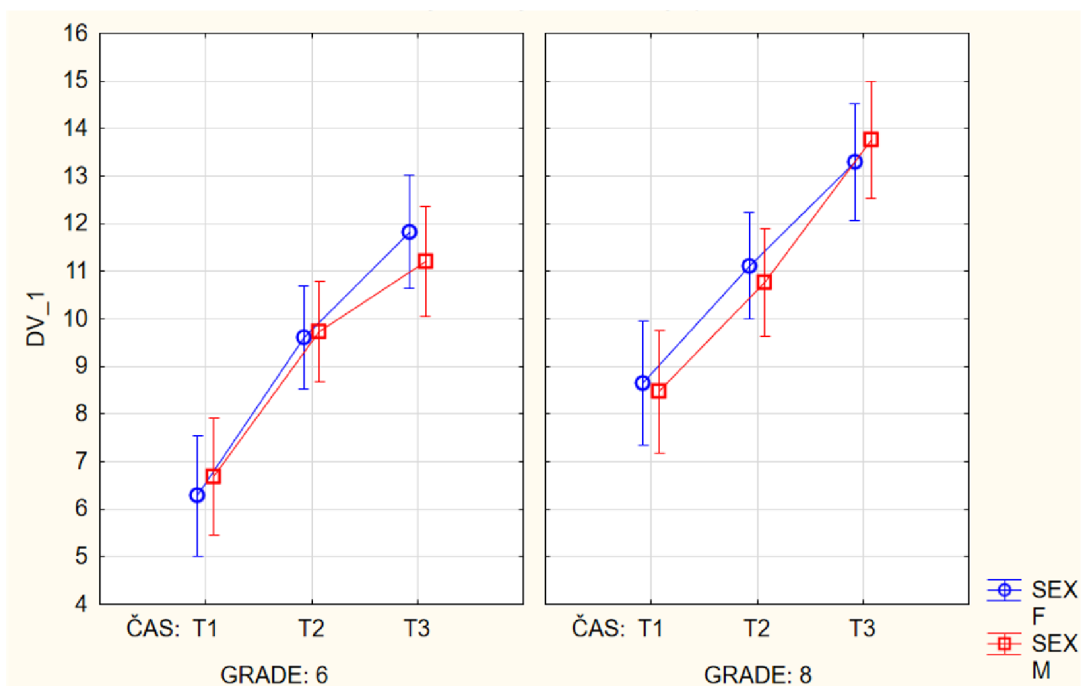


FIGURE 10. Total points GPAI test over time and in between the sexes and grades

NOTES: T – Total points GPAI

Figure 11 shows psychomotor performance score – dribbling over time after combined technical-tactical didactic intervention. Figure 11 shows that, collapsed across three measurements, 6th and 7th grade male students had better dribble with combined technical-tactical didactic approach over time than 6th and 7th grade female students and 8th and 9th grade male group. Additionally, 8th and 9th grade female students had the highest dribbling scores after combined technical-tactical didactic approach over time than 8th and 9th grade male students and both 6th and 7th grade groups.

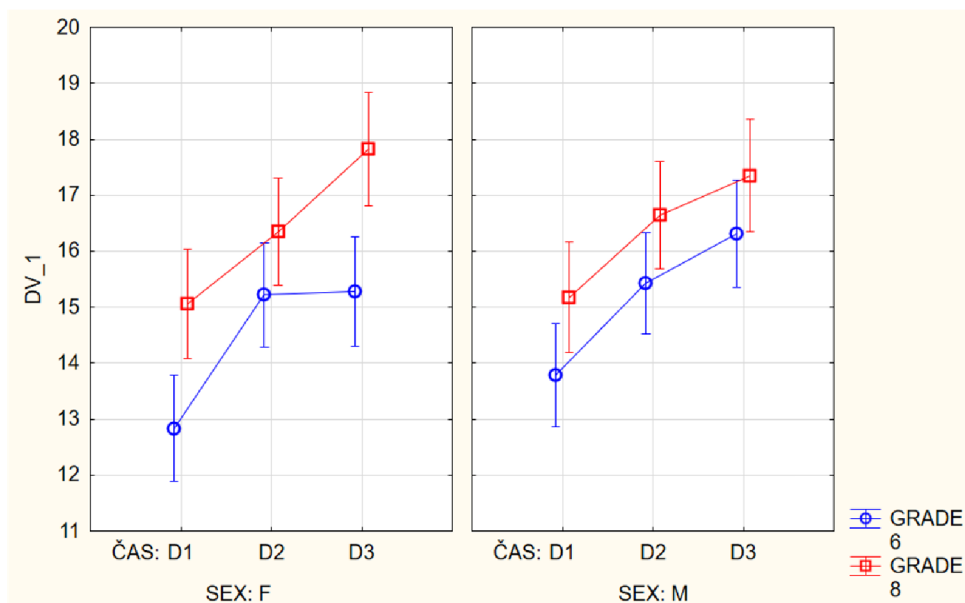


FIGURE 11. Dribbling test over time and in between the sexes and grades

NOTES: D – dribbling

Figure 12 shows psychomotor performance score – PACES scores over time after combined technical-tactical didactic intervention. Figure 12 shows that, collapsed across two measurements, 6th and 7th grade female students had better PACES scores with combined technical-tactical didactic approach over time than females in grades 8-9 and males grades 6-9.

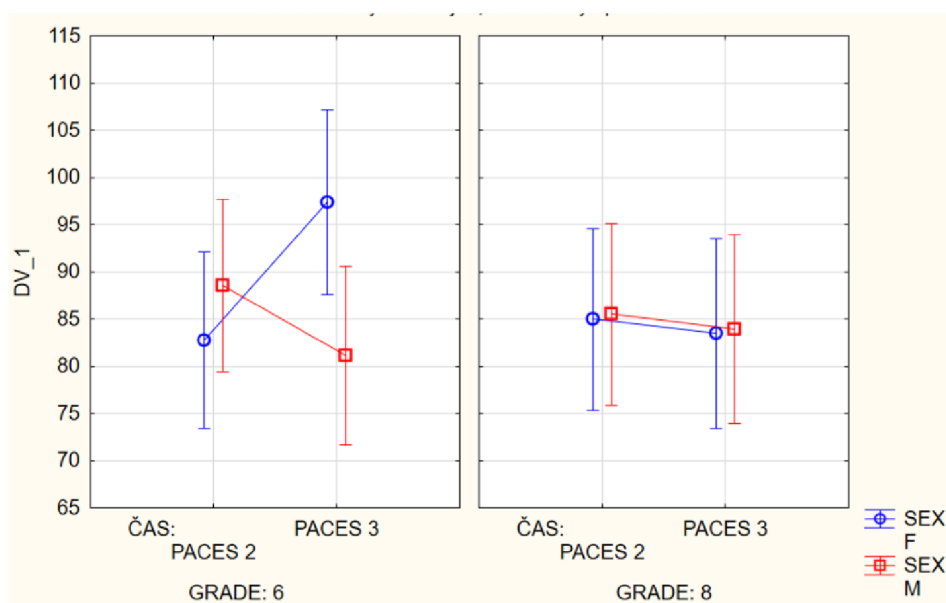


FIGURE 12. PACES test over time and in between the sexes and grades

NOTES: PACES – physical activity enjoyment scale

Discussion

This study showed that both pedagogical approaches increase the learning on the ball skills (skill execution, decision making) and off the ball skills (player support, defense) over 16 didactic units of invasion game of basketball. According to the pre-technical and post – tactical tests result of the study groups, statistically significant differences were found for all game performance skills: decision making, skill execution, player support, defense ($p < .001$). There was a difference over time on all game performance skills across all groups. 6th and 7th grade students improved more in decision making and had higher overall game performance than 8th and 9th graders. However, 8th and 9th graders had higher overall game performance scores after TGfU didactic unit. 8th and 9th grade male students had higher increase in defense scores and overall game performance than 8th and 9th grade female students and 6th and 7th grade female students had higher defense scores and overall game performance than 6th and 7th grade male students.

Both pedagogical approaches provide increase in psychomotor skills: dribbling, passing, and shooting, ($p < .001$) over time. Additionally, we found that 6th and 7th grade male students had higher increase in dribbling scores over time than 6th and 7th grade female students and 8th and 9th grade female students had the highest dribbling scores than 8th and 9th grade male students.

In the finding for the cognitive field (another dimension of the study), PACES questionnaire was administered to determine the student's level of enjoyment. We found out that overall, female students had higher enjoyment level over time than men ($p < .01$). Additionally, 6th and 7th grade female students enjoyed the game of basketball more over time than the rest three groups, ($p < .001$).

When comparing both pedagogical approaches no differences were found for the decision making, skill execution, player support, overall game performance, dribbling and passing tests in all groups, all subjects. On the other hand, students had better defense scores – supporting teammates on defense – off the ball, guarding opponent well – on the ball, (mean 0.17 ± 0.87 points) and shooting scores (mean= 0.47 ± 2.27 points) with tactical games approach than those with technique – oriented approach. This finding is very different than with a study by González-Espinosa et al. (2021), where students in technical method improved significantly in on and off the ball defense than in tactical games units. Additionally, 8th and 9th grade male students had slightly higher scores on skill execution (mean= 0.28 ± 0.75 points), player support (mean 0.07 ± 0.92 points), defense (mean 0.46 ± 0.85 points) and had better overall performance

(mean 0.71 ± 2.94 points) after TGfU units. Study by Psotta and Martin (2011), also came into the conclusion that no significant difference was found in the variables of decision making and skill execution between tactical and technical approach, suggesting that „*the significant enhancement of decision-making skill and skill execution found was not contributed from the potential effect of the initial lower level of both students 'groups in a given variable*“ (Psotta & Martin, 2011). Previous studies also provided mixed or controversial results like mine, that tactical method did not demonstrate significant benefits in the game performance and psychomotor skills compared to technical method (Harrison, Blakemore, Richards, Oliver, Wilkinson, & Fellingham, 2004; French, Werner, Taylor, Hussey, & Jones, 1996; Turner & Martinek, 1995). The technical approach showed similar improvement of decision making, skill execution, player support, defense, and overall game performance in a match as a tactical model (Harrison, Blakemore, Richards, Oliver, Wilkinson, & Fellingham, 2004; Harrison, Preece, Blakemore, Richards, Wilkinson, & Fellingham, 1999).

A similar increase in all the variables could have possible explanation. First 8 training blocks with 15 minutes of tactical game of basketball at the end of each technical unit could be sufficient length to effect a positive change in game performance in any match in a physically active young adolescent. Other intervention studies suggest that minimum amount of seven 30-45 min lessons involving tactics and technique could significantly increase decision making performance, thus skill execution and other game variables (Nevett, Rovegno, Babiarz, & McCaughtry, 2001; Turner & Martinek 1992, 1995). Secondly, the similar increase in both pedagogical methods in all game variables could be contributed to by implicit learning (nonepisodic learning of complex information in an incidental manner, without awareness of what has been learned, (Seger, (1994). Provided with the same end of the teaching unit game time and matches without teacher's verbal instructions with the same mean game time yield stimuli for implicit learning tactics in both methods (Harrison, Blakemore, Richards, Oliver, Wilkinson, & Fellingham, 2004; Turner & Martinek, 1995). When given enough time and training frequency, the technical instructional blocks can provide an important environment for effective game performance (Psotta & Martin, 2011).

Overall, collapsed across three-time units, students had better game performance scores and had higher scores on psychomotor skills with combined pedagogical approaches. This has significant implication to the teaching, learning, and assessing of invasion games in school settings, since “*tactical decision making, and response selection is critical for invasion games performance*” (Harvey & Jarret, 2014). Other studies also showed that students improve with different, combined, defined sports teaching programs (Gamero et. al, In press). Gouveia et al.

(2019, p.968) suggested that *“tactical games pedagogical approach may help students to transfer learning from one game to another, because they are tactically similar, even though requiring different skills”* and also students *“quickly understand what to do to play any invasion game successfully”*. Combining both methods by teachers in schools could expand and deepen their content goals within a tactical problem in any invasion games.

I can point out strengths of my study. It was conducted in a real, educational context, with intact groups. All four groups were under my supervision and with 13 years as a basketball elite player and 8 years of coaching youth I am considered to be an experienced coach/teacher. Finally, as with Gouveia et al. (2019, p. 968) study, *“this study supports the positive effect of one instructional didactic unit, that considers similar tactical problems across different invasion games, on the learning process”*.

There are also limitations of my study. It is hard to make claims about the learning process after only 8-week program. There was no control group for me to compare the two teaching programs simultaneously due to the lack of time in between classes for the preparation of two different class units. The lack of experienced teachers for GPAI assessment for comparison with my results – could introduce bias. We have limitations due to equipment and space (only 2 basketball boards, it is not always feasible to play 3 on 3 basketball with 20 or more students in a class and keep everyone organized). Lastly, a lot of students were missing randomly in teaching units so not all students completed all 16 teaching classes, they were later assessed in a match without certain knowledge and were in disadvantage to those students that were present in all classes.

Further research is needed to verify the results, especially comparison of the two methods presented in this study, in between sexes and grades. An extension to this study might be actuate the model into different sport and compare results.

Conclusions

Hopper, T., (2002, p. 48) wrote „*teaching skills is essential for students to be better game players, teaching tactical understanding is essential to allow students to understand how to use the skills they are acquiring and why they need these skills to play a game* “. This study showed that the combined technical – tactical instructional model for basketball with an emphasized orientation to technical and tactical skills respectively, can result in the significant improvement in game performance variables (decision-making, skill execution, off the ball support and defense), game performance skills (dribbling, passing, and shooting) and enjoyment level in secondary school students. This study also suggested that to improve game performance variables and game performance skills both pedagogical approaches must be implemented into the curriculum.

Physical education and playing games are often considered to have no education value and I feel as though society in general, devalues the importance of physical education. I strongly disagree with those statements. Playing basketball teaches teamwork, discipline, following the rules and discipline. The game enables students to be active and have good cardiorespiratory fitness (Febrianta, Y., 2017, p. 319). As Werner, et al. (1996) has commented “*the primary purpose of teaching any game should be to improve students’ game performance and to improve their enjoyment and participation in games, which might lead to healthy lifestyle*”. The common viewing of the videos in class teaches comradery, allowed players to recognize their strengths and weaknesses, and establish their practice needs as with any other subject taught in school. While watching videos of themselves they saw the outcome of their decision making, they learned responsibility for their own actions and learned how to solve the problem posed (Maxwell, T., 2006).

Further research is needed to verify the results, especially comparison of the two methods presented in this study, in between sexes and grades (different ages). An extension to this study might be actuate the model into different sport at initial training level and compare results. Additionally, a tactic-to-skill approach (on opposite to my study), and how it enables secondary school students to acquire skills should be conducted. Finally, research with effects of small - sided games - modification strategies on tactical constraints of the game is needed.

As a teacher and a coach, I need to be introspective, constantly think and question my teaching methods, because if that doesn’t happen, I will be failing myself and my students.

Summary

This diploma thesis was focusing on assessing the effectiveness of a combined technical-tactical didactic approach in teaching basketball at secondary schools on a) student's four game performance basketball scores (decision-making, skill execution, off the ball support and defense), b) basketball skills (dribbling, shooting, passing) and c) enjoyment level. Additionally, we wanted to assess whether there would be a difference a) over time, b) between sexes over time, c) between grades over time, d) between sex and grades over time, on improved game performance, skills, and enjoyment level after application of combined technical-tactical didactic approach. Lastly, we wanted to assess the student's improvement differences between first – technical method and second – tactical didactic unit in game performance and skills area.

In this study, both quantitative (GPAI, Johnson's Basketball Test battery, video recordings) and qualitative (PACES) research methods were used with the objective of examining the effectiveness of these models on game performance, psychomotor skills, and cognitive field – level of enjoyment.

Both programs were found effective over time on student's game performance and skills. The differences were found in the situations of dribbling, passing, and shooting, decision-making, skill execution, player support, off and on the ball defense, and total points in the GPAI assessment instrument. Female students had higher enjoyment level over time than men. When comparing both pedagogical approaches no differences were found for the decision making, skill execution, player support, overall game performance, dribbling and passing tests in all groups, all subjects.

Overall, collapsed across three-time units, students had better game performance scores and had higher scores on psychomotor skills with combined pedagogical approaches. This has significant implication to the teaching, learning, and assessing of invasion games in school settings. For the students to learn basketball properly and improve, it is recommended to implement both technical and tactical model into the teaching curriculum.

Souhrn

Tato diplomová práce se, jako svým hlavním tématem, zabývá efektivitou technicko – taktického didaktického přístupu ve výuce basketbalu na II. st. ZŠ se zaměřením na: a) výkon a skóre studentů ve čtyřech herních složkách basketbalu (správné rozhodování se, provádění basketbalových dovedností, uvolnění hráče s míčem, bez míče a obranu), b) basketbalové dovednosti (driblování, střelbu, přihrávky), c) požitek ze hry. Kromě toho jsme chtěli posoudit, zda bude rozdíl: a) v průběhu času, b) mezi pohlavími v průběhu času, c) mezi třídami v průběhu času, d) mezi pohlavími a třídami v průběhu času, na lepší herní výkon, dovednosti a úroveň požitku ze hry po aplikaci kombinovaného technicko - taktického didaktického přístupu. Nakonec jsme chtěli posoudit rozdíly ve zlepšování studentů mezi první – technickou a druhou – taktickou didaktickou metodou v oblasti herního výkonu a dovedností.

V této studii byly použity jak kvantitativní (GPAI, Johnson's Basketball Test battery, videozáznamy), tak kvalitativní (dotazník PACES) výzkumné metody s cílem prověřit účinnost těchto modelů na herní výkon, basketbalové dovednosti a požitek ze hry.

Oba programy byly shledány účinnými v průběhu času na herní výkon a dovednosti studentů. Rozdíly byly zjištěny při testování driblingu, přihrávky, střelby, rozhodování se, provádění basketbalových dovedností, podpory hráče s míčem a bez míče, obrany na míči i mimo něj a celkového počtu bodů v hodnocení GPAI. Studentky měly v průběhu času vyšší úroveň zájmu = potěšení ze hry než muži. Při porovnání obou pedagogických přístupů nebyly zjištěny rozdíly v rozhodování se, provádění basketbalových dovedností, uvolnění hráče s míčem, bez míče, celkovém herním výkonu, driblinku a přihrávkách ve všech skupinách a všech třídách.

Celkově, v průběhu tří časových měření (před, mezi a po), měli studenti lepší skóre herního výkonu a skóre basketbalových dovedností s kombinovaným pedagogickým přístupem. To má významný dopad na výuku, učení a hodnocení invazivních her ve školním prostředí.

Závěrem této studie je doporučení začlenit do osnov basketbalu technicko – taktický model výuky, aby se žáci naučili basketbal správně a stále se v něm zdokonalovali.

Citations

- Allison, S., & Thorpe, R. D. (1997). A comparison of the effectiveness of two approaches to teaching games within physical education: A skills approach versus a game for understanding approach. *British Journal of Physical Education*, 28(3), 17-21.
- Almond, L. (1986). A games classification (pp. 71-72). In R. Thorpe, D. Bunker and L. Almond (Eds.). *Rethinking games teaching*. England, University of Technology, Loughborough, Department of Physical Education and Sports Science.
- Almond, L. (1986). Research-based teaching in game. In J. Evans (Ed.), *Physical education, sport, and schooling*. Studies in the sociology of physical education (pp. 155-165). London: Falmer Press.
- Almond, L. (1986). Reflecting on themes: A games classification. In R. Thorpe, Almond, L., & Thorpe, R. (1988). Asking teachers to research. *Journal of Teaching in Physical Education*, 7(3), 221-227.
- Atkins, K. (1985). *Winning basketball drills*. Parker Publishing Company.
- Baechle, T.R., Roger, W.E., (2000). *Essentials of Strength Training and Conditioning*. National Strength and Conditioning Association (2nd ed.). Champaign, Ill.: Human Kinetics
- Bělka, J., Hůlka, K., Dudová, K. (2021). *Teorie a didaktika sportovních her*. Fakulta Tělesné Kultury. Univerzita Palackého v Olomouci.
- Botek, M., Neuls, F., & Klimešová, I., (2017). *Fyziologie pro tělovýchovné obory: Vybrané kapitoly, část. I*. Fakulta Tělesné Kultury. Univerzita Palackého v Olomouci.
- Botek, M. (2021). *Skripta Basketbal*. Univerzita Palackého v Olomouci.
- Bunker, D., Almond, L. & Thorpe, R. (1986). *Rethinking games teaching*. Loughborough: Department of Physical Education and Sports Science, University of Technology.
- Bunker, D., & Thorpe, R. (1982). A model for the teaching of games in secondary schools. *Bulletin of Physical Education*, 18(1), 5-8.
- Bunker, D., & Thorpe, R. (1986). The curriculum models. In R. Thorpe, D. Bunker, & L. Almond (Eds.), *Rethinking games teaching* (pp.7-10). Loughborough, England: University of Technology.
- Bunker, D., & Thorpe, R. (1986). Landmarks on our way to teaching for understanding. In R. Thorpe, D. Bunker, & L. Almond (Eds.), *Rethinking games teaching*. Loughborough, England: University of Technology.

- Bunker, D., & Thorpe, R. (1997). A changing focus in games teaching. In L. Almond (Ed.), *Physical education in schools* (2nd Ed). London: Kogan Page.
- Butler, J., Griffin, L., Lombardo, B., & Nastasi, R. (2003) *Teaching Games for Understanding in Physical Education and Sport: An International Perspective*. Reston, VA: National Association of Sport and Physical Education.
- Capel, S. (1991). Teaching games as interactive activities. *International Journal of Physical Education*, 27(2), 6-9.
- Chatzipanteli, A., Digelidis, N., Karatyoglidis, C., Dean, R., (2014). A tactical – game approach and enhancement of metacognitive behavior in elementary school students. *Physical Education and Sport Pedagogy*. University of Thessaly, Karies, Trikala, Greece.
- Dorak, F., et al (May, 20108). A comparison of the tactical game approach and the direct teaching models in the teaching of handball: Cognitive – Psychomotor field and game performance. *World Journal of Education*. Vol. 8, No. 3.
- Febrianta, Y., (2017). An alternative to learning basketball game using TGfU. *Atlantis Press*, Vol. 109, pp. 313-319.
- French, K. E., & Thomas, J. R. (1987). The Relation of knowledge Development to Children's Basketball Performance. *Journal of Sport Psychology*, 9, 15-32.
- French, K. E., Werner, P. H., Taylor, K., Hussey, K., & Jones, J. (1996). The effects of a 6-week unit of tactical, skill, or combined tactical and skill instruction on badminton performance of ninth grade students. *Journal of Teaching in Physical Education*, 15, 439–463.
- Gamero, M., García-Ceberino, J., Ibanez, S., Feu, S. (In press). Analysis of declarative and procedural knowledge according to teaching method and experience in school basketball. *Sustainability* in press.
- González-Espinosa, S., García-Rubio, J., Feu, S., Ibáñez, S. (2021). Learning basketball using direct instruction and tactical game approach methodologies. *Children*, 8(342).
- Gouveia, E. et al. (May, 2019). The effectiveness of a tactical games approach in the teaching of invasion games. *Journal of Physical Education and Sport*, 19(139), 962–970.
- Gréhaigne, J., Richard, J., & Griffin, L. (2005). *Teaching and learning team sports and games*. Routledge Press.
- Griffin, L., & Butler, J. (2005). Teaching games for understanding. Theory, research, and practice. *Human Kinetics*.
- Griffin, L. L., Butler, J., Lombardo, B., & Nastasi, R. (2003). *An introduction to Teaching Games for Understanding*. In L. Griffin, J. Butler, B. Lombardo, & R. Nastasi (Eds.). *Teaching Games for Understanding in Physical Education and Sport: An International*

- Perspective (pp.1-9). Reston, M.D.: American Alliance for Health, Physical Education, Recreation and Dance.
- Griffin, L., Mitchell, S. A., & Oslin, J. L. (1997). *Teaching sports concepts and skills: A tactical games approach*. Champaign, IL: Human Kinetics.
- Hansen, K., (July 2008). Teaching within all three domains to maximize student learning. *Strategies, ProQuest Educational Journals*, 21(6), 9-13.
- Harrison, J. M., Blakemore, C. L., Richards, R. P., Oliver, J., Wilkinson, C., & Fellingham, G. (2004). The effects of two instructional models – tactical and skill teaching – on skill development and game play, knowledge, self-efficacy, and student perceptions in volleyball. *Physical Educator*, 61(4), 186–199.
- Harrison, J. M., Preece, L. A., Blakemore, C. L., Richards, R. P., Wilkinson, C., & Fellingham, G. W. (1999). Effects of two instructional models – skill teaching and mastery learning – on skill development, knowledge, self-efficacy, and game play in volleyball. *Journal of Teaching in Physical Education*, 19, 34–57.
- Harvey, S. (April, 2007). Using a generic invasion game for assessment. *Journal of Physical Education, Recreation and Dance*, 78(4).
- Harvey, S., Jarrett, K., (2014). A review of the game – centered approaches to teaching and coaching literature since 2006. *Physical Education and Sport Pedagogy*, 19(3), 278–300.
- Hodges, M., Wicke, J., Flores-Marti, I., (2018). Tactical Games Model and Its Effects on Student Physical Activity and Gameplay Performance in Secondary Physical Education. *The Physical Educator*, 75, 99–115.
- Hopkins, D. R. (1977). Factor analysis of selected basketball skill tests. *Research Quarterly for Exercise and Sport*, 48(3), 535-540.
- Hopkins, D. R. (1979). Using skill tests to identify Successful and unsuccessful basketball performers. *Research Quarterly for Exercise and Sport*, 50(3), 381-387.
- Hopper, T. (1997). Learning to respond: Supervising novice physical educators in an action research project. *Sport, Education and Society*, 2(2), 163-180.
- Hopper, T. (1998). Teaching games for understanding using progressive principles of play. *Chaperd Journal de l'Acsepld*, 4-7.
- Hopper, T. (2002). Teaching games for understanding: The importance of student emphasis over content emphasis. *Journal of Physical Education, Recreation, and Dance*, 73(7), 44-48.
- Hůlka, K., Válková H., Bělka, J., Válek Š., (2014). A conversion of the physical activity enjoyment scale (PACES) questionnaire into the Czech Language. *Česká kinantropologie*, Vol 18, no. 1, p.63-71.

- Light, R. (2003). Preservice Primary Teachers' Responses to TGfU in an Australian University: "No Room for Heroes". In L. Griffin, J. Butler, B. Lombardo, & R. Nastasi (Eds.). *Teaching Games for Understanding in Physical Education and Sport: An International Perspective* (pp.67-77). Reston, M.D.: American Alliance for Health, Physical Education, Recreation and Dance.
- Light, R. (2006). Introduction: The games approach to coaching. *Journal of Physical Education New Zealand*, 39(1); ProQuest Educational Journals, pg.5.
- Maxwell, T. (2006). A progressive decision options approach to coaching invasion games: basketball as an example. *Journal of Physical Education New Zealand*, 39(1), 58–71.
- Mitchell, S., Griffin, L. and Oslin, J. (2006). *Teaching Sport Concepts and Skills: a tactical games approach*. Human Kinetics, Champaign, Illinois.
- Mitchell, S. A., & Oslin, J. L. (1999). *Assessment in games teaching. HASPE assessment sense*. Reston, VA: National Association of Sport and Physical Education.
- Mitchell, S. A., Oslin, J. L., & Griffin, L. L. (2003). *Sport foundations for elementary physical education : A tactical games approach*. Champaign, IL: Human Kinetics.
- Nevett, M., Rovengo, I., Babiarz, M., & McCaughtry, N., (2001). Changes in basic tactics and motor skills in an invasion – type game after 12 – lesson unit of instruction. *Journal of Teaching Physical education*, 20(4), 352 – 369.
- Oslin, J. L., Mitchell, S. A., & Griffin, L. L. (1998). The Game Performance Assessment Instrument (GPAD): Development and preliminary validation. *Journal of Teaching in Physical Education*, 17, 231-243.
- Pospíšil, J. (2001). Basketbalová cvičení.
- Psotta, R., Martin, A., (2011). Changes in decision making skill and skill execution in soccer performance: the intervention study. *Acta Universitatis Palackienae Olomouc, Gymnica*, 41(2).
- Seger, C. A. (1994). Implicit learning. *Psychological Bulletin*, 115(2), 163–196.
- Serra-Olivares, J., García-Lopez, L., Calderon, A., (2016). Game-based approaches, pedagogical principles and tactical constraints: Examining game modification. *Journal of teaching in Physical Education*, 35, 208-218.
- Sliverman, S., & Ennis, C. (1996). *Student learning in physical education*. Champaign, I.L.: Human Kinetics.
- Stroup, F. (1955). Game results as a criterion for validating basketball skill test. *Research Quarterly for Exercise and Sport*, 26(3), 353-357.

- Štumbauer, J., Maleček, J., & Šimberová, D., (2013). *Specializes terminology of selected sporting disciplines*. Masaryk University, Brno.
- Turner, A. P. (1991). *A model for developing effective decision-making during game participation*. Unpublished master thesis. North Carolina University, Greensboro.
- Turner, A. P., & Martinek, T. J. (1992). A comparative analysis of two models for teaching games: Technique approach and game-centered (tactical focus) approach. *International Journal of Physical Education*, 29(4), 15-31.
- Turner, A. P., & Martinek, T. J. (1995). Teaching for understanding: A model for improving decision making during game play. *Quest*, 47, 44–63.
- Usman, M., (2016). *Skill tests for basketball*. M/S Scholar Suit Peshawar.
- Velenský, M. (1998). *Basketbal. Základní program aplikace útočných a obranných činností*.
- Vickers, J.N. (1990). *Instructional design for teaching physical activities: A Knowledge structures approach*. Champaign, IL: Human Kinetics.
- Werner, P., & Almond, L. (1990). Models of games education. *Journal of Physical Education, Recreation and Dance*, 61(4), 23-27.
- Werner, P., Bunker, D., & Thorpe, R. (1996). Teaching game for understanding: Evolution of model. *Journal of Physical Education, Recreation and Dance*, 67(1), 28-33.
- Whiddon, N. S., & Reynolds, H. (1983). *Teaching basketball*. N.Y.: Macmillan.
- Young, G., & Moser, H. (1934). A short battery of tests to measure playing ability in women's basketball. *Research Quarterly for Exercise and Sport*, 5(3), 3-23.

Internet sources:

- <http://web.uvic.ca/~thopper/iweb09/TeelaGuill/Teela/Home.html>
- <https://www.sikana.tv/en/sport/learn-to-play-basketball#chapter-5>
- <https://thephysicaleducator.com/>
- <https://folioz.ca/user/timhopper/ephe-452-mini-unit-plan-v-2>
- <https://www.youtube.com/watch?v=YeNqVKR7qPc&t=3s>
- https://www.youtube.com/watch?v=ABC5iPye7JY&list=PLYCyY9D9ouxhAv3rJZQBC1vcd_RDeScEY&index=5
- https://www.youtube.com/watch?v=cSbxvGnin_k&list=PLYCyY9D9ouxhAv3rJZQBC1vcd_RDeScEY&index=6&t=5s
- 4basket.cz
- Czech Union Sports. (2020). <https://www.cuscz.cz/>

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List of abbreviations

1 – PRE – TRADITIONAL

2 – POST – TRADITIONAL

3 – POST – TGFU

DM – DECISION-MAKING

SE – SKILL EXECUTION

SU – SUPPORT

PS – PREVENT SCORING

T – TOTAL POINTS GPAI

FGT – FIELD GOAL TEST

D – DRIBBLE TEST

P – PASSES TEST

PACES – PHYSICAL ACTIVITY ENJOYMENT SCALE

List of attachments

1. 1-8 Technical instructional units

All units start with formal part (2 min): pupils' arrival, reporting, registration, acquaintance with the aim of the teaching unit, motivation.

All units end with final part (7 min): stretching – compensatory exercises with the help of classic stretching for 10-30 sec, organizational – evaluation, compliments, constructive criticism, motivation for the next lesson.

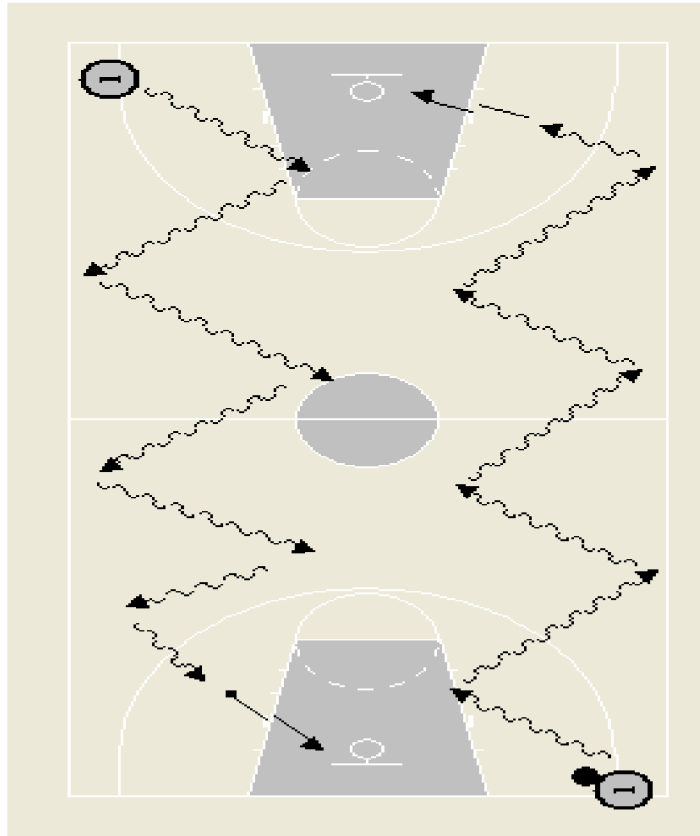
1.1 Aim of the teaching unit: Dribbling. Technical execution of the different dribbling techniques.

Material needed: basketballs, cones, gym, jerseys

Age/grade: 6-9

| Time – min | Content |
|-------------------|--|
| 5 | Introductory part: Warm up – Tag game, each player has a ball and dribbles, a player who is tagged has a distinctive jersey in his hand and catches his teammates. As soon as he touches another player, he hands him the jersey. The game is played inside a basketball court, it is possible to add more catchers. |
| 5 5 | Preparation for the teaching Unit a) Dynamic stretching with the help of basketball balls b) Warm up game: With the help of frontal organization - the teacher shows the exercises, and the students imitate him. We choose with many variants, dribbling right, left hand, with 1 or 2 balls at once, crossover, behind the back, figure eight between the legs, dribbling exercise standing, sitting, lying down, kneeling, squatting, dribbling change of height low, high, at the level of the shoulders, waist, and changing speed, etc. |
| 10 | Main part of the teaching Unit Zig Zag drill - Players with the ball perform a change of direction with the ball in motion along the entire length of the basketball court. The player changes |

the dribble hands and the direction of movement at the cone. At the end of the field, he ends up with a lay-up or jump shot. The ball gets rebounded and the exercise repeats on the other side. After 5 minutes we will change direction and do the same exercise on the other side.




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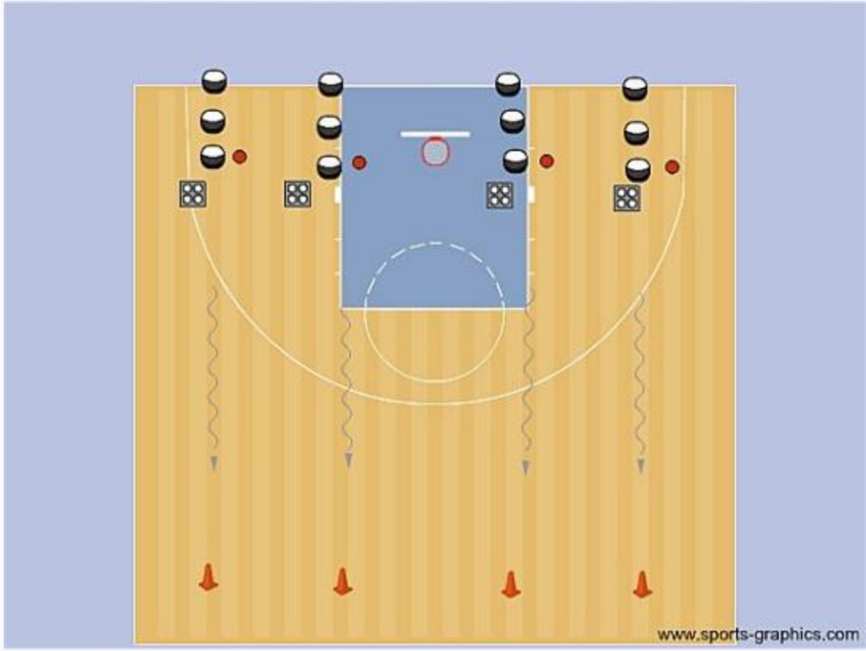
End of the teaching unit game - 5 x 5 according to basketball rules, players try by dribbling, passing, and getting open to get to the attacking side and score.

1.2 Aim of the teaching unit: Dribbling – team competitions

Material needed: basketballs, cones, gym, jerseys, ladder

Age/grade: 6-9

| Time min | Content |
|-------------|---|
| 5 | <p>Introductory part:</p> <p>Warm up – Tag game in pair, each player has a ball and dribbles with the outside hand and with the inside hand holds his/her partner. A pair that is tagged can't uncouple and they catch other pairs. The game is played inside a basketball court, it is possible to add more catching pairs.</p> |
| 5 5 | <p>Preparation for the teaching Unit</p> <p>a) Dynamic stretching with the help of basketball balls</p> <p>b) Warm up game: Special athletic running and dribbling exercise on the ladder (dribbling right, left hand, circling around the body, throwing the ball in the air, various foot movements and dribble changes, passing the ball between legs, etc.)</p> |
| 7 | <p>Main part of the teaching Unit</p> <p>Dribbling in motion – team competition</p> <p>The players are divided into four teams and collect mini cones from the halfway circle according to the color of their team. Students returns with them, and after a slap, another player runs out to get a mini cone. The whole exercise is performed in a dribble (running for mini cones, collection, and return).</p> <p>Variants: front, back, in a defensive position, etc.</p>  <p style="text-align: right;"><small>www.sports-graphics.com</small></p> |

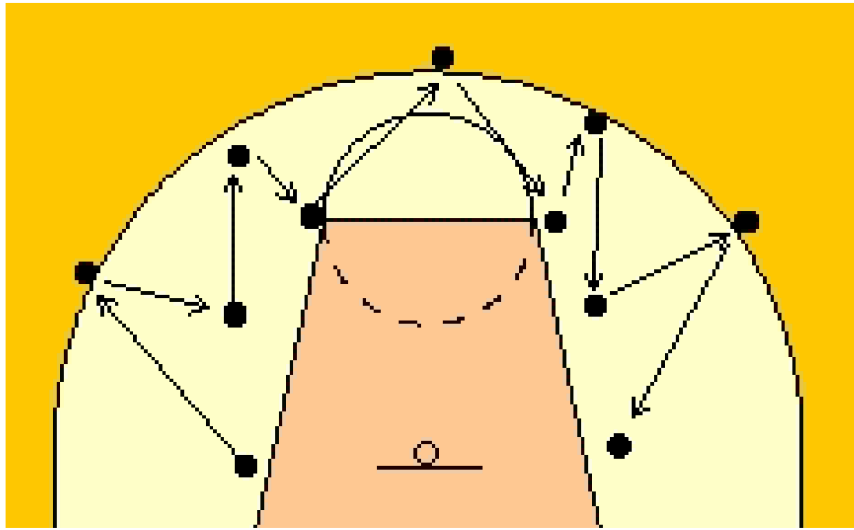
| | |
|----|--|
| 7 | <p>1. Dribbling in motion – team competition in different setting Players is divided into four or more teams. There are mini cones in the middle of the field. Depending on what number the player rolls the dice, he spins around the dribble cone so many times. He returns to the line and passes the ball to his teammates.</p> <p>Variants: even / odd numbers with a run in the middle / back of the gym, different locomotion of the dribble run (backwards, sideways, etc.).</p>  |
| 11 | <p>End of the teaching unit game – 5 x 5 according to basketball rules, players try by dribbling, passing, and getting open to get to the attacking side and score.</p> |

1.3 Aim of the teaching unit: Improving shooting.

Material needed: basketballs, cones, gym, jerseys

Age/grade: 6-9

| Time – min | Content |
|------------|--|
| 5 | <p>Introductory part: Warm up – shooting exercise – follow the leader</p> |



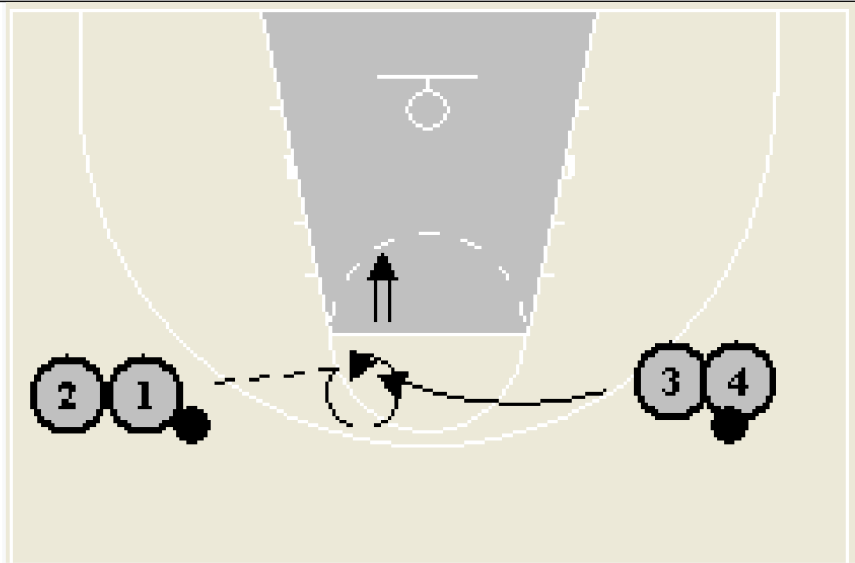
Exercise for individuals (according to height, age, etc.)

Description: Free shooting behind a designated leader. For 5-10 baskets achieved, the player counts 1 point. The winner is the one who gets the highest number of points in the specified time period.

Exercises for teams, groups of more players

Description: We will set targets for shooting or we can shoot behind the leader. Players shoot either one shot from the target or two shots. When the first player scores, the player behind him must score as well. We can compete for points or in a disqualification manner. It is possible to shoot behind the leader with rebounding, so that there is one less ball in the group, the player without the ball is in the defined area and rebounds the shot of the shooting player, who then rebounds the shot of the player behind him. After finishing the ball, the player goes to the end of the crowd. The first shooting player chooses the place of shooting and the method of shooting.

| | |
|---|---|
| 5 | Preparation for the teaching Unit |
| 5 | a) Dynamic stretching with the help of basketball balls b) Warm up game: Shooting on the move |



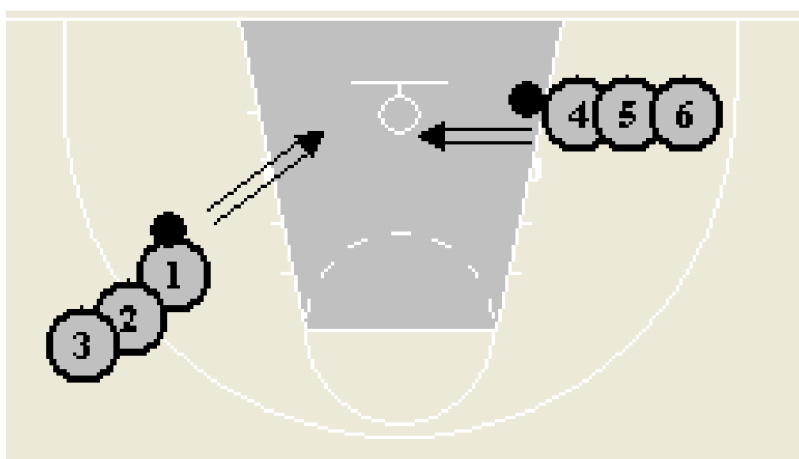
The players are standing in a line near side-line. There is one ball in each line. The first player has the ball in line one and the second player in the second line. Player 3 runs from the line against the pass in the territory of the free throw line, where he receives a pass from the second line and ends with a shot. He bounces and passes to the line from which he received a pass and joins the same team.

The number of repetitions and player exchanges is determined by the coach.

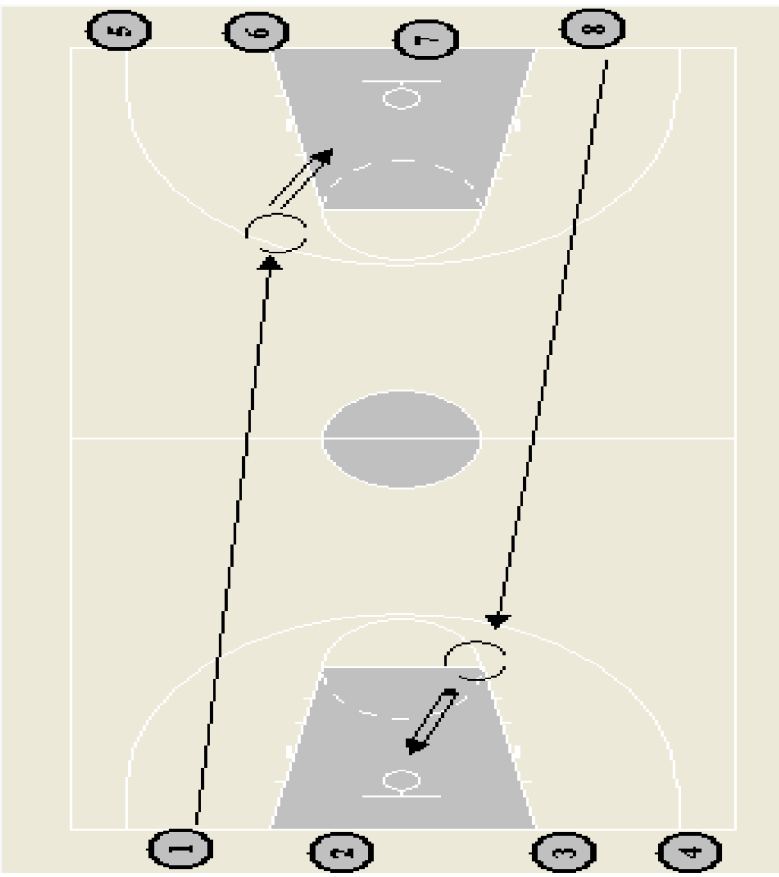
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Main part of the teaching Unit

Shooting with a follow-up rebound



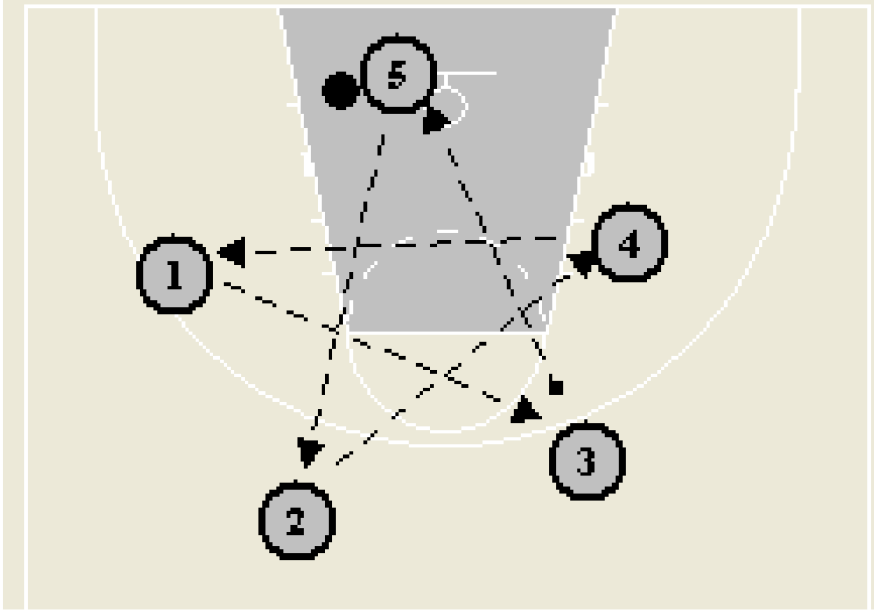
The two teams take turns shooting from the field around the defined area. Each team has one ball. Players of both teams shoot at the same time. If both teams score, the

| | |
|----------|---|
| <p>7</p> | <p>score is even. If one team misses, the other team leads by a point. We play for a difference of 3 points between teams.</p> <p>Shooting - shoot first 20 points after the sprint</p>  <p>The players are divided into two equal groups, which are prepared at the end lines. The first player shoots for 2 points, lands, dribbles to the other side, where he ends up with a lay-up. He bounces the ball, dribbles back, where he shoots a free throw. Then he passes to another player. The second group does the same. Players must score 20 points, with each basket worth 1 point.</p> <p>11 End of the teaching unit game – 5 x 5 according to basketball rules, players try by dribbling, passing, and getting open to get to the attacking side and score.</p> |
|----------|---|

1.4 Aim of the teaching unit: Improving passing, lay-ups.

Material needed: basketballs, cones, gym, jerseys, ladder

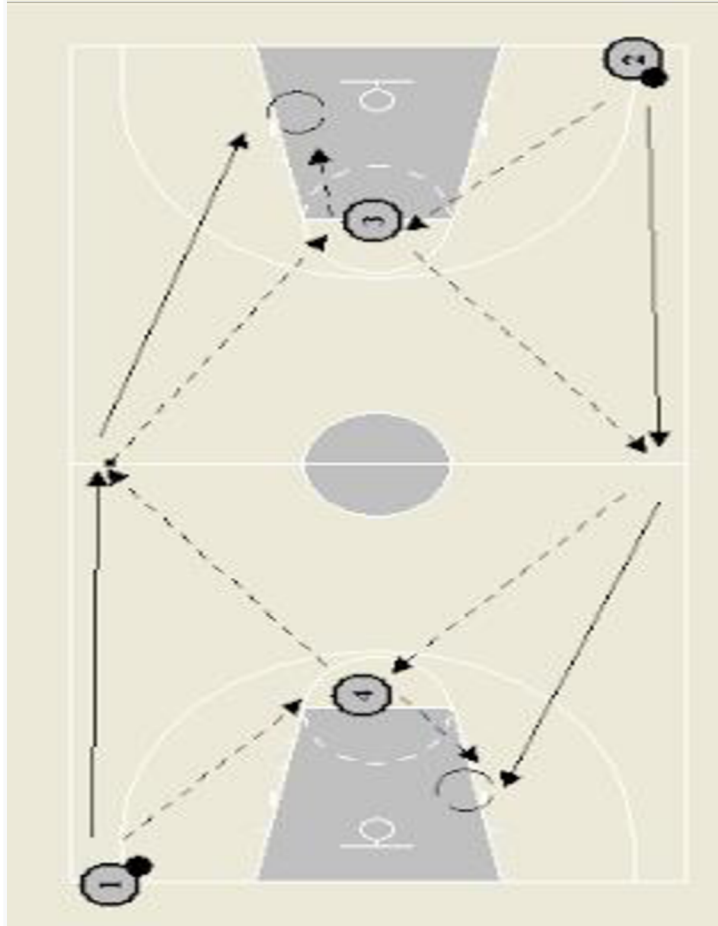
Age/grade: 6-9

| Time min | Content |
|-------------|---|
| 5 | <p>Introductory part:</p> <p>Warm up - Pass and hit! Two teams play against each other, and one team has the ball in possession for some time. Players move in the defined area and pass each other; they can take a maximum of two steps with the ball. The goal is to hit the free-running players from the other team. After a while, the teams switch. The team that hits the opponent more times wins. One player can be hit several times. The game can be played with one or two balls.</p> |
| 5 5 | <p>Preparation for the teaching Unit</p> <p>a) Dynamic stretching with the help of basketball balls</p> <p>b) Warm up game: Special athletic running and dribbling exercise on the ladder (dribbling right, left hand, circling around the body, throwing the ball in the air, various foot movements and dribble changes, passing the ball between legs, etc.)</p> |
| 7 | <p>Main part of the teaching Unit</p> <p>Passes in circle – form a star</p>  <p>Players stand in a circle at the distance of about 3 meters. Exercise starts with one ball. Players pass to the right every other person. Passing paths "draw" an</p> |

imaginary star. Each player always passes to the same teammate. Passes can be of any type. Additional balls can be added later.

Passes - pass to the receiver, catch the ball, end with a lay-up.

7



2 players with the ball in two opposite corners of the court. The other 2 players are on the free throw line. Player 1 passes to player 4, who returns the ball to him. Player 1 immediately passes to player 3, who passes the ball to him for a shot around the defined area or in a lay-up. We do the same exercise on the opposite side.

11

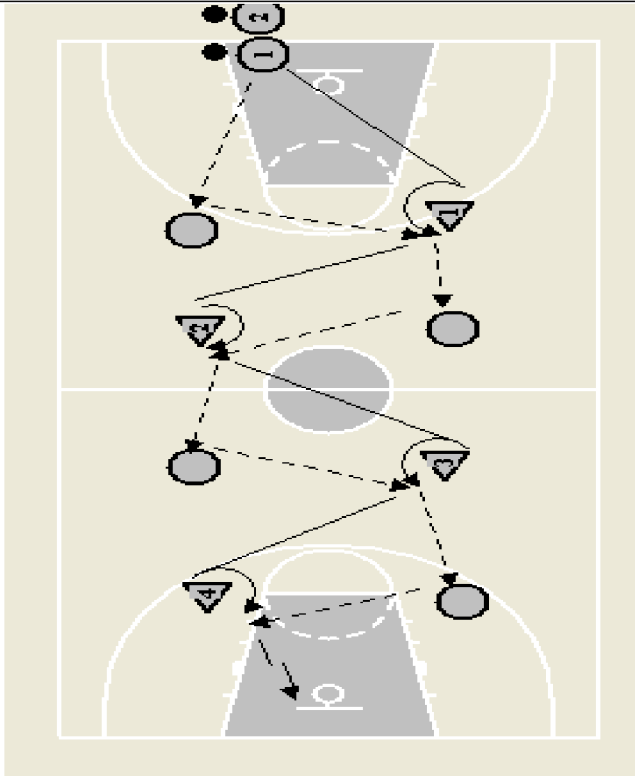
End of the teaching unit game – 5 x 5 according to basketball rules, players try by dribbling, passing, and getting open to get to the attacking side and score.

1.5 Aim of the teaching unit: Moving into the open space without the ball – player support.

Material needed: basketballs, cones, gym, jerseys

Age/Grade: 6-9

| Time – min | Content |
|------------|--|
| 5 | <p>Introductory part:</p> <p>Warm up – The players are divided into pairs, and each has their own ball. The game is played based on imitation. One player dribble for 2.5 minutes along the entire length and width of the gym and the other imitates him/her. The student can dribble with his right, left hand, he can crossover, transfer the ball behind his back, between his legs, spin, he can change positions with a dribble (sitting, lying, kneeling, squatting), he can change dribble height (shoulder, waist, low, etc.), speed. After 2.5 minutes at the whistle, the players switch.</p> |
| 5 5 | <p>Preparation for the teaching Unit</p> <p>a) Dynamic stretching with the help of basketball balls</p> <p>b) Warm up game:</p> <p>Free game 5 x 5 according to basketball rules but players must not dribble. Players must change speed (acceleration, deceleration), change direction, change distance from the defender (move towards the defender, make contact, and then go away from the defender) to get to the opponent's basket. The winning team determines the penalty of the team that lost – 10 push-ups, 10 squats, 10 sit-ups, etc.</p> |
| 10 | <p>Main part of the teaching Unit</p> <p>Training moving into the open space without the ball around the defenders - Players stand under the basket, everyone has the ball. There are two players on the left and right on the field. Approximately at the same level but mirrored against the players on the axis of the field, the defenders are standing. The player's task is to throw the ball to the standing player and run at the defender to make a quick change of direction "C" escape - release for the ball. Defenders try to prevent the pass. Players end the exercise with a lay-up or jump shot.</p> |

| | |
|----|---|
| 10 |  <p>End of the teaching unit game – 5 x 5 according to basketball rules, players try by dribbling, passing, and getting open to get to the attacking side and score.</p> |
|----|---|

1.6 Aim of the teaching unit: Cross-fit training with a focus on basketball skills.

Material needed: basketballs, cones, gym, ladder, bench

Age/grade: 6-9

| Time min | Content |
|---------------------|--|
| 5 | <p>Introductory part:</p> <p>Warm up – running around the gym, at the whistle: changing direction, laying on the ground, turning around, etc.</p> |

| | |
|----|--|
| 5 | <p>Preparation for the teaching Unit</p> <p>a) Dynamic stretching.</p> |
| 5 | <p>b) Warm up game: Athletic Training – Special running exercises to the middle of a basketball court, and back slow jogging. Skipping, carioca, butt kicks, skipping, power skipping, side shuffle, leg swings, lunges, etc.</p> |
| 25 | <p>Main part of the teaching Unit</p> <p>Cross-fit management method: students will be in pairs - 1 is practicing, the other is resting</p> <p>8 stations - 30 sec one student trains, 30 sec the other student</p> <p>Stations 3 and 7 – students practice at the same time</p> <p>Stations are marked with picture cards</p> <p>Jogging between station</p> <p>1 round - approx. 10 min</p> <p>We practice 2 rounds = 20 min</p> <p>Between first and second round, there is about 2 min drink break</p> <p>STATION 1</p> <p>Shooting at the basket from the free throw line - the player shoots at the basket and the other passes to him, we use two balls, the effort will be to give as many baskets as possible in 30 seconds. STATION 2</p> <p>Dribble on the bench - the first round in dribble while sitting on the bench (fast dribble, alternate hands), the second round in walking along the bench (alternate hands)</p> <p>STATION 3</p> <p>Passes in pairs with one ball - in the first round both hands, knees are at a 90-degree angle, hands in front of each other ready for a pass. In the second round, the one-handed, right-left handed passes alternate. The goal is to pass as fast as possible.</p> <p>STATION 4</p> <p>Zigzag around cones - first round change of direction: crossover, second round between legs.</p> <p>STATION 5</p> |

Lay-ups from the right side and then from the left, the goal is to complete the exercise as quickly as possible. After each basket, rebound and dribble, the student goes around the cone and performs a lay-up from the other side. Students are trying to improve in the second round.

STATION 6

High jumps to a point on the wall with basketball - jump as high as possible and touch the point with the basketball. Rebound training. STATION 7

Passes in pairs with two balls. In the first round, one student passes chest pass, the second student bounce pass. Everyone passes the second round with both their right and left hand.

STATION 8

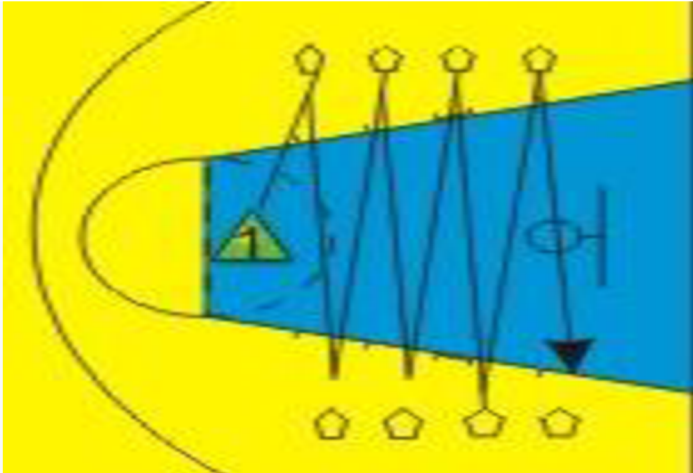
Dribbling on the ladder - first round sprint alternating legs up the ladder, on the way back students move on the side of the ladder, second round high knees. We alternate dribbling hand after each length.



1.7 Aim of the teaching unit: Methodology of training defensive position.

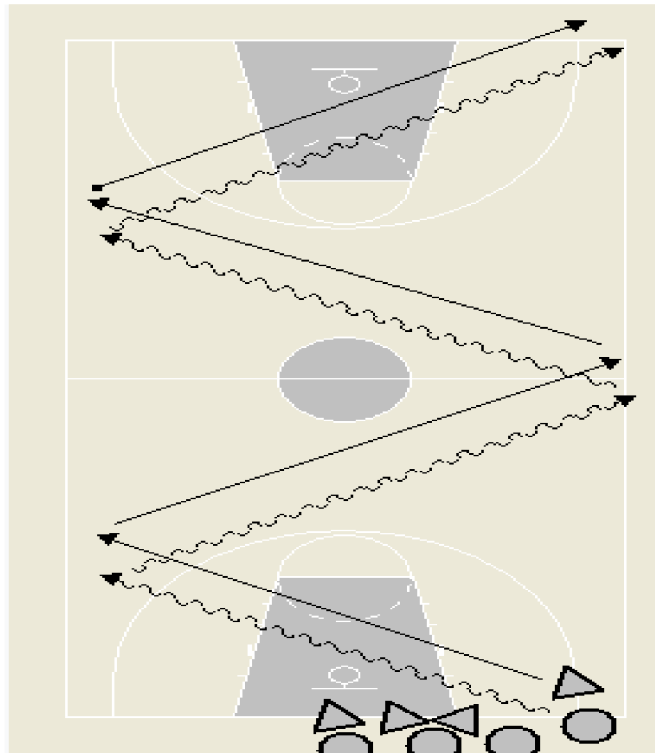
Material needed: basketballs, cones, gym, jerseys

Age/grade: 6-9

| Time – min | Content |
|------------|--|
| 5 | <p>Introductory part:</p> <p>Warm up - running around the gym, at the whistle: changing direction, laying on the ground, turning around, etc.</p> |
| 5 5 | <p>Preparation for the teaching Unit</p> <p>a) Dynamic stretching with the help of basketball balls</p> <p>b) Warm up game: Defense - defensive position on the spot.</p> <p>The players are arranged in front of the teacher so that they have space around them. At the coach's first whistle, they begin a defensive move on the spot. The movement of the legs must be as fast as possible. The center of gravity of the players is set as low as possible. The coach shows the players by hand what additional movement the players should put into the defensive movement. At the whistle players can simulate shooting, can make a push-up, fall into a sitting or lying position, can make a movement to the right or left, forward or backward. The exercise lasts 60 seconds, then it is repeated after sufficient recovery.</p> |
| 7 | <p>Main part of the teaching Unit</p> <p>Defensive movement with cones. Team competition.</p>  |

Cones are placed on the floor. At the sign, the player sets off with a defensive movement and shed the individual cones to the ground. After defeating every cone, a second round can follow, when on the contrary, they put them back in their original place. Alternatively, it is possible, for example, to collect caps or cones and deliver them to the end line or other designated place. You can compete against time, or two teams against each other, etc. You can also set the time for which the player must beat or place the cones.

Defense one on one.



The attacker starts in the corner of the field, the defender shadows him. The attacker leads the ball with a dribble to the sideline, makes a turn and runs at the junction of the sideline and half line. This movement is made to the end line of the court. This exercise can be varied - either the defender can shadow the attacker, or the player tries to steal the ball from him. Players take turns attacking and defending. For more efficiency, we can divide the court in half.

End of the teaching unit game – 5 x 5 according to basketball rules, players try by dribbling, passing, and getting open to get to the attacking side and score.

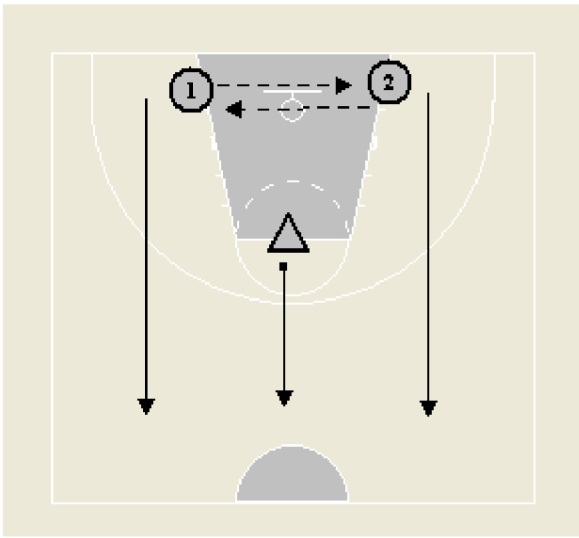
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11

1.8 Aim of the teaching unit: Offensive movements for numerical superiority: 2 vs. 1 and 3 vs. 2.

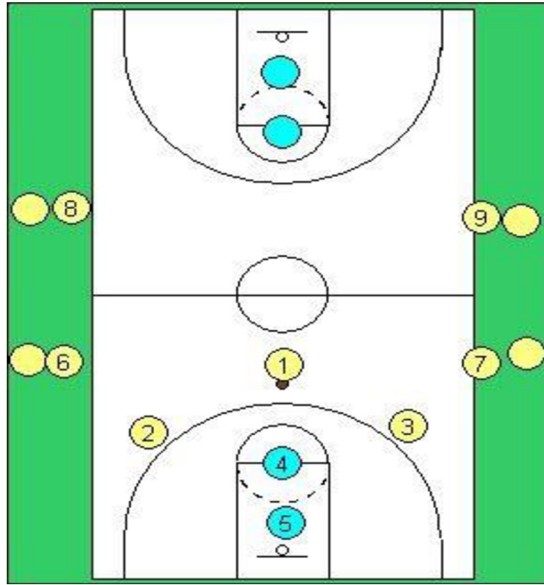
Material needed: basketballs, cones, gym, jerseys

Age/grade: 6-9

| Time – min | Content |
|------------|---|
| 5 | <p>Introductory part:</p> <p>Warm up – Tag game. At the whistle assigned players try to catch and tag other players in the designated area. When the players are caught, they perform different kinds of punishment before they can be back in the game: they can be saved by another player going between their legs, jumped over while laying down, etc.</p> |
| 5 | <p>Preparation for the teaching Unit</p> <p>a) Dynamic stretching with the help of basketball balls</p> |
| 10 | <p>Main part of the teaching Unit</p> <p>2 on 1</p>  <p>Players 1 and 2 are attackers ready at the end line in the corners of the defined area. Defender A stands on the free throw line with the ball facing the attackers with his back. The attackers start the exercise with a pass. The defender tries to get the ball. The exercise ends with scoring the basket or the defender intercepting the ball. Players then swap roles.</p> |

10

3 on 2



Position according to the diagram. Exercise starts with forwards 1, 2 and 3 against defenders 4 and 5. Two more defenders are waiting on the other side of the court, the other two players in four lines are standing at the side lines. Exercises are started by players 1, 2 and 3 and they try to overplay defenders 4 and 5 and score. As soon as the attackers shoot, everyone goes for a rebound (attackers as well). After the rebound, the player who got a ball immediately goes to the nearest sideline with one dribble and passes to players 6 or 7 who are waiting at the sideline. The rebounding player with players 6 and 7 forms a new offensive trio and continues to the opposite basket, where they end up against the defense of the other two defenders. Players jump back in and continue back with players 8 and 9 as at the beginning of the practice.

RULES:

1. Only one shot is allowed.
2. It is not decisive who rebounds the ball. The player who lands immediately passes to the side and sets off on the attack. If the defender wins the ball (ex. by a bad pass from the attackers), he sets off to attack with a new pair.
3. Of the five players in the original 3-2 attack, four who did not jump or get the ball immediately shout "defense". The first two who shout it become the other two defenders and the other two go to the side lines.

End of the teaching unit game - 5 x 5 according to basketball rules.

11

2. 1-8 Tactical – TGFU instructional units

All units start with introductory, formal part (2 min): pupils’ arrival, reporting, registration, acquaintance with the aim of the teaching unit, motivation.

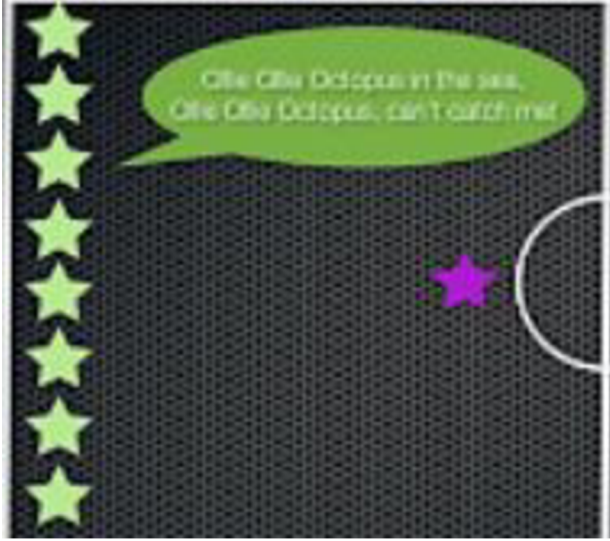
All units end with final part (5 min): stretching – compensatory exercises with the help of classic stretching for 10-30 sec, organizational – evaluation, compliments, constructive criticism, motivation for the next lesson.

All units have at least 5 to 10 minutes discussion questions, feedback from the teacher, in between and while playing exercises.

1.1 Aim of the teaching unit: Dribbling. Discovery of the approach to the basket and shot in situations 3 vs. 3.

Material needed: basketballs, cones, gym, jerseys

Age/grade: 6-9

| Time – min | Content |
|------------|---|
| 10 | <p>Preparation for the teaching Unit Warm up game:</p> <p>OCTOPUS</p>  <p>Aim:</p> <p>Each student as a ball and his goal is to dribble through the gym to go into a safe zone. At the beginning, a student is chosen as the octopus and the other</p> |

| | |
|----|---|
| | <p>students must avoid him. Once a student is tagged by the octopus, he can't move, he can only do a "pivot foot". The game is over when there are no players left.</p> <p>Rules:</p> <p>The octopus has to tag all the students.</p> <p>Once the teacher uses the whistle, every student must dribble to the safe zone.</p> <p>Once you're tagged, you can't move, you can only do a "pivot foot".</p> <p>Task Progression:</p> <p>If it's too easy, make the boundaries smaller if it's too hard, make it bigger.</p> <p>Allow a second octopus at the beginning.</p> <p>Dribble with the appropriate hand when you change direction.</p> <p>Dribbling Cues: Fingers spread, use fingertips, stay low, non-dribbling hand guards ball.</p> |
| 10 | <p>Main part of the teaching Unit</p> <p><u>SKILL/CONCEPT DEVELOPMENT GAME:</u></p> <p><u>SLALOM CHALLENGE</u></p> <p>Aim:</p> <p>In this task, students learn how to dribble in a competitive way. With the challenge, students enjoy more this part. Students learn how to dribble but also how to control their dribble to change directions easily.</p> <p>Rules:</p> <p>Students must do the slalom as fast as possible.</p> <p>Students start when they hear the whistle.</p> <p>Students can't dribble with two hands.</p> <p>Task Progression:</p> <p>Individual challenge then team challenge.</p> <p>Students walk first, then they run.</p> <p>Dribble with the opposite hand (left hand for right-handed, right hand for left-handed)</p> |
| 10 | <p><u>CULMINATING GAME: DRIBBLE TO DEATH</u></p> <p>Aim:</p> |

| | |
|---|---|
| 8 | <p>In this game, students learn how to dribble and how to move with the ball in a restricted area while they have to protect their ball. Students must dribble and move constantly, but also try to catch their opponent ball.</p> <p>Rules:</p> <p>Students can only dribble in the restricted area.</p> <p>If a student goes out the boundaries, he is eliminated.</p> <p>If a student loses his ball, he is eliminated.</p> <p>Task Progression:</p> <p>Students start in a large area.</p> <p>The teacher makes the area smaller when there are less students.</p> <p>The teacher can make a time limit to motivate the students if they don't try to catch their opponents' ball.</p> <p>End of the teaching unit game – 3 x 3 according to basketball rules, players try by dribbling, passing, and getting open to score. We play on 1 basket – streetball rules.</p> |
|---|---|

1.2 Aim of the teaching unit: Shooting, faking. Decision making to shoot or dribble in situations 3 vs. 3.

Material needed: basketballs, cones, gym, jerseys, parallel elastic lines, basketball balls small and normal, playground balls.

Age/grade: 6-9

| Time – min | Content |
|------------|--|
| 10 | <p>Preparation for the teaching Unit Warm up game:</p> <p><u>LISTEN TO THE WHISTLE</u></p> <p>Aim: Students are jogging in a restricted space in different directions. When the teacher uses the whistle, they must stop jogging and fake a shoot.</p> <p>Rules:</p> <p>1 - Students must stop jogging when the teacher uses the whistle.</p> <p>2 - Students can only shoot above their head.</p> |

3 - The teacher can use the whistle twice to make students shooting twice in a row.

Task Progression:

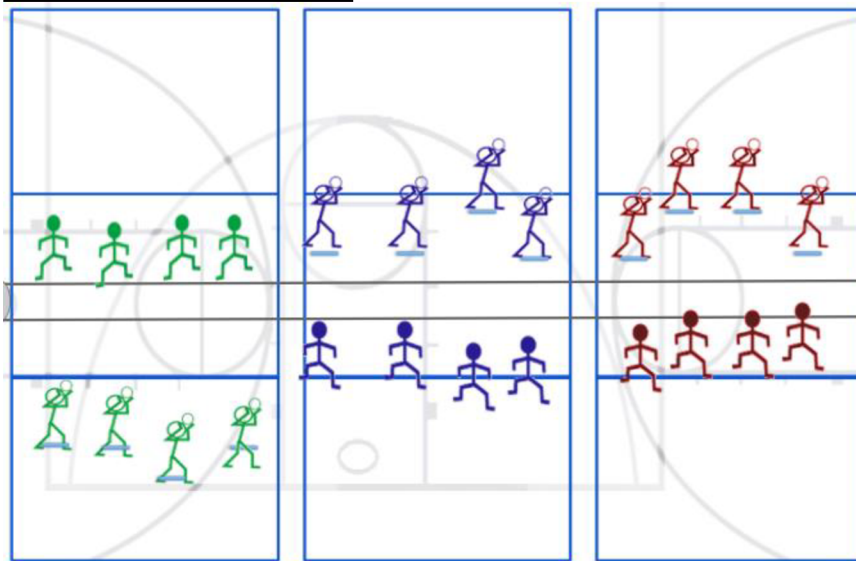
- 1 - Students jog without a ball.
- 2 - Students jog with a ball, but no dribbling.
- 3 - Students are allowed to dribble.

10

Main part of the teaching Unit

SKILL/CONCEPT DEVELOPMENT GAME:

SHOOTING PRACTICE



Aim:

Set shot between the elastic lines from baskets to score points.

1. Partner rebounds ball before it bounces, and chest passes back to partner
2. If partner scores two baskets, then move the blue line back one step.
3. Take 10 shots to see how far back you can go.

Extension

Score 1 points if touch elastics

Score 2 points if go between elastics without touching the elastics

After they learned the different phases of a shot, students learn how to shoot and especially how to score.

BEEF – BALANCE, ELBOVS, EYES, FOLLOW THROUGH

- Balance- Weight on toes and balls of feet
- Eyes- on target focus on basket. Elbow- Keep elbow in.

- Follow Through – Hold hands up until the ball goes in.

Task progression

Balance – stagger step

One hand push through ball

Shoot up and then bounce.

Non-hand alongside and bend knees

Shoot through ball high from toes, knees and extend arm

Wave goodbye

Wall shot

Shot on target of square

Shoot with a partner.

Check form with BEEF

Partner rebound as shot from key.

Try Hot-shot score after 5 free throws.

Discussion questions:

How can you use height to increase set-shot success?

Where do you go after making a shot?

When is the best time to fake a shot?

When is the best time to take a shot?

How can you make an accurate shot consistently through the target?

10

CULMINATING GAME: SHOOTING CHALLENGE

Aim:

This game focus on the time pressure, student 1 learn how to shoot when student 2 is trying to shoot before him.

Rules:

Students start behind the 3 points lines.

Students are eliminated if the person behind them score first. Students can try to score until they succeed.

Task Progression:

Students shoot between the 3 points line and the key.

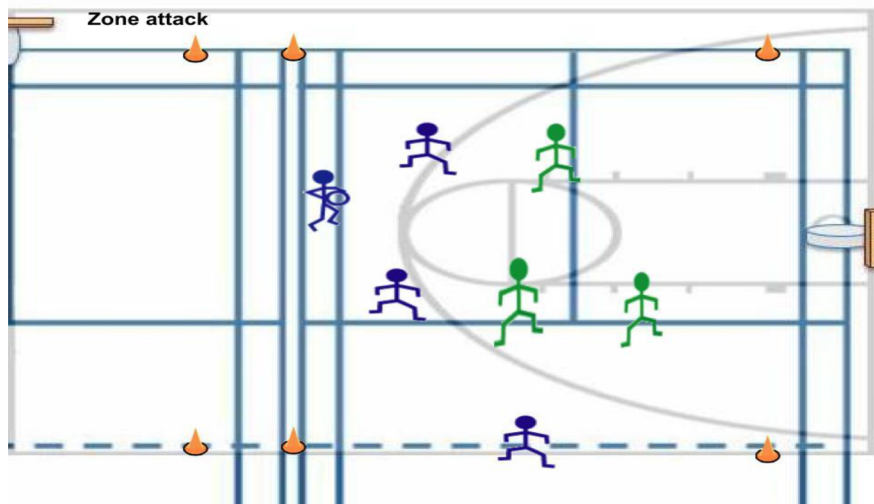
A student can be a defender to make the shoot harder.

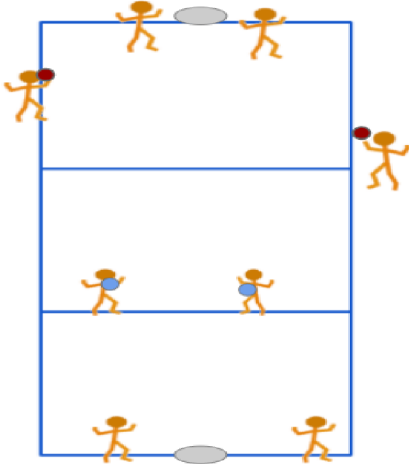
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| 8 | End of the teaching unit game – 3 x 3 according to basketball rules, players try by dribbling, passing, and getting open to score. We play on 1 basket – streetball rules. |
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1.3 Aim of the teaching unit: Shooting. Discovery of placement and position in on – ball defense.

Material needed: basketballs, cones, gym, jerseys

Age/grade: 6-9

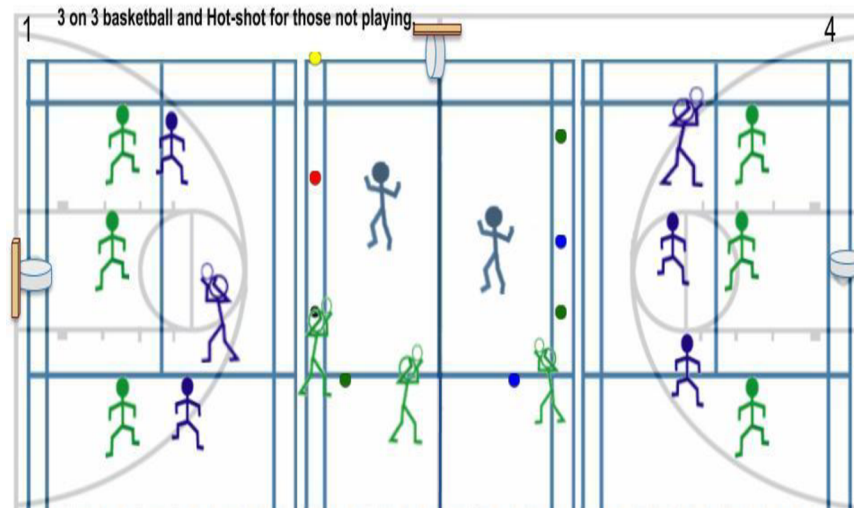
| Time min | Content |
|-------------|---|
| 10 | <p>Preparation for the teaching Unit Warm up game:</p> <p><u>Zone Attack</u></p>  <p>Aim:</p> <p>Scoring by passing to teammate as they enter the zone.</p> <p>Rules:</p> <p>No playing is allowed in the zone unless they have the ball (pass to space)</p> <p>Score by passing to teammate as they enter the zone space marked by corners.</p> <p>If score is made the defending team starts with the ball after is made.</p> <p>Throw-in from side if ball or player with ball goes out of play.</p> |

| | |
|----|--|
| | <p>To stop scoring one defender must go to player with the ball and the rest of the defenders must try to intercept the ball.</p> <p>Task progression before this exercise:</p> <p>Pass to wall, pass to partner at different distances, pass and move with signal</p> <p>Discussion questions:</p> <p>How do you pass to teammate to ensure they can receive?</p> <p>Where should you go after making a pass?</p> <p>How do you create space to receive a pass in the scoring zone?</p> |
| 10 | <p>Main part of the teaching Unit</p> <p><u>SKILL/CONCEPT DEVELOPMENT GAME:</u></p> <p><u>HOT – SHOT RECORD SHEET</u></p>  <p>Aim:</p> <p>Score a point for team when score 7 or more points with 5 free throws in a row shooting from outside the box.</p> <p>Rules:</p> <p>Score 1 point if hit white box and 2 if score through net.</p> <p>Score a point for completing 5 free throws in a row.</p> <p>Score team experience points if beat previous best score.</p> <p>Task progression:</p> <p>Start by defender passing ball to shooter</p> <p>Defender rebound ball and feed to partner</p> <p>Shooter move to locate in space around the key</p> <p>Receive pass and send ball to the basket and then relocate.</p> |

Try to shoot after performing lay-up.

CULMINATING GAME:

SET – UP 3 ON 3 AND HOT SHOT IN THE MIDDLE



Aim:

Score more points than opposing team within the allotted time. Draw decide with rock, paper, and scissors. Winning team moves up a court. Losing team down a court. Rotate player to shoot in hot-shot competition

Rules:

A team scores three points for any field goal made behind the three-point line.

A team scores two points for any field goal made within the three-point line. 1 point if hit back board square.

A team scores one point for any free throw made.

Once the ball is behind the three-point line, a minimum of two players of the offensive team must touch the ball before an attempt to score.

Following each unsuccessful field goal or last free throw:

If the offensive team were to rebound the ball, it may continue to attempt to score without returning the ball to behind the three-point line.

If the defensive team were to rebound the ball, it must return the ball (by passing or dribbling) behind the three-point line.

Discussion questions:

How do you create space with runs?

How do you communicate intent to your team?

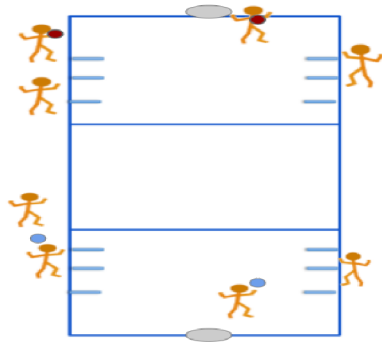
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| | <p>Can I shoot?</p> <p>Can I pass to someone in a better position?</p> <p>Can I dribble to shoot or pass to someone in a better position?</p> <p>What are key cues to help you make a successful outside shot?</p> <p>Where do you go after making a shot?</p> <p>When do you pass back in attack?</p> <p>What do you do in defense to limit the attackers' options in attack?</p> |
|--|--|

1.4 Aim of the teaching unit: Creating space to score, pass or invade opponent's territory, lay-ups.

Material needed: basketballs, cones, gym, jerseys, hula-hoops

Age/grade: 6-9

| Time – min | Content |
|------------|---|
| 10 | <p>Preparation for the teaching Unit Warm up game:</p> <p><u>LISTEN TO THE WHISTLE</u></p> <p>Aim: The aim of this warmup is to give students the opportunity to learn how to score when they dribble. In this situation, students are in a restricted space and when the teacher use the whistle, they have to stop dribbling and do a “fake layup”.</p> <p>Rules: Students dribble in many directions but cannot leave the specific area. When the teacher uses the whistle, students must stop dribbling and do 2 steps. Students can just shoot above their head.</p> <p>Task Progression: Students are walking while they are dribbling. Students start their two steps with the right foot. Students start their two steps with the left foot.</p> |
| 10 | <p>Main part of the teaching Unit</p> <p><u>SKILL/CONCEPT DEVELOPMENT GAME:</u></p> <p>LAY UP CHALLENGE</p> |



Aim:

Score a basket using a lay-up – RIGHT, LEFT and REACH to SHOOT.

Rules:

Try to score a lay-up from each side of the basket starting at the nearest blue line.

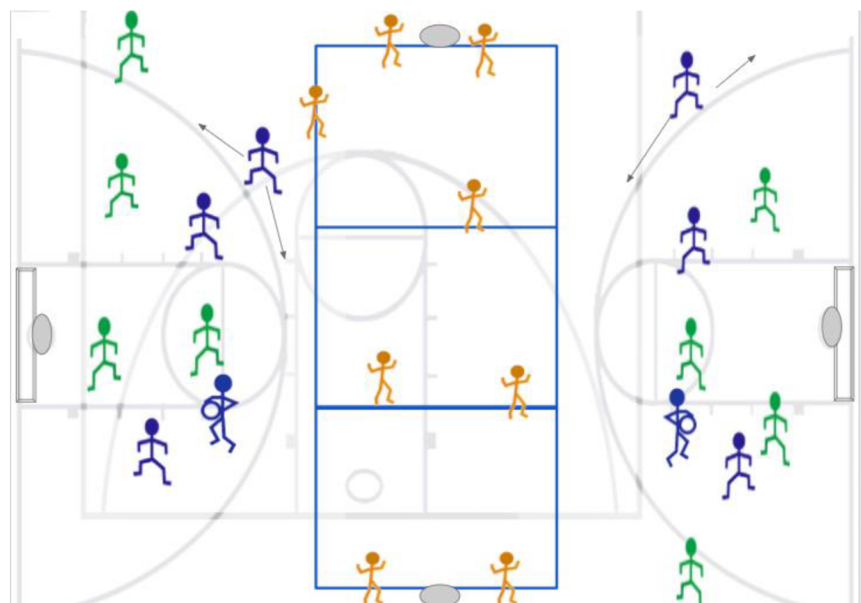
After score 2 baskets try from next blue line using a dribble.

Try to score from the furthest back line with a lay-up.

CULMINATING GAME:

15

SET UP 3 ON 3 PLUS OUTSIDE DRIBBLER WITH LAY – UP CHALLENGE IN THE MIDDLE



Aim: Score by shooting at backboard and hoop

Rules:

| | |
|--|---|
| | <p>Players allowed to dribble outside the 3-point line or with 2 steps inside the 3-point line.</p> <p>Score by shooting ball to hit backboard square (1 point), Net (2 points).</p> <p>Outside 3-point line.</p> <p>Defense become offence if make a pass to team player outside three-point area</p> <p>Defense become offence if attacking team puts ball out of play</p> <p>Spare players play lay – up challenge.</p> <p>Rotate role after 3 attacks.</p> <p>The fourth player is there only to help with passing and can't score only dribble and pass. It can only move outside a three-point line.</p> <p>Once player catches ball after dribble cannot dribble again</p> <p>Defensive player cannot move into a position in the path of dribbler or reach hands into the path of the dribbler.</p> <p>If a player scores a basket, who is allowed to score a basket next on that player's team?</p> <p>Discussion questions:</p> <p>Who do you check in defense and why?</p> <p>What do you do after making a shot?</p> <p>Where should you go as teammate rebounds the ball?</p> <p>When shot goes up how can you rebound as a team?</p> <p>After a score in made what happens next?</p> |
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1.5 Aim of the teaching unit: Movement off the ball, getting open for a pass, and rebounding.

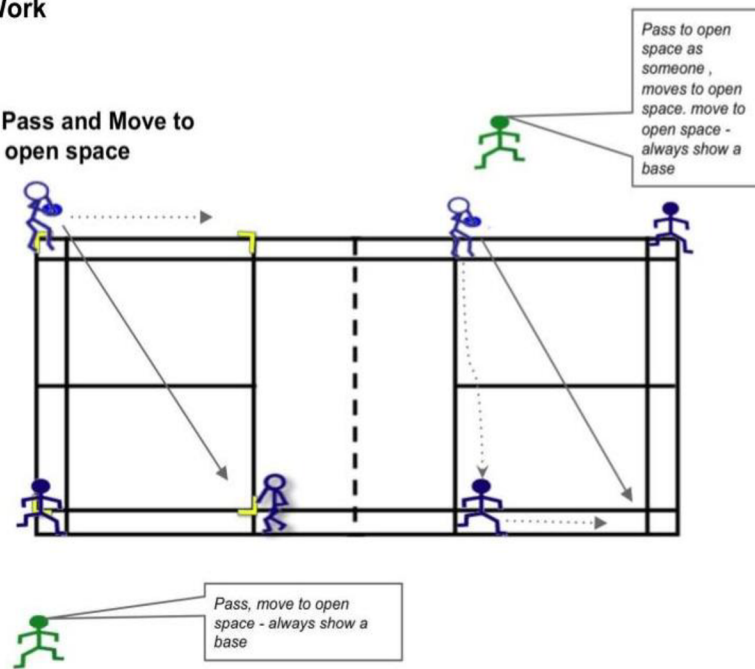
Material needed: basketballs, cones, gym, jerseys

Age/grade: 6-9

| Time – min | Content |
|-------------------|--|
| 10 | Preparation for the teaching Unit Warm up game: GRID WORK |

Grid Work

1. Pass and Move to open space



Aim:

Pass ball when guarded to open teammate and move to open space (support)

Rules:

Pass and move to open pylon (Space).

Call name, pass to space (Force).

Move to space (Space).

Quick passes to open space (Time).

Always two options to pass.

Pass to open space, move to the open space.

Task progression for teaching tactical awareness:

3 v 0 game in grid – 1 coach

3 v 1 – co-op defender

3 v 2 – In long quadrant (10 x 20)

Change the object and equipment.

Defenders – one must go to the ball.

Play to score – must complete 10 passes.

Discussion questions:

Where do you go after sending a ball?

Where do you go when your team is defending a goal?

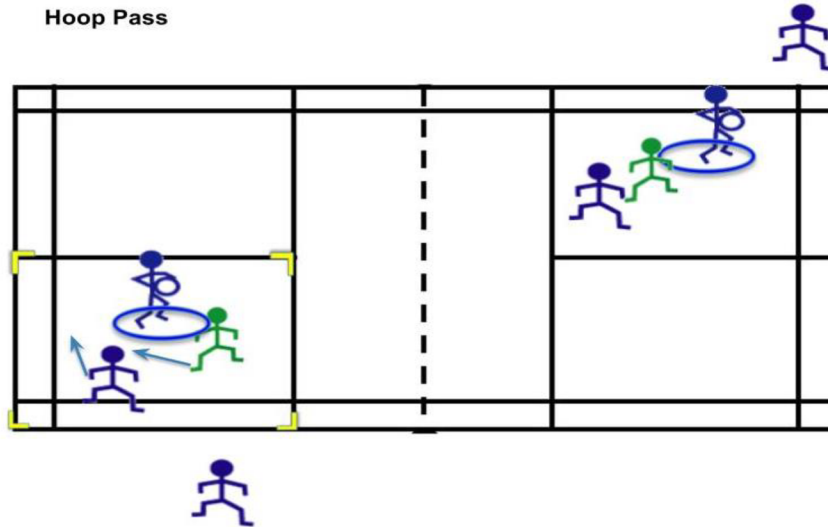
How can you improve off-the-ball movement?

10

Main part of the teaching Unit

SKILL/CONCEPT DEVELOPMENT GAME:

HOOP PASS



Aim:

For receiver to receive pass from teammates in the hoops.

Rules:

Receiver cannot go between the hoops

Receiver and defender must start at least 2 strides from senders

After each attempt ball returned to passer

Hoop players can pass to each other.

Defender tries to intercept the pass without touch the receiver

Task progression:

Based on receiver decide who will be the defender.

Play for 30 seconds and then rotate rolls changing defender until all defenders and had a go.

Note how to match up one on one defensive roles.

Discussion questions:

What type of movements are most successful in this game?

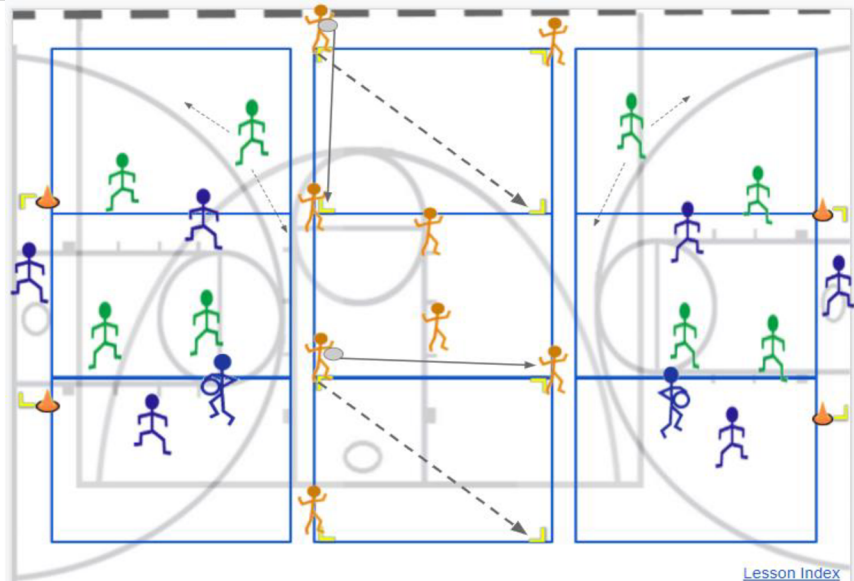
How can coordinate movements with timing of passe?

What are passes that defender have less time to intercept?

CULMINATING GAME:

SET UP 3 ON 3 PLUS OUTSIDE DRIBBLER WITH GRID WORK IN THE MIDDLE

18



Aim: Score by shooting at backboard and hoop

Rules:

Players allowed to dribble outside the 3-point line or with 2 steps inside the 3-point line.

Score by shooting ball to hit backboard square (1 point), Net (2 points).

Outside 3-point line.

Defense become offence if make a pass to team player outside three-point area

Defense become offence if attacking team puts ball out of play

Spare players play grid-work – with and without defense.

Rotate role after 3 attacks.

The fourth player is there only to help with passing and can't score only dribble and pass. It can only move outside a three-point line.

Once player catches ball after dribble cannot dribble again

Defensive player cannot move into a position in the path of dribbler or reach hands into the path of the dribbler.

If a player scores a basket, who is allowed to score a basket next on that player's team?

Discussion questions:

Who do you check in defense and why?

What do you do after making a shot?

Where should you go as teammate rebounds the ball?

| | |
|--|--|
| | When shot goes up how can you rebound as a team? After a score is made what happens next? |
|--|--|

1.6 Aim of the teaching unit: Passing and receiving the ball, moving into the open space and numerical superiority.

Material needed: basketballs, cones, gym, jerseys, bean bags

Age/grade: 6-9

| Time – min | Content |
|---------------|--|
| 10 | <p>Preparation for the teaching Unit Warm up game:</p> <p>SLIDE TAG</p>  <p>Aim:</p> <p>This game will emphasize the problem of defense and spatial awareness, students will learn how to avoid defenders by a fun game. To avoid defenders, students must move into an open space which is an off-the-ball movement skill.</p> <p>Rules:</p> <p>Students must pass through different gates to get into the safe zone. Students must avoid defenders. Once students are tagged, they have to come back to the beginning.</p> |

The defenders can only slide along their line and can reach out to tag other players without coming off their line. Once a player passes them safely, they can no longer tag that player.

Task Progression:

Running and collecting the bean bags at the end zone.

Running, dribbling and collecting the bean bags at the end zone.

Discussion questions:

How do you move through the lines without being tagged?

How do you move from zone to zone successfully?

How do you create space between you and the defender(s)?

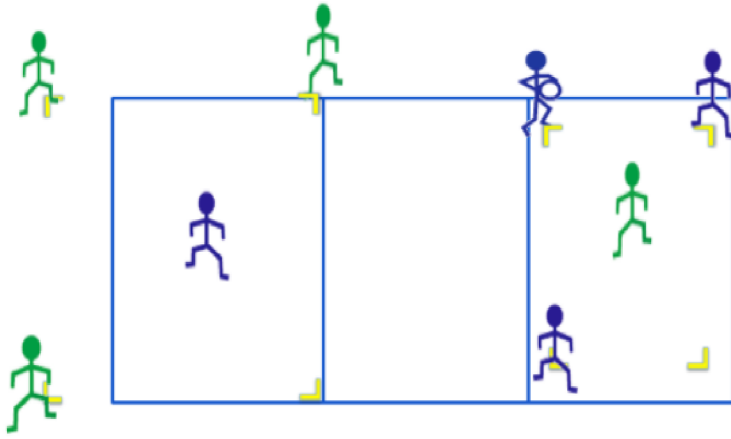
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Main part of the teaching Unit

Skill/Concept development games

Grid Work

6 passes and decrease space



Aim:

4 students in a square. 3 students are at 3 different corners and the last student is in the middle of the square. The student who is in the middle is named “defender”. His aim is to catch the ball.

Rules:

3 students are passing the ball while the defender is trying to catch it.

Students must move to the open spot to get the ball.

When the defender catches the ball, he switches with the student who missed his pass.

15

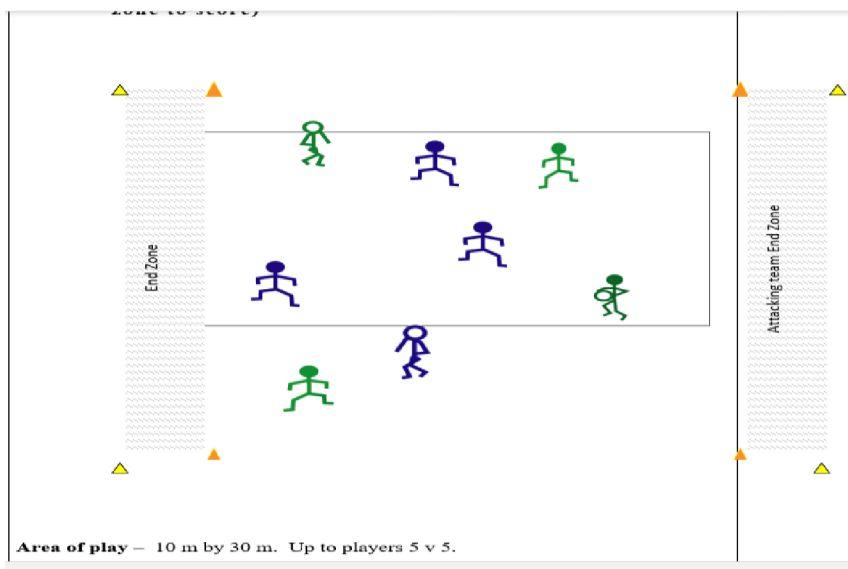
Task Progression:

Defender is passive.

Change the size of the ball.

Defender more aggressive.

End ball with End - Zone (Person receive a pass in end zone to score)



Area of play – 10 m by 30 m. Up to players 5 v 5.

Aim: Score 1 point by passing to team-mate in End-Zone.

3 points if make shot into basket from end-zone.

Rules:

Allowed to dribble, but only into space (cannot dribble in endzone).

One defender must go to player with the ball.

Attacking team only allowed one person in end-zone.

Defending team becomes attacking team when they the get ball into attacking team end-zone.

Additional rules :

2seconds allowed in End-zone

In defender allowed in End-zone

Change space to play in

Count passes with goal as 10th point.

Skill: Playground ball or basketball.

SENDING – Chest pass and bounce pass

RECEIVING – Catching

RETAINING – Dribble

Task progression:

Can only score with a pass from below head height or a bounce pass.

No defender allowed in end zone.

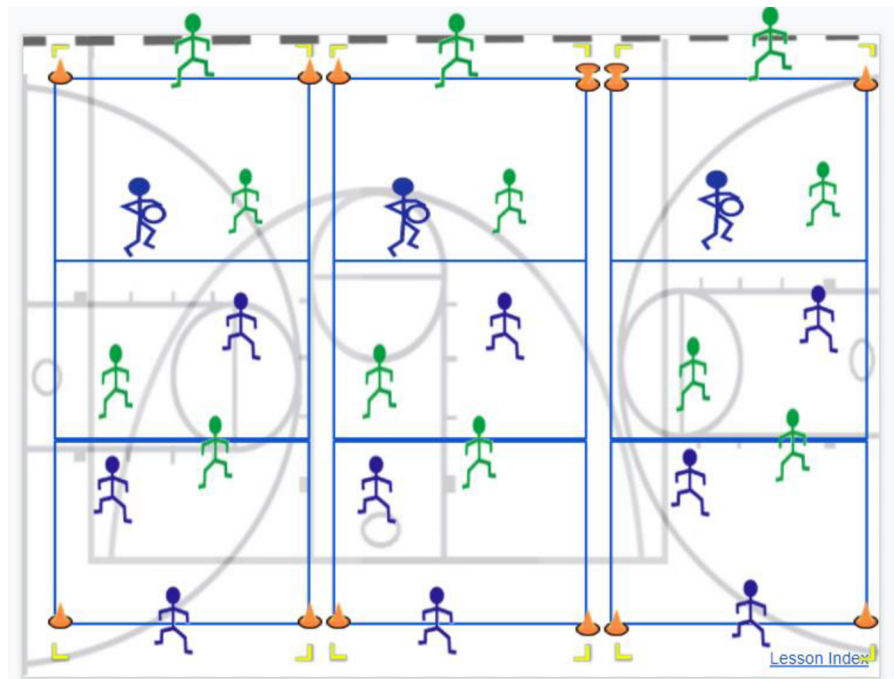
3 second rule with ball

Discussion questions:

Where do you go after sending a ball?

Where do you go when your team is defending a goal?

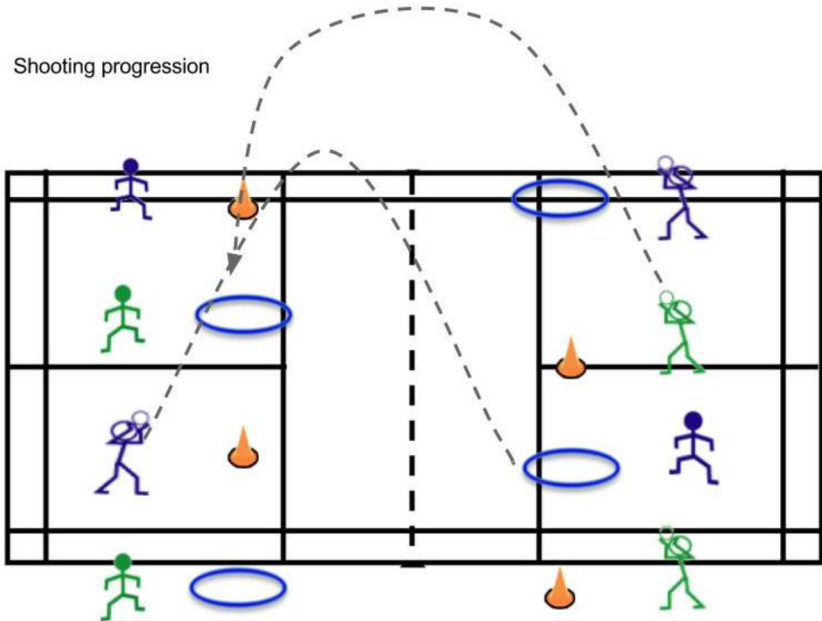
End Ball with using large space gym



1.7 Aim of the teaching unit: Dribbling/Shooting. Placement and position in on – ball defense.

Material needed: basketballs, cones, gym, jerseys, parallel elastic lines, basketball balls small and normal, playground balls.

Age/grade: 6-9

| Time min | Content |
|-------------|---|
| 10 | <p>Preparation for the teaching Unit Warm up game:</p> <p>DRIBBLE TO DEATH</p> <p>Aim:</p> <p>In this game, students learn how to dribble and how to move with the ball in a restricted area while they have to protect their ball. Students must dribble and move constantly, but also try to catch their opponent ball.</p> <p>Rules:</p> <p>Students can only dribble in the restricted area.</p> <p>If a student goes out the boundaries, he is eliminated.</p> <p>If a student loses his ball, he is eliminated.</p> <p>Task Progression:</p> <p>Students start in a large area.</p> <p>The teacher makes the area smaller when there are less students.</p> <p>The teacher can make a time limit to motivate the students if they don't try to catch their opponents' ball.</p> |
| 10 | <p>Main part of the teaching Unit</p> <p><u>SKILL/CONCEPT DEVELOPMENT GAME:</u></p> <p><u>SHOOTING PROGRESSION</u></p>  <p>The diagram illustrates a shooting progression game on a basketball court. The court is divided into three sections by a vertical dashed line. Stick figures in purple and green are positioned around the court. Orange cones are placed on the court. Blue ovals represent the ball. Dashed lines show the path of the ball from a purple figure in the top-left to a purple figure in the top-right, and from a purple figure in the bottom-left to a purple figure in the bottom-right. A purple figure in the bottom-left is shown shooting the ball towards a purple figure in the top-right.</p> |

Shooting over a space to a target.

Repeat and increase distance for winning pair and those on 2.

Review BEEF.

- Balance- Weight on toes and balls of feet
- Eyes- on target focus on basket.
- Elbow- Keep elbow in.
- Follow Through – Hold hands up until the ball goes in.

Work with partner to practice - catch and then hoop.

Then shoot over badminton court space into target.

Aim:

First pair to score 3 hits wins.

Must shoot from behind the target.

Ball must go over service box area at least 4 meters off ground (higher than backboard)

Either hit cone or bounce in hoop to score.

Discussion questions:

How do you use your body to get height and direction?

Where should you go after making a pass?

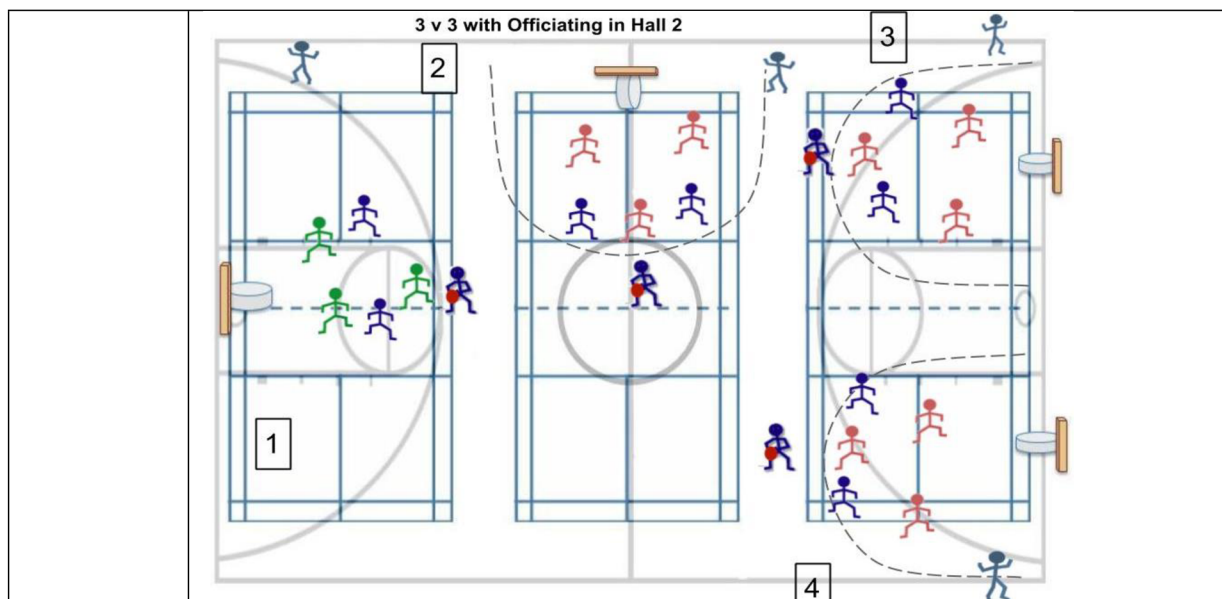
How can you create space to attack? - L cut and V cut.

How can you create time to keep possession? - Use support player to pass back

Play game then ask each team to discuss answers with coach

Culminating Game:

SET UP 3 ON 3



Aim:

To score more points than defensive players when in attack.

Score 2 or 3 points for basket. Players allowed on the outside of the 3-point line for attacking team.

Outside player can dribble to change angle to make pass and allowed 3 steps with dribble inside 3-point line. Any person can become outside dribbler.

Make pass outside 3-point line to become attacking player.

Offensive team is allowed three steps with the ball using a dribble.

Once player catches ball after dribble cannot dribble again

Defensive player cannot move into a position in the path of dribbler or reach hands into the path of the dribbler.

Dribbler cannot charge into a stationary dribbler.

Discussion questions:

Who do you check in defense and why?

What do you do after making a shot?

Where should you go as teammate rebounds the ball?


After a score is made what happens next?

In attack, where do you go as a pass is made?

1.8 Aim of the teaching unit: Transition from offense to defense, moving to open space, passing.

Material needed: basketballs, cones, gym, jerseys, hula-hoops, soft balls, foamies

Age/grade: 6-9

| Time – min | Content |
|------------|---|
| 10 | <p data-bbox="384 331 1082 369">Preparation for the teaching Unit Warm up game:</p> <p data-bbox="384 421 746 454">PRAIRE DOG PICKOFF</p> <p data-bbox="384 506 730 539">BUILT ONE AND TWO</p>  <p data-bbox="384 1043 467 1077">AIM:</p> <p data-bbox="384 1099 1050 1133">Attacking a goal, communication, defending a goal</p> <p data-bbox="384 1155 475 1189">Rules:</p> <p data-bbox="384 1211 1410 1682">Students begin in a scattered formation with each student in possession of a foamie (their prairie dog) that is stood up in the center of a hoop (their prairie dog’s nest). Once the teacher adds foam balls to the playing area, students may move away from their nest to gain possession of a ball and throw/roll the ball as they attempt to knock over other players’ prairie dogs. If a player’s prairie dog is knocked over, that player takes their hoop and foamie and go set up beside the player who knocked them over. The two players now form a colony that continues to grow as they successfully knock over more prairie dogs! The game goes on until only one colony is left in the game.</p> <p data-bbox="384 1704 639 1738">Task Progression:</p> <p data-bbox="384 1760 722 1794">Build One: Prairie Dogs</p> <p data-bbox="384 1816 1410 2020">In build one, each student will be given a hoop and a foamie. Students will then set up in a scattered formation, placing their hoop on the ground in front of them with the foamie standing up in the center of the hoop. The foamies are the students Prairie Dogs, which they must attempt to protect throughout the game.</p> |

| | |
|----|--|
| | <p>The hoops are the Prairie Dogs’ nests. Students may not stand in or over a nest at any time.</p> <p>On the teacher’s signal, students get into a defensive ready position and begin to slide around their prairie dog’s nest. When the teacher calls “GET MOVING”, students have 5 seconds to pick up their prairie dog and its nest, move to a new open space, set up once again, and then continue to slide around the nest while maintaining a defensive ready position. The teacher will continue to call “GET MOVING” and can choose to modify the amount of time given to the students to find a new open space.</p> <p>At the end of the round, the class will come together to discuss tactics they used to quickly be able to identify and move to new open spaces.</p> <p>Build Two: Prairie Dog Pickoff</p> <p>In build two, the teacher will add a few foam balls to the game.</p> <p>The object of the game is for students to knock over opponent’s prairie dogs while continuing to defend their own. To knock over a prairie dog, a student may leave their nest to get a ball. Once the ball is in their hand, the player’s movement is then limited to pivoting. If a player is in possession of a ball, they may throw or roll that ball to try and knock over an opponent’s prairie dog. If a prairie dog is knocked over, that prairie dog’s owner has to pick up their foamie and hoop and then move to a new open space before they may continue to play. At the end of the round, the class comes together to discuss the tactics they used to either successfully knock over other players’ prairie dogs or the tactics they used to successfully defend their own prairie dog.</p> |
| 10 | <p>Main part of the teaching Unit</p> <p><u>SKILL/CONCEPT DEVELOPMENT GAME:</u></p> <p>Build Three: Prairie Dog Colonies</p> <p>In this build, players continue to play just as they did in build two. However, if a player successfully knocks over another player’s prairie dog, then that player must signal to the prairie dog’s owner that they have done so. If a player has their prairie dog knocked over, they must take their hoop and foamie and go set up so that their hoop is in contact with the hoop of the player who knocked over their prairie dog. These two players are now building a colony, and the goal of this build is for players to see how big of a colony they can create and defend.</p> |

| | |
|--------------------|---|
| <p>10</p> <p>8</p> | <p>If a player within a colony has their prairie dog knocked over, then they must leave their colony and go join the player or players who knocked their prairie dog over. If multiple players get their prairie dog knocked over at once, then they must all leave to go join the player or players who did so.</p> <p>If ever a player has their prairie dog knocked over but are unsure who did so, then they simply leave the colony and set up on their own in an open space.</p> <p>Players within a colony may make passes between each other in order to move closer to target prairie dogs they hope to knock over. That being said, player movement is still limited to pivoting when in possession of the ball.</p> <p>At the end of the round, the teacher will lead a class discussion on tactics used to successfully attack other prairie dog colonies as well as those used to successfully defend larger colonies.</p> <p><u>CULMINATING GAME:</u></p> <p>Build Four: Prairie Dog Bases</p> <p>For this build, the teacher will need to pause the game once they see that there are only 2-3 colonies left in the game. Using small cones, the teacher will mark off the perimeter of each colony. This perimeter will serve as the outer edge of the colony's base. Once the bases are set up, the teacher will remove all of the hoops that form the colony as well as all but 2-3 foamies that will be left in the center of the colony's base. Just as with the hula hoops, players may not step inside their base unless they are doing so too retrieve a dead ball.</p> <p>Play then resumes with colonies attempting to win by being the last team with prairie dogs left standing in their base.</p> <p>Discussion questions:</p> <p>When are you on offence in this game?</p> <p>When should you transition between an offensive role and a defensive role (and vice-versa)?</p> <p>How does working as a team on offence change the way you select and execute tactics in this game?</p> <p>What are the challenges of defending larger colonies/bases? How did you, as a team, overcome those challenges?</p> <p>End of the teaching unit game – 3 x 3 according to basketball rules.</p> |
|--------------------|---|

3. Normality and homogeneity of the study

| TEST | NORMALITY | HOMOGENEITY LEVENE'S TEST |
|------|-----------|---------------------------|
| DM1 | 0.21 | 0.57 |
| DM2 | 0.30 | 0.80 |
| DM3 | 0.30 | 0.39 |
| SE1 | 0.20 | 0.03 |
| SE2 | 0.28 | 0.95 |
| SE3 | 0.21 | 0.74 |
| SU1 | 0.31 | 0.04 |
| SU2 | 0.29 | 0.18 |
| SU3 | 0.25 | 0.22 |
| PS1 | 0.24 | 0.25 |
| PS2 | 0.23 | 0.71 |
| PS3 | 0.20 | 0.88 |
| T1 | 0.13 | 0.22 |
| T2 | 0.14 | 0.10 |
| T3 | 0.12 | 0.45 |

| | | |
|--------|------|------|
| FGT1 | 0.14 | 0.44 |
| FGT2 | 0.22 | 0.08 |
| FGT3 | 0.16 | 0.11 |
| D1 | 0.14 | 0.01 |
| D2 | 0.12 | 0.07 |
| D3 | 0.13 | 0.02 |
| P1 | 0.32 | 0.04 |
| P2 | 0.32 | 0.01 |
| P3 | 0.25 | 0.01 |
| PACES2 | 0.05 | 0.02 |
| PACES3 | 0.08 | 0.02 |

NOTES: 1 – Pre-technical, 2- post-technical, 3- Post-tactical, DM – decision making, SE – skill execution, SU – player support, PS – prevent scoring, T – total points GPAI, FGT – field goal test, D – dribble, P – passes test, PACES – physical activity enjoyment scale