

**EMCA Studia 1** 

# Multisport Approach for Young Athletes

Age 6 - 11 years





#### EMCA Studia 1

### **Multisport Approach for Young Athletes**

Age 6 -11 years

Professor Goran LEKO, PhD Professor Dario NOVAK, PhD Professor Renata BARIĆ, PhD Flavia GUIDOTTI, PhD Bojan MIJATOVIĆ

> HAŠK Mladost Zagreb, 2018.

## MULTISPORT APPROACH FOR YOUNG ATHLETES Age 6 -11 years

#### **PUBLISHER**

Hrvatski akademski športski klubovi Mladost Sveučilišta u Zagrebu (HAŠK Mladost)

#### FOR THE PUBLISHER

Federico EICHBERG Tomislav DRUŽAK

#### **AUTHORS**

Professor Goran LEKO, PhD Professor Dario NOVAK, PhD Professor Renata BARIĆ, PhD Flavia GUIDOTTI, PhD Bojan MIJATOVIĆ

#### **EDITING**

Bojan MIJATOVIĆ, project coordinator Ines JAKOPANEC Dunja BRAČUN Gabriella BASCELLI

#### PHOTO AND VIDEO MATERIALS

Marijeta ČELIĆ

#### **PRINTING**

Zinam d.o.o., Zagreb

#### PROJECT ERASMUS+ SPORT

Sport MyWay - Multisport Coachers for Young Athletes

#### PROJECT CONSORTIUM

HAŠK Mladost (Croatia), coordinator
Aalborg 1885 (Denmark)
Sporting (Portugal)
Lazio Basket (Italy)
APOEL (Cyprus)
Olympiacos (Greece)
Crvena zvezda (Serbia)
EPSI (European Platform for Sports and Innovation, Belgium)
CONI Servizi (Italy)

#### EMCA Studia I

EMCA Studia is the official bibliotheca of the association EMCA (European Multisport Club Association) with headquarters in Brussels, Begium. EMCA Studia gathers together all publications published by the member clubs and ongoing projects.

A PDF of this Multisport handbook EMCA Studia I, together with the videos and photos that explain the exercises can be downloaded from following URL: www.multisportclubs.eu/emcastudia

Zagreb, 2018. ISBN 978-953-48192-1-0























Co-funded by the Erasmus+ Programme of the European Union

Co-funded by the Erasmus+ programme of the European Union.
The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



GOVERNMENT OF THE REPUBLIC OF CROATIA

Office for Cooperation with NGOs

This project is co-financed by the Croatian Government Office for Cooperation with NGOs. The views expressed in this publication and video materials are the sole responsibility of HAŠK Mladost and can in no way be taken to reflect the views of the Government Office for Cooperation with NGOs.

5

2.	PHYSICAL, MOTOR AND PSYCHOSOCIAL ASPECTS OF DEVELOPMENT IN CHIL	_DREN
	AGES 6-11 THROUGH SPORTS AND PHYSICAL ACTIVITY	7
	2.1. Features of psychological development in children ages 6-11	7
	2.1.1. Physical and motor development	8
	2.1.2. Cognitive development	9
	2.1.3. Social development	13
	2.1.4. Moral development	14
3.	PHYSICAL EDUCATION LESSON PLAN	20
	3.1. Lesson structure and duration	20
	3.1.1. Introductory part of the lesson	21
	3.1.2. Preparatory part of the lesson	21
	3.1.3. Main part A of the lesson	22
	3.1.4. Main part B of the lesson	22
	3.1.5. Final part of the lesson	23
4.	PROGRAMME CHARACTERISTICS	24
	4.1. ASSUMPTIONS	24
5.	TEACHING UNITS AND TOPICS	27
	5.1. List of equipment needed for the implementation of the programme	36
6.	PROGRAMME	37
	6.1. The Smileyometer	44
	6.2. Alternative programmes	44
	LITERATURE	46
	PHOTO SOURCES	47

1. INTRODUCTION

#### **1** INTRODUCTION

The European Multisport Club Association (EMCA) was founded on the 8th of January 2013 in Rome by the Societa Sportiva Lazio together with five other founding members (Ferencvaros, Panionios, Olympiacos, Racing Club de France and Sporting Clube de Portugal) with the purpose of promoting the multisport orientation, its benefits and the multisport heritage that represents some of the oldest European sports organisations. On the 24th of March 2014 the membership was enlarged with nine new members, HAŠK Mladost was one of them. At the beginning of 2017 EMCA was established as an independent multisport organisation with headquarters in Brussels, Belgium. Currently EMCA is made up of twentytwo members.

In 2016 HAŠK Mladost (Croatia) as the coordinator and five other EMCA multisport members (Aalborg 1885 (Denmark), Sporting (Portugal), Lazio Basket (Italy), APOEL (Cyprus), Olympiacos (Greece), Crvena zvezda (Serbia) and another two EMCA partners EPSI (European Platform for Sports and Innovation, Belgium) and CONI Servizi (Italy) representing the "Sport MyWay – Multisport Coaches for Young Athletes" project were chosen to be part of the Erasmus+ Sport programme by the Education, Audiovisual and Culture Executive Agency (EACEA) for co-financing. The project has an 18-month duration focusing on several contents areas for its development and implementation. HAŠK Mladost was in charge of the coordination and technical implementation of the core activities and Crvena zvezda was in charge of hosting the basic instructor seminar where the working programme for the multisport approach was taught.

In order to provide the best possible education underlying the essential concept of the multisport orientation, an expert group has been established to study its methodology and its practical implementation in the different countries. The project focuses on children from ages six to eleven, which basically corresponds to the first four grades of the elementary schools in all of the countries involved. The reason children these ages have been chosen is because it is at this time that they generally start performing exercises that are not primarily focused on ludic movements but rather actual training for particular skills.

There are of course sports that begin training children even sooner in order to reach high-class competitiveness and results, but in this case one must take into account the average sports clubs and the age that they allow children to play sports. Children from ages 6-11 are widely accepted as it is at this age that children start learning general and specific physical skills and knowledge. Obviously the starting age for accepting children in sports clubs is different than the starting age for the practical training. The majority of sports clubs however generally start recruiting their youngest members before they are ready to learn the basic physical skills required for a particular sport.

A multisport approach contains different aspects of the sport and leisure contexts, which need to be formalised according to the international regulatory framework. In particular, the recent Call for Tender "Study on Sport Qualifications Acquired Through Sport Organisations and (Sport) Educational Institutes" has strongly contributed to developing a comprehensive knowledge of sports qualifications released by educational providers in the Member States and the employment in sport, by detecting the weight of sports workers in the national labour markets of the 28 national territories. According to this study, a multisport professional belongs to the "Instructing segment", which is focused on "the development of the athlete's performance at a non-competitive level. This segment also includes the sports people who have obtained qualified sports certifications – bachelor's degrees – master degrees and specialised programmes in sports disciplines (i.e. physical education, health) and courses in sports related areas such as recreation,

leisure, wellness and outdoor activities" (Study on Sport Qualifications Acquired Through Sport Organisations and (Sport) Educational Institutes, 2016 pg. 24). This definition places emphasis on the difference between a "coach" and a "sports instructor". In fact, a coach is mainly focused on developing the athlete's performance at a competitive level, usually focusing on a particular sport, whereas the multisport instructor focuses on several sports disciplines in order to develop all the different motor skills in a non-competitive/leisure environment. Therefore according to the European regulatory framework, each country participating in the Sport My Way Project has sports professionals presenting all the necessary competencies and skills to implement the multisport approach within the relative national context. Furthermore, this handbook will refer to the multisport professional as a "multisport coach/instructor".

The know-how and the experience of the coaching staff in multisport environments is different in all of the countries, depending on what sports they have included in their memberships, the quality level of the staff, the results they have reached and the strategy that that particular organisation is striving for. It has been noticed that the standard set of multisport abilities and skills required from the children in most of the sports clubs are quite similar in the different countries and traditions involved. The multisport environments have a unique advantage because as a result of their communication and cooperation, certain sets of skills are being trained and shared.

In order to share the best practice and experience with a wider public, the expert group has been given the task to explore, identify, express and provide written and visual examples of the sets of skills and their accompanying exercises. The idea is to provide guidelines for the implementation in average sports circumstances such as sports halls and playgrounds, along with identifying a few sets of skills for its implementation in specific environments, such as swimming pools. Each partner in the project and all the sports organisations are free to choose whatever setting they feel most suitable for the implementation of the project.

As modern technology requires constant development and adjustment, it is expected that only through the actual facilitation, in time, useful and honest feedback will be received, which will provide the means for constant updates of the professional contents and improvement.



picture 1 – HAŠK Mladost presents multisport at European week of sport 2017 in Zagreb

# 2 PHYSICAL, MOTOR AND PSYCHOSOCIAL ASPECTS OF DEVELOPMENT IN CHILDREN AGES 6-11 THROUGH SPORTS AND PHYSICAL ACTIVITY

It is already well known that practicing sports is not only useful for the physical and motor development of a child, but also for their psychological, and especially psychosocial development. By practicing sports children learn rules, social values and meet other children who represent a referential framework for the evaluation of their own competences. In order to enjoy a sports experience and develop motivation for practicing sports, which is a basic presumption for the adoption of active life habits, it is indispensable that within the framework of sports and physical activity children are able to fulfil their needs and achieve certain skills and knowledge which enable them to overcome the requirements of a sports environment. By doing so it is extremely important for sports and recreational activities to be carried out in accordance with the particularities of their developmental features.

#### 2.1. Features of psychological development in children ages 6-11

Developmental psychology is an applied psychological discipline, which studies the changes in behaviour and abilities that occur during development. Developmental psychologists have two goals:

- Describe the behaviours at each stage of the development (e.g. when children begin to catch a ball, which are typical mathematical capabilities for a seven year old)
- Discover the causes and processes which cause the changes in behaviour from one point in time to another (meaning the study of developmental stages) the aim is to research the role of heritage, upbringing, social environment, experience and their influence on development and changes.

Development represents a series of qualitative and quantitative changes which occur from the moment of conception to death (Vasta, Haith and Miller, 2005). Development is considered to be a result of combined activities, heritage and the environment, but in the background of the development there is a strong influence of biological processes, i.e. maturation which causes regular development of features defined by genes. As a result, development is not necessarily continuous, which is an important issue regarding sports and exercise from an early sports selection aspect. In some sports early selection is indispensable (e.g. gymnastics, ice-skating, rhythmic gymnastics), however, the selection criteria are not always defined nor are they the best. It is possible for a child not to be recognised or selected because they do not show a superior performance or they learn slower than others regardless of their level of motor skills. This may be due to less of a talent or developmental peculiarities, i.e. individual speed of development. It is therefore the task of experts who work with children in the area of sports and exercise to take into account the developmental features and to know the basic rules of development in order to adapt their programme to the child's needs as much as possible to help the child develop physical and motor skills and to feel good as a result of learning and doing various sports activities.

Child development is observed in four areas, i.e. through a number of developmental aspects such as:

- 1. Physical and motor skills
- 2. Cognitive skills
- 3. Social skills
- 4. Moral skills

This article will briefly explain some psychological features of physical and motor development, the cognitive, social and moral development of children from ages 7-11, i.e. younger schoolaged children. This is a period of middle childhood which, by definition, includes children from ages 6-11/12 (Vasta, Haith and Miller, 2005). It is possible to notice gender differences as boys are generally about one year behind girls in almost all segments.

#### 2.1.1. Physical and motor development

Physical and motor development of children ages 6-11 is a framework within which development occurs in other areas as well. Motor development is not only something that spontaneously affects a child, but the child can induce it by themselves and as a result we can see the conception of human motivation for achievement or efficiency. Motor development helps a child gain control over their body and uses it as a means to impact their environment and develop their competences. By moving and implementing motor skills children organise their world, learn about spatial relations, control their movements better and become more independent and efficient.

Even though a child has developed the basis of his/her primary movement patterns (walking, running, hopping, throwing, catching etc.) by the age of 7, children aged 6-11 have significantly developed perceptive and motor processes in comparison to pre-school children, which enables them to act with more structure and purpose in their environment. A seven-year-old child develops consciousness of their body, which includes consciousness about *laterality of the body* and consciousness about the fact that the body has two sides that move independently. The ability to distinguish left from right is almost perfect in the majority of children up to the age of 10, which means they are ready to comprehend some more complex instructions when exercising (Haywood and Getchell, 2005).

Another important segment that develops at this age is *directionality*, i.e. the ability to direct the body and parts of the body in space, as well as to understand spatial relations which help in catching and controlling objects in space.

From a motivational perspective, younger school-aged children are physically and motorically ready for new challenges. When including children in more complex and challenging sports activities with kinesiology contents, it is important to take care of the developmental features of their age by respecting the age limitations. At this age, children are extremely motivated and open to learning, which can be used to create the basis of knowledge and basic movement patterns which still do not have to be concentrated on a specific sport.

In younger school children ages 6-8, the emphasis should be on the development and upgrade of basic movement patterns which are the basis for various sports, e.g. apprehension on how to conduct an activity by following the rules and using them as a basis for the development of motor skills. It is therefore recommended to entice comprehensive motor development enabling children that age to learn about various sports which in turn will create a good basis for comprehensive development of their bodies' movements, various sports skills and subsequently easier sports specialisation.

Physical and motor development	Skills	Contents for improvement
laterality	the ability of lateral discrimination – distinguishing left from right	coordination exercises and introduction of bilateral exercises of the same movement patterns (from the age of 10 they are able to understand more complex instructions on one hand and 'copy' more complex movements on the other)
directionality	understanding spatial concepts, the ability to control the body and the objects in space	training grounds, exercises for managing the space and obstacles with or without props, exercises for changing movement directions
gradual upgrade of motor patterns	with age the capacity to learn more complex motor skills increases	learning connected motor tasks and more complex motor skills
more developed and larger muscle groups	children perform the movements better using their posture and large musculature	exercises for larger groups of muscles and postural musculature, gradually introduce exercises for smaller muscle groups with and without props
less efficient anaerobic system	decreased ability of anaerobic work, sufficient endurance capacity	shorter series of anaerobic exercises with a progressive load
better development of balance and kinaesthetic sense, oculomotor coordination	Better understanding and greater sense for the body and its movement	emphasis on rotation exercises, oculomotor coordination and balance
introduction of sports specific skills	perfection of basic skills and gradual adoption of sports specific skills	various exercises and tasks of specific sports events, monitoring the principle of progression

#### 2.1.2. Cognitive development

Children and adult thought processes are significantly different from one other, Jean Piaget (1896-1980), the researcher into a child's cognitive development assumed that children's cognitive processes develop regularly and in stages. Even though some children may be more advanced than others, the procedure is the same. He thought that children are like little researchers who actively act in their own environment, i.e. the child understands the world by acting in it. According to his theory, the process of cognitive development takes place through four limited time periods, being:

- 1. Sensory motor period (from birth to the age of 2);
- 2. Period of pre-operational thinking (from the age of 2 to the age of 5 or 6);
- **3.** Period of concrete operations (from the age of 7 to the age of 11 or 12);
- **4.** Period of formal and logical operations or abstract opinion (from the age of 12 onwards).

Younger school-aged children are in the *phase of concrete operations*. In this phase the thinking operations are performed on objects, i.e. the material on which the conclusions are made are physically present, they can be comprehended and managed through thinking about what they see. The need for operations is a characteristic of this phase of logical thinking. Children can add, subtract, understand simple logical rules and relations and solve logical problems with concrete objects.

Over and above what has been mentioned, children acquire *conservation* – they understand the characteristics of physical substances (e.g. mass, weight) when they change e.g. the shape (the plasticine ball – pancake); and they can simultaneously focus on various aspects of a problem *(decentralization)*. They stop being egocentric (egocentrism – tendency to consider only one's own conditions while neglecting the experience of others), and gradually accept the *opinion of others*.

A rich and stimulating surrounding as well as a child's involvement in various problem-solving activities, with sport and exercise being the most challenging, can thus further cognitive development and help a child transition faster through the various stages.

Cognitive maturity is a significant readiness factor for children to practice sports. It can be defined as a level of maturity for knowledge acquisition (Cecić Erpič, 2005). From a cognitive immaturity point of view, if a child engages in a sports activity too early or if it is too demanding as a consequence of elevated expectations from a child's coach or parent who require more from their existing cognitive abilities, it can cause numerous adverse consequences such as frustration, lower self-esteem, and the loss of interest in sport.

A younger school-aged child (e.g. 7 or 8 year old) involved in any form of regular training that teaches new motor skills is able to learn and perceive it's content differently to a somewhat older child. Children of that age are still not able to successfully carry out parallel processing, they are not able to consider more than two aspects of the content at the same time, as their attention span is too short and they cannot do automatic motions on both ends. They must first learn how to do them on their left side and then on their right side. If there are more issues to be considered, as is the case in a complex sports environment (sport games) or when studying something new, children may experience a problem. Children of this age scan the environment non-systematically, in an unorganized fashion, and differentiate important from unimportant with difficulty. This is why it is important to be patient when working with younger school-aged children as well as provide them with study breaks which are active, entertaining and relaxing activities.

The second important factor of cognitive readiness is the ability of a child to understand the reason for doing sports (Brustad, Babkes and Smith, 2001). Fry and Duda (1997) state that children under the age of 10-12 are not able to clearly differentiate the factors contributing to success in sport (effort, motivation, task difficulty, luck etc.). For example, the 11 year olds are not able to differentiate properly between effort and ability as factors contributing to success or failure in sports, which is why they can interpret them incorrectly which has a long term effect on their motivational structure. In other words, if 11 year old children think they are good at sports because they train and make an effort they are bound to be disappointed if they do not succeed because they do not take into consideration the talent for sport or more training by others. This is because they base their own quality primarily on the knowledge of their regular training sessions.

Cognitive development	Skills	Contents for improvement
concrete thinking	mental operations are conducted on physical, present objects	using concrete and obvious terms, poor understanding of more complex relations, reduced ability of understanding tactics and abstract terms
conservation	they understand the permanence of the characteristics of the matter	variations of the same tasks, application of various work models on the same content
improvement of attention	wide attention scope, limited time capacity, unorganized attention, do not differentiate important from unimportant	it is necessary to provide concrete and short information, use various simple instructions; provide short breaks; parts which need to be observed must be well highlighted; important: solid structure, children function well in a structured and well defined environment
limited learning capacity	children are gradually developing the ability to learn and forget	they learn best from illustrative demonstrations and imitation, they do not have the capacity to follow long technical instructions; they forget easily and miss details, multiple repetition is necessary
verbal reasoning skills and reproduction increases gradually	performance corrections are limited by not understanding the mistake	correction must be provided in various ways, check whether and what the children truly understood, ask them to repeat what was said

#### 2.1.3. Social development

A child's social development includes the methods of communication, typical patterns of behaviour, social interaction, conduct as well as attitudes and emotions seen in a child's interaction with adults and peers.

The first patterns of social interaction in a child begin within the family along with early experiences with other people who teach children about desirable and unacceptable behaviour by observing, awarding and punishing. These play a significant role in a child's social development. A child learns new social and cognitive skills through interaction with both children and adults, which requires a certain degree of cognitive maturity.

A child develops his/her social skills whilst interacting with others. A sports environment offers children a safe surrounding in which to understand prosocial skills through numerous possibilities for practising social life skills, such as peaceful interaction with others, the use of a common language, exchanging information and examining the similarities as well as mutual differences. The prosocial skills consist of a basic social skills group; functioning skills, dealing with feelings, stress as well as an alternative to aggression. (Brajša-Žganec, 2003). Children essentially learn social skills based on the models in their environment. A child may learn prosocial skills such as cooperability, responsibility, empathy, generosity, politeness, curiosity as well as skills including pugnacity, stinginess, entering into conflicts and egoism related to socialisation issues (Brajša-Žganec, 2003). A correctly shaped social environment contributes to the successful apprehension of social roles.

The participation in extracurricular sports activities implies recreational sport in which an educational and pedagogical role of kinesiology is executed. One of its main roles is to influence social development. In order to successfully meet these goals, it is important to be aware of the developmental characteristics of children in specific target groups. The research to-date has shown that children who have apprehended social skills and understand other people's emotional states tend to be better students, have less behaviour-related problems, are physically healthier, have better self-esteem and trust the people around them more. Children also develop deeper friendships, manage their emotions better, and recover faster after stress (Denham et al., 1997; Eisenberg et al., 1997, Moss et al., 1997).

#### Social development is based on two assumptions:

As social beings, children develop through the interaction with other important people – parents, siblings, family members, teachers, coaches and friends. These initial influences are very important, even more important than many others that come at a later stage in life.

Children develop strong emotional relationships at an early stage (especially with their mother), while early social development still has a strong impact. To the same extent, the emotional relationship with a coach or a teacher is also very important, and an adult working with a child has an immense responsibility. Every expert must be aware of being a role model to the child who learns from him/her in their social environment. It is an expert's duty to behave in a way that facilitates optimal learning and the apprehension of socially desirable patterns of behaviour and the system of values. The fact is that a teacher and a coach always represent a role model in the presence of a child who learns from them even when the specific teaching intent does not exist.

According to Erikson, the period of middle childhood (ages 6-12) is marked by the aspiration to learn the skills i.e. the feeling of inferiority in case of a failure. In other words, a child in this age group tries to be successful and competent by comparing him/herself to others. If successful, the child develops pride, the feeling of competence, a positive picture of him/herself and vice versa. Children at this age have a natural desire and need to achieve their goals, control their environment, improve themselves and learn new skills just for fun and are primarily intrinsically motivated in doing so. Children at this age look for pleasure in activities, focus their attention on exploration and enjoyment and not on the results or outcomes (Horga, 2000). During this phase, peers, coaches and teachers become exceptionally important to children.

Social development during this period is characterised by creating a group of friends based mostly on common activities, goals and similarities among peers who are becoming increasingly more important. Children also form individual friendships, peers become role models and a framework for developing social skills. Friendship changes from sharing toys (ages 6-7), to exchanging opinions and sharing emotions (ages 9-10), and then sharing problems, emotional support, trust and loyalty (ages 11-12) (Horga, 2000). The most important social values are considered to be sharing, cooperation and helping others. These are developed at the same time as the skill to compete on a regular basis while strictly adhering to rules, without lying, cheating or hurting the opponent. The last one mentioned emerges as a result of numerous adverse social influences which change children's basic needs.

The development-psychological studies also show that children from the age of 7 become increasingly more attached to social comparison, which as a consequence, makes them ready to compete in sports competitions (Cecić Erpič, 2005).

Taking into consideration these developmental abilities, the best recommendation for working with children this age is to provide them with a lot of emotional support and respect, which will enable them to satisfy their natural need for competence and skill improvement within a

#### / PHYSICAL, MOTOR AND PSYCHOSOCIAL ASPECTS OF DEVELOPMENT /

flexible game surrounding giving them an opportunity to create, explore, set new goals and make choices. If a child fails to satisfy these needs, the feeling of inferiority emerges resulting in lower self-esteem, self-dissatisfaction, and an adverse effect on personality development. Furthermore, if a child does not meet the need for emotional support (e.g. due to hostile parents, a teacher too strict or a cold harsh coach), an aggressive reaction may emerge which may lead to being rejected by peers (Barić and Horga, 2007). In this case, a child is more likely to become part of a 'vicious circle' i.e. to develop maladjusted behavioural patterns resulting from unsatisfied needs and the consequences will lead to unsatisfied needs once again, etc. In terms of motivation, the basic idea is to provide children with a positive experience whilst practicing sports i.e. create sufficient feedback in order to make them feel capable of their actions. This occurs especially when they have chosen the activity by themselves (which is mostly the case when dealing with extracurricular activities) as intrinsic motivation is encouraged and maintained which prevents children from giving up sports and/or choosing a different environment to accomplish their potential.

Social development	Skills	Contents for improvement
prosocial skills	<ul><li>Cooperation</li><li>Empathy</li><li>Politeness</li><li>Responsibility</li><li>Sharing</li></ul>	<ul> <li>group exercises and games</li> <li>pair practice</li> <li>leading and following exercises</li> <li>tasks which provide the possibility to organise and take over responsibility</li> <li>learning by cooperation</li> </ul>
Competence	<ul> <li>task completion</li> <li>acquiring new tasks</li> <li>confronting mistakes</li> <li>recognising positive feedback</li> <li>providing positive feedback</li> <li>encouraging and positive monologue</li> <li>self-confident physical and mental attitude</li> </ul>	<ul> <li>contents and tasks adequate to the child's abilities or somewhat higher (challenge)</li> <li>practise giving positive feedback</li> <li>apprehension of self-confident physical and mental attitude</li> <li>learning from a positive monologue</li> <li>target practice for facing a mistake as part of sport performance</li> </ul>
affiliation (group acceptance and belonging)	communication     team spirit and identity	<ul> <li>modalities of group work</li> <li>learning by cooperation</li> <li>acquisition of group routines</li> <li>creation of group targets</li> <li>trust exercises</li> <li>games and competitions</li> <li>emotional support practice</li> <li>acquisition of sport rules and sport behaviour</li> </ul>

#### 2.1.4. Moral development

Moral development refers to when a child develops attitudes, values and behaviour towards other people which are similar to the generally accepted social opinions, values, cultural norms, rules and laws. In other words, children learn what is good and what isn't, what behaviour is acceptable and what's not i.e. they learaccepn *moral reasoning*, the understanding and recognition of good, bad, correct, allowed, forbidden, mandatory as well as rules and obligations with respect to their society and its social norms.

Lawrence Kolheberg (1958), the US psychologist, is the creator of a multilevel theory of moral development. He sees moral development as a long-lasting and gradual process in which an individual goes through levels or stages of moral reasoning at a permanent rate. Although we develop at different rates within the moral development framework, the developmental flow is always gradual, it goes from lower to higher, to more mature stages of moral reasoning, bearing in mind that some never reach their highest level.

Younger school-aged children are at different stages of their moral development, most form part of the preconventional stage while others form part of the conventional morality stage. Somewhere in the middle of this age group, children start creating their own values, they are less subjective in their moral reasoning (they take into consideration both the intent and the damage when judging someone's behaviour, whereas younger children only consider the person who did the most damage to be guilty regardless of their intent).

The characteristics of the *preconventional* stage (ages 0-9) include basing moral reasoning on judging behavioural consequences. During this stage, children attempt to avoid punishment and satisfy their own needs. The carrot stick principle is applied, good and obedient behaviour leads to punishment avoidance. At this stage, children listen to their authorities (parents, teachers, coaches); they respect the rules and try to be obedient as they fear the consequence of punishment. During this stage of moral reasoning, children are not capable of understanding other people's perspective and observe the problem from somebody else's point of view.

During the next phase of moral development, which generally includes younger school-aged children, the morality facilitates a needs satisfaction – other people must serve the interests of a child, children adhere to rules, make friends and look for what they will get in return, everything is a compromise and an agreement for mutual benefit. Children follow the rules if they think that they will benefit from them. The rule of reciprocity also applies during this stage ('tit for tat'). Children are preoccupied with what is fair and prone to negotiation among themselves as well as with adults (e.g. 'I'll do it this way if you do it that way.'). At this stage, they start to understand that others also have their own needs and motives.

Children of ages 10-12 are at the start of the *conventional stage*. Moral judgments reflect social rules. Moral behaviour is in line with the rules, which applies to most. The basic rule is to adjust to others – the behaviour of the most is moral is, do to others what you would like them to do to you. Children try to be accepted and try live up to the expectations of their surroundings. Children do the right thing because it is good for their families, friends, and teams. They understand the concept of trust, loyalty and gratitude. They are not vindictive, and their moral behaviour complies with what their social environment considers to be morally correct.

Moral development	Skills	Contents for improvement
moral reasoning	situation assessment in line with the rules and age appropriately	using concrete and obvious terms, poor understanding of more complex relations, reduced ability of understanding tactics and abstract terms
sport behaviour and fairplay	adhering to game and sport rules	variations of the same tasks, application of various work models on the same content

In order for children to successfully train and fulfil the demands set by their selected sports, it is important that teachers and sports coaches understand the motives that make children want to do sports and exercise, what their needs are and how to satisfy them.

#### Why do children exercise?

The existing sport psychology literature offers numerous reasons which are summarised as follows, bearing in mind these differ among children:

- Competence (learning and improving skills),
- Affiliation (to be with friends and make friendships, to be accepted by others),
- Belonging to a group (to be a part of a team, team spirit),
- Health and fitness (get in shape and stay in shape),
- Competition, victory (excitement, skill demonstration),
- Pushing the boundaries,
- Social acceptance,
- Games, fun.

Teachers and coaches who understand these goals and motives can help children in two ways; the first being the planning of the programme and including the various activities to allow children the opportunity to achieve their various goals. For example:

- competence provide each child with an opportunity to show others what he/she has learned
- Apprehension of new specific skills
- Affiliation group work, encourage contacts and cooperation among children,
- Belonging to a group highlights the importance and power of a group/team,
- Health talk about the connection between exercise and health using personal and various other examples.
- Competition, victory ensure various competition conditions, think of an exacerbating circumstance during a competition to give everyone a chance to win,
- Pushing the boundaries introduce new, challenging, unusual activities and encourage children to try them out, not to give up and explore their own capabilities,
- Social acceptance commend various aspects of performance and attitude towards work,
- Games, fun allow children to pick their game. Play and laugh with them in an uncompetitive way.

The second way refers to coach sensibility and the ability to recognise and module a child's goals as well as ensure the conditions and circumstances in which a child is satisfied even when he/she loses, when he/she is not the best, etc. In this sense, a teacher may highlight some other aspects of behaviour as desirable (e.g. cooperation with the others, hard work and effort) by teaching children to focus on the process and not only on the results (Whitehead, 2006).

Working with younger school-aged children should facilitate the fulfilment of all these needs. The key to children's motivation for sports and exercise is the feeling of competence. A child that is able to practice a specific sports activity, regardless of his/her level or talent, will opt for this as a long-term activity. In other words, the feeling of competence prevents a child from giving up on an activity, whereas practicing sports and exercising has a long-term effect on facilitating the development of healthy life habits and an active life style from an early age, which as a result, also has long-term positive effects.



#### How do children develop the sense of competence?

Children develop the sense of competence by doing something that interests them in a challenging environment, perfecting themselves, having the possibility to demonstrate what they have learned and a successful experience as a result of their own work. From a child's point of view, when the efforts yield results (which can mean even the slightest improvement is acknowledged by a teacher or coach) – it will cause a sense of competence, attributing success to themselves and their own work, as well as their abilities and positive emotions, e.g. a sense of pride, satisfaction and enjoyment.

Children at a younger school age relate their physical competence to their efforts and hard work. Not having developed abstract thinking yet, they cannot distinguish properly between effort and ability; they tend to think that the person who tries the most is the best. On average, before the age of 12 most children do not understand the aspect of ability, some find it hard to understand that the result depends on both effort and the abilities, i.e. they do not understand that sometimes additional effort will not help in the way they hoped for.

Considering the fact that younger school-aged children base their success on their efforts and the task goal, it is thus the effort and the hard work that should be noticed, praised and monitored. From age 7 onwards there is a need to compare themselves with others and those in their segment, along with a need for feedback from the coach or the teacher. This plays an incentive role, especially for boys.

Competence is one of the dimensions of motivation – children who are encouraged to put in the effort, be persistent when faced with obstacles, taught that success and abilities are judged based on their own criteria (previous performance, headway, level of enjoyment) will develop intrinsic (inner) motivation, i.e. they will chose an activity that they enjoy, learn from and have fun doing and not because of external reasons such as results.

#### / PHYSICAL, MOTOR AND PSYCHOSOCIAL ASPECTS OF DEVELOPMENT /

On the other hand, children who value competence compared to others will be orientated towards the outside world and towards the outcome and external awards which contribute to the development of extrinsic (outer) motivation. This type of motivation includes a bit of a risk – when there are no external sources of motivation (victory, level etc.) motivation decreases and a child may give up the activity, if the same happens again.

The feeling of competence contributes to the development of a positive image of oneself – building the basis for self-confidence and self-respect from an early age.

Adults have to be aware of their own role in the development of this image that a child has about himself or herself – a teacher or coach achieves this with a different approach to children, with both verbal and nonverbal messages.

One of the main sources of self-confidence is "the mirror of the environment" – the way the environment reacts to the individual.

Teachers, parents and coaches may act positively to the development of a child's self-confidence in various manners; from expressing a positive attitude towards sports (sending a message that a child is doing something good and useful) to optimism that a child may acquire skills and meet the requirements (message: you are able, I believe in you), through the encouragement to persist when he feels overwhelmed. A positive outcome in such situations has an effect on all future situations and also in a child's life as it increases motivation and a child's self-respect.

#### How to act positively on the feeling of competence?

The strongest motivational instrument, which contributes to the development of competence, is feedback. Teachers and coaches can give feedback in the form of comments, praise or award, and it is important that preference is given to positive feedback. Research has shown that children and athletes of various ages react differently to feedback and evaluations by others when it respects the features of their cognitive and social development.

Younger children (age 8 and 9) prefer information given by adults (parents, coaches) while older children highly value the feedback and messages from their peers.

Feedback should be constructive, instructive, and appropriate for a child's age and be positively formulated. That does not mean that a teacher or a coach should always praise a child (even though it is widely known that there is "never enough praise") considering that in the initial phase of learning or sports development children often make mistakes.

When working with children, the way of reacting to a mistake is important precisely due to motivation. Children should learn that mistakes are part of learning and that they are expected, which a teacher or coach should repeat frequently. It is not recommended to punish mistakes and failures. If children understand that mistakes are part of the learning process, it will help them develop the feeling of competence (especially when mistakes give way to improvement) and it will not cause negative emotions. Teachers and coaches are expected to react by giving support and sending the message that they believe in the child and in his/her abilities, give corrective, specific and constructive feedback with respect to their age, monitor the headway and praise the effort, not only the result.

All feedback that refers to a mistake should be constructive i.e. contain the message on what was good, what was not and how to improve it. The so called 'sandwich feedback' is preferred, meaning that the feedback should start with something positive, warn about the mistake and give a suggestion on how to correct it and finish with something positive. In this way, a teacher or a coach makes sure that a child hears him/her, and does not experience it as something negative so he/she will be motivated to correct the mistake (for instance: "Anna, this attempt was significantly better that the previous ones, however you are still late with the turn, so next time try to swing earlier, I see that you are almost there and I am sure you will learn it soon").

From a motivational aspect, the ratio of feedback is also important. Too much feedback does not have a real purpose; it can lead to a bad feeling (despite the best intentions of teachers or coaches). A child may start to feel incompetent because of constant corrections which lead to a feeling of incompetence. A teacher or a coach should bear in mind that feedback is timely and that in the right proportions it encourages the development of an internal self-regulation system, i.e. that by giving feedback on one hand the teacher is sending the message that the child is being monitored, and on the other hand that he/she is teaching the child about something important, correct or wrong, in order for a child to start monitoring himself, check his actions, motivate himself and finally, activate certain internal sources of satisfaction.

Reward represents a specific aspect of feedback. In the framework of sports and exercising, awards are often present per se (in the form of achieved results), but if we wish to manage someone's motivation by rewards it is important to take into account some aspects of awarding them. A reward should be earned, i.e. a result for when something has been done really well in order for a child to perceive it as earned. In this case, the reward increases the feeling of competence and has a positive influence on internal motivation. If a reward is seen as a means of "control", a reason why a child does something, it can be seen as controlling and even decrease motivation which depends primarily on external sources.

What is extremely important for the development of motivation is creating a *motivational climate*, i.e. environments which nurture cooperation, learning, playing and perfection. Except for teachers and coaches, younger school-aged children learn from their peers. This is exactly why teachers and coaches should emphasise the importance of cooperation and mutual support, contrary to mutual rivalry and competition.

When a child feels that he/she is taking part in a sports activity not because he/she wants to but because of the fear of failure, this limits them causing them to feel sad, inhibited, angry or uncomfortable. The sport then becomes a burden, more of a job than fun, and if the result is a criteria, they may feel dissatisfied or a failure and see the only solution to be quitting. The challenge in such a situation is to find true motivational sources, adjust the circumstances to the needs of a child as much as possible and help the child to adjust to them.

#### Children are not little adults

There are significant differences between children and adults regarding sports and exercise. Sometimes those differences are neglected, forgotten and overseen. Children are not little adults. Children are children – small people with their own behaviours, attitudes, needs, goals, motifs and rights; and we should respect them and consider them as such. In the framework of sports and extracurricular activities it means that the system of work, rules, equipment and competitions should be adjusted to children. This essentially means nurturing a positive approach, doing everything in our power to benefit children and developing both their strengths and their happiness.

The European Federation of Sports Psychology (FEPSAC) (1996) presented a summary after much research in children's sports providing simple and easily comprehensible guidelines on how to deal with children and young athletes.

Their recommendations are the following:

- 1. Children's sports should be organised and conducted in a way that primarily increases the benefits of a child.
- 2. Professionals working with children and young athletes should understand and accept that children are not mini-adults.
- 3. The subculture of children's sport should be organised according to their own system of rules and competition.

#### / PHYSICAL, MOTOR AND PSYCHOSOCIAL ASPECTS OF DEVELOPMENT /

- 4. Children should be given the possibility to try different sports, early specialisation should be avoided.
- 5. A motivational climate directed towards learning and cooperation should be dominant, and the emphasis should be focused on achieving personal goals, the joy of learning, developing new skills and the feeling of autonomy.
- 6. Adults should show interest in their children's activities, and if appropriate, encourage independence and cooperation regarding the decision-making processes of their children.
- 7. Coaches and teachers should regularly contact parents. Parents should be an important part of the sports team when children are engaged in sport at a higher level.
- 8. Persons working with children and sport should attend courses for additional education on children's needs, developmental features and rights.
- 9. Adults working with children in sports should be able to recognise the signs of potential problems such as, anxiety, eating disorders etc. and seek professional help if needed.

If we wish to have an active population in the future, the habits of an active lifestyle and love towards sports are built during childhood. What we need to aim for is to have children and young athletes who are primarily focused on perfection and apprehension of sports skills, who feel good and competent because of that and feel that they are capable, that they enjoy themselves and have fun. In such a way, their achievements will be greater, they will be able to overcome challenging goals, by making efforts, persevering when it is difficult and by doing so building confidence in themselves, feeling good about sports and exercise and being satisfied on a general level. Strategically the final aim would be to teach them to recognise and copy such feelings and experiences in everyday life and develop a permanent need for an active lifestyle.



picture 3 - Project program implementation by Olympiacos

#### 3 PHYSICAL EDUCATION LESSON PLAN

A lesson in Physical Education is an organisational form of work, which ensures planned and systematic activities regarding the anthropological status of children. The aims of the lesson achieved through the programme include the influence on morphological and functional abilities of children, their cognitive and conative dimensions, improvement of motor achievements, development of their moral features and apprehension of motor skills and theoretical knowledge (Findak 2001: 36). Achieving these aims demands certain complexity, i.e. organisation and implementation with the aim of engaging a child's attention and motivation and their participation in a physical and psychological sense.

#### 3.1. Lesson structure and duration

The lesson structure consists of four intertwined parts, which are referred to as introductory, preparatory, main and the final part of the lesson (Mejovšek, Vukotić 1954; Findak 2001; Neljak 2011). Furthermore, the main part of the lesson usually consists of two parts which are structurally different and are referred to as part A and part B. The lesson in carried out in a timeframe of 45 to 60 minutes. The timeframe is primarily defined by the kinantropological features taught to the children in that lesson.

The structure of every lesson is the same and the duration of the individual parts is different because it is connected with the total time of the lesson's duration. The lesson begins with the introductory part lasting 4 to 5 minutes, making up 10% of the total lesson. Then there is a preparatory part of the lesson lasting 8 to 10 minutes which makes up a 20% of the total lesson. The main part of the lesson lasts 26 to 30 minutes, about 60% of the total lesson. The duration of this part of the lesson may often be extended in practice. The main part A of the lesson lasts 18 to 22 minutes, about 40% of the lesson, while the main part B lasts 8 to 12 minutes, about 20% of the lesson. The lesson ends with the final part which usually lasts 4 to 5 minutes, which constitutes about 10% of the total lesson.



Tetare 4 - Instructors explaining the exercise to enhance

#### 3.1.1. Introductory part of the lesson

The importance of the introductory part of the lesson in which the body is prepared for the demands of exercising and is given tasks starts from the first lesson, regardless of the psychological and psychomotor differences of children and adults. Various games and activities, which include the basic skills of movement and manipulation of equipment, stimulated in a fun and simple way to increase the level of physical activity, develop motor skills and mentally prepare children for more complex subsequent tasks. Taking into consideration their growth and development, the equipment and entire environment should be adjusted accordingly in order to achieve the maximum level for the development of abilities, experience and satisfaction in the quickest and easiest way. The purpose of the introductory part of the lesson is the psychological and physiological preparation of children for exercising in class (Neljak 2011: 113). In order to achieve this, appropriate activities should be selected which will create the requisite for a pleasant atmosphere in the class; otherwise the psychological and physiological adjustment of the children will decrease or worse not be obtained.

From a psychological point of view it is extremely gratifying to begin the lesson by stimulating the children's motivation for exercising and creating a quality working atmosphere. This can be achieved through an encouraging presentation of the coach who begins the lesson with an introductory part. It can thus be said that in most cases the introductory part bears crucial significance on this part of the lesson because otherwise the quality preconditions for the continuation of exercising will not be achieved. Considering the fact that there are no global rules for motivating children and creating a quality working environment, it must be said that the greatest effect will be achieved by coaches who are emotionally and physically engaged in the implementation of the teaching process (ibid: 113). By doing this it is possible to motivate children to exercise, whereas inactive coaches will most likely obtain the opposite effect.

From a physiological aspect, the beginning of exercising increases the activation of the locomotor system which stimulates many organic functions (ibid: 113). Firstly, the blood, muscle and overall body temperature increases reaching its maximum within the first five minutes of exercising, which almost matches the duration of the introductory part of the lesson (ibid: 113). The increase in the body temperature results in the stimulation of many important bodily functions necessary for the physical activity. From a physiological point of view, the purpose of the introductory part of the lesson is to stimulate as many organic functions as possible which help the children continue exercising. A methodological basis for exercises in the introductory part of the lesson is the key to achieving a psychological and physiological component. In order to achieve them, the methodological basis shows that it is necessary to: (1) select interesting and appropriate exercising content (2) appropriately define the intensity of its load and (3) implement it efficiently. Otherwise, the psychological and physiological adjustment of children for exercising in class will decrease or not be achieved (ibid: 114). Considering the everyday exercises and the amount of available literature the content is divided into the two following groups:

- (a) Running and simple movement structure and
- (b) Elementary games (common, team and tag games) (ibid: 119).

#### 3.1.2. Preparatory part of the lesson

The purpose of the preparatory part of the lesson is to prepare the locomotor system and to stimulate the children's motor abilities which are important for the exercise activities in the main part of the lesson (Neljak 2011: 127). In order to achieve its purpose at this part of the lesson, preparatory exercises should be selected based on two equally important criteria. The

first refers to the fact that the selected preparatory exercises should be activated in space and time where those parts of the children's locomotor system will be put under strain for most of the main part of the lesson. The second refers to the fact that the selected preparatory exercises should primarily stimulate those motor skills which are the basis of the implementation of the programme and all the other contents in the main part of the lesson. Over and above a well thought-out selection, the purpose of this part of the lesson is achieved through its planning and implementation of the preparatory exercises. It is a well known fact that any motor task that depends on the kinematic features of its movement structure stimulates certain parts of the locomotor system and the necessary abilities for their performance differently. As a result of this in order to fulfil the purpose of the preparatory part of the lesson, general and special (specific) preparatory exercises are used. General preparatory exercises are considered to be stretching, strengthening and relaxing exercises, which due to their biomechanical movements are not related to the movement structures of physical activities in the main part of the lesson. These exercises help the general activation of the locomotor system and motor abilities. Special preparatory exercises are biomechanically related to the movement structure of the exercising activities in the main part of the lesson, and do not necessarily have to be stretching, strengthening or relaxing exercises. Their function is to stimulate specific neuromuscular coordination which is similar to the movements in the main part of the lesson. Preparatory exercises can be carried out with or without equipment, and can be divided into static and dynamic exercises. Preparatory exercises without equipment are the easiest to perform as they can be executed in one place or in motion. The preparatory exercises in one place using equipment usually include balls, rackets, balance ball, ropes etc., whereas the equipment used for the preparatory exercises in motion generally include motion balls and ropes.

#### 3.1.3. Main part A of the lesson

The main part of the lesson is 26-30 minutes long accounting for about 60% of the overall lesson duration. It consists of the main part A, which is 18-22 minutes long and accounts for about 40% of the overall lesson duration, and the main part B, which is 8-12 minutes long accounting for about 20% of the overall lesson duration. The purpose of the main part A is the efficient implementation of the programme content aimed at achieving key educational, kinesioanthropologic and upbringing tasks in a lesson (Neljak 2011: 146). Tasks set for this part of the lesson are primarily focused on the understanding and the improvement of the different motor skills as well as the enhancement of motor achievements. Children use both their practical and theoretical knowledge whilst exercising to gain a better understanding of the game. Much emphasis is placed on the activities when planning the lesson and creating the programme. It is therefore necessary to decide the content for each exercise i.e. the lesson, as well as the objective of each task or a game. These games are practiced before the tasks. The tasks follow as a logical continuation and are considered an example of a specific content which may be used before a more complex kinesiological contents which in turn will facilitate the pupils' comprehension. The same games can be used in the main part B of the lesson i.e. during the preparatory and final parts of the lesson.

#### 3.1.4. Main part B of the lesson

The main part B of the lesson is 8-12 minutes long accounting for about 20% of the overall lesson duration. This part of the lesson aims at the situational application of motor skills and a high activation level of functional motor abilities in children (Neljak 2011:159). The most frequently used contents of this part of the lesson include sports games, relays and team elementary games, respectively. Part B of the lesson is composed of competitive contents which result in

a high intensity of the physiological load imposed on a pupil and can be acknowledged through turbulent or emotional reactions in the children.

#### 3.1.5. Final part of the lesson

The lesson comes to its end in its final part, which is usually 4-5 minutes long, accounting for about 10% of the overall lesson duration. The purpose of this final part of the lesson is to reduce the physical and mental functional activities and to recover efficiently (Neljak 2011:168). The main part of the lesson causes a moderate to high fatigue of the central nervous and locomotor system. Although the games in this part of the lesson have a low physiological load, the practical part is somewhat different in that it entails a higher physiological level depending on the goals that have been set when developing the plan. Although the games implemented at this part of the lesson have a low physiological load, the practical approach is sometimes different. The level of the physiological load depends on the goals set to be achieved during the lesson. The emotional loads can be low, moderate and high and it is the coach in these situations that has the greatest influence on the children's emotional levels once the lesson has finished. The final part of the lesson consists of different types of games such as joint, relay and team elementary games.

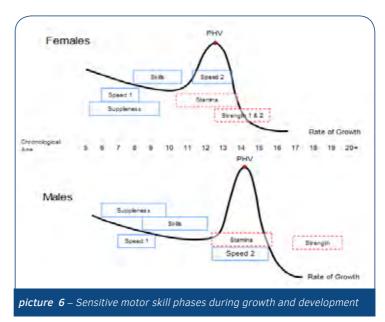


#### **4** PROGRAMME CHARACTERISTICS

#### 4.1. ASSUMPTIONS

The programme will introduce children to skill development exercises, which are not or are rarely present in PE. Special attention is dedicated to skills which are undergoing their sensitive phase and that are susceptible to a greater influence at that age. Due to the fact that the number of lessons in the experimental programme is relatively low, the importance is placed on introducing the children to these motor structures more than the development of their skills. The skill apprehension and development programme must be conducted through low intensity activities using fun games and activities. The coordination is fundamental for the maximum performance of motions during almost all of the activities. The coordination is a complex motor activity, which can be defined as motor intelligence. It marks the ability to control the motions of the entire

body or individual parts of the locomotor system. Well developed coordination enables a child or young athlete to understand and perform various motor tasks, and as a result correct their motor skills faster. (Kujundžić, 2016). The first stage of the multiphase development in a child or young athlete is the initiation various low intensity contents which influence development of basic coordination. Motor abilities and skills such as balance and precision are not monitored within the school programme. (Findak, 1996.)



For children aged 6-11, it is important to understand basic motor skills. During this period, motor skills that facilitate a successful understanding of space, obstacles and support, must be developed and mechanised as much as possible. These skills will also serve as a requisite for doing a sport. In children aged 6-11, sensitive phases suitable for the development of motor abilities and skills emerge. Therefore, content aimed at the development of such abilities and skills must be present in PE as well as during extracurricular activities. As a result of the sensitive periods needed for development in early ages, coordination abilities must start as early as possible. (Milanović, 2010). The coordination is crucial for performing many tasks engaging large muscle groups such as walking, running, maintaining balance, jumping, throwing, catching, etc.

It is very important to develop certain motor skills at this age, as they will have a positive effect on a child's self-esteem as well as the development of their character.

Usually different types of lifting, carrying, throwing, catching, hanging, pushing and pulling are considered as the basic motor skills used for overcoming active and passive resistance (body mass). Children need to master these exercises according to their capabilities. (Findak i sur., 1992.). During children's basic coordination trainings, it is important to engage large muscle groups which move the entire body such as walking, running, maintaining balance and jumping, which children do spontaneously and through games (Crnokić, 2011). Using only one of the

basic coordination classifications would be too general and too specific. General coordination serves as a basis for developing specific coordination.

Coordination is manifested as a fast and regular performance of complex motor tasks i.e. fast resolution of motor issues. This ability is often called 'motor intelligence'. Coordination abilities must be developed as early as possible given proof of the sensitive periods for their development at early ages (Milanović, 2010).

As coordination is a complex motor ability, it can be divided into several factors: (Crnokić, 2011):

- 1. Speed coordination
- 2. Rhythmic coordination
- 3. Fast apprehension of a motor task
- 4. Timing
- 5. Space-time orientation
- 6. Coordination of reorganised motion stereotypes
- 7. Agility
- 8. Balance (static, dynamic with open or closed eyes)

Coordination can be developed through several basic stages (Crnokić, 2011):

- 1. Carrying out standard technical structures of a certain sport
- 2. Carrying out all exercises on the opposite side (left-handed on the right side and vice versa),
- 3. Changes of speed and rhythm during the exercise,
- 4. Change of familiar technique elements,
- 5. Adding new motions to familiar techniques,
- 6. Increased load in situational exercises,
- 7. Learning technical skills in other sports.

Agility is an important characteristic in the motor development of children, as it controls the body and its balance when changing direction. The development of agility is very complex and requires specific types of activities studied for each individual child. The success in agility tests is highly influenced by coordination (Joao et al., 2014).



According to research regarding the long-year development of an athlete (LTAD), the levels can be divided into 7 important phases (Pic. 2.) in which the second and the third phases include children aged 6-12. The phases of basic motor abilities and skills ("Fundamental") include understanding motor structures that require coordination and agility. The third phase ("Learn to train") brings the motor abilities and skills that have been learned to the initial level of mechanisation.

In the phase "Fundamentals" the understanding of motor skills is recommended: agility, balance, coordination and speed (ABC'S – Agility, Balance, Coordination and Speed) which will be developed through exercises such as running, jumping, throwing, catching, hitting and falling, while in the phase "Learn to train" the level of these skills is brought to the phase of initial mechanisation.

During the activities of children aged 6-11 the volume and intensity of the activities should be low and each activity should be carried out under supervision (Kelvin et al, 2005). All younger age groups should work on coordination for at least 10–15 minutes in each practice session. As a result of possible nerve fatigue, it is not recommended to spend more time on coordination exercises (Drabik, 1996).

When choosing the exercises one should consider the equipment available for those exercises within the various schools and therefore choose the exercises accordingly. It is however unrealistic to expect significant development of motor abilities considering the relatively few number of lessons and relatively little stimulus on every segment of motor skills.

The aim of this programme is to enable children aged 6-11 to master skills through games which can be applied in any other physical activity. It is extremely important to apply a wide range of skills because at that age, sensitive phases appear when they are faced with the greatest possible impact.

Besides the basic goal, which is the development of versatile skills, it is of utmost importance to carry out these lessons through games. According to experience, about 70% of children up to the age of 13 years old quit physical activities because they did not include fun elements (Balyi & Hamilton 2001).

During the implementation of the programme, it is preferable to pay attention to the features of children aged 6-11 (Kelvin et al, 2005).

FEATURE	IMPACT ON TRAINING	COACH'S REACTION
The size of the heart increases proportionally as the entire body grows	Capacity of endurance is sufficient for almost all demands	The coach should know if a child is able to perform an aerobic task
Anaerobic system has not developed	Decreased ability of anaerobic work	Plan very short series of anaerobic activities
A child's metabolism is not as efficient as an adult's	Children use more oxygen when expressed in absolute values proportional to the body size	Must not expect the same results as an adult
Large muscle groups are more developed than small muscle groups	Exercises performed by large muscle groups are carried out better by children	Emphasis on exercises for large muscle groups. Gradually introduce coordination exercises for smaller muscle groups.
Children have a shorter time tolerance for exercising at high temperatures	Children show signs of over-heating or over-cooling earlier	Acclimatisation in children lasts longer so they need longer warm-ups
Motor stereotypes get more sophisticated and the balance mechanism develops with the development of middle ear	Increase of agility, balance, coordination and flexibility	Emphasis on coordination exercises and kinaesthetic feeling.
Strength is developed based on the nervous system	Increase of strength without muscle adaptation	Lots of coordination exercises

#### **5** TEACHING UNITS AND TOPICS

The curriculum will include units and topics, which are often already present in the programme of the first four years of elementary school and supplemented with exercises for the development of agility, balance and precision. For each teaching unit there will be a greater number of tasks and the programme implementer will select them according to the conditions in the school. In order to standardise the programme as much as possible, all schools will receive an initial package of equipment which has rarely been used in the elementary schools educational plan and programme.

The following motor skills will be developed by the following motor tasks in about 10 to 20 lessons:



picture 8 – Implementation of the activities in schools

#### / FIRST GRADE /









UNITS ANS TOPICS	ACTIVITIES
Walking and running	Walking and running with a change in direction  Walking along a line Walking along a rope  Cyclic movements at various paces up to 1 minute Sprint up to 20m from a standing start Free running over hurdles 20cm high
Jumping	Two-leg and one-leg hops on a marked area 3  Two-leg jumping/skipping over a short rope in one place 4  Hops in mixed support along a Swedish bench
Throwing and catching	Throwing a ball from one place with the left and right hand (T) Throwing lighter balls in the air in various ways and catching them (H) Throwing lighter balls on the ground in various ways and catching them (H)
Rolling	Side rolling from left to right Rocking in lying position Forward roll down a slope
Climbing and crawling	Crawling and wriggling in various ways Going up and down the Swedish ladder 5

UNITS ANS TOPICS	ACTIVITIES	
Hanging and pushing	Various positions of hangings and grips 6  Various mixed supports in one place and in motion on the floor / exercisers Reverse hand support with legs on various support systems  Handstand on shoulder blades	
Games	Free play and guiding the ball (F) Free play with less players on a marked area (3:3,4:4) (F)	
Agility	Run Through One Foot In (AL*) Run Through Two Foot In (AL*) High skip (each leg in one zone or each leg in each zone) (AL*) Two-leg hops (two zone forwards, one zone back) (AL*) 5-10-5 (CD*)	
Balance	Standing on one leg with eyes open and closed Carrying a ball on a ping-pong racket Fencing with balloons on a bench Lifting a skittle when standing on one leg Walking along a rope	
Precision	Shooting a target on the wall with a tennis ball 7 Throwing a ball in the basket on the floor 8 Kicking the ball in the goal Darts (vacuum)	

















UNITS ANS TOPICS	ACTIVITIES
Walking and running	Walking in defined speed Cyclic movements in various paces up to 2 minutes Fast walking up to 30 m from standing start Walking on narrow area Running over low hurdles (5-10 hurdles in a row, 15 – 25cm high)
Jumping	Two-leg and one-leg hops in one place and in motion with various tasks 2 Two-leg hops over small obstacles Side step with legs together over smaller obstacles Hopping over a short rope in motion Mount onto a 40cm high elevation, various types of dismounts 3
Throwing and catching	Shooting the target with a ball from various distances (F) Throwing lighter balls at a wall in various ways and catching them (T, H) Aiming the target on a wall by bouncing it off the floor (T,H) Passing the ball from one place to a team member in motion (H,B) Passing the tennis ball in motion (T)
Rolling	Rolling forward down a slope Rolling forward 4
Climbing and crawling	Climbing on obstacles of 80 cm  Climbing on Swedish ladders, getting down a slope and vice versa 6
Support	Vary sitting and support positions on different pieces of apparatus Hand stand touching against a vertical mat

UNITS ANS TOPICS	ACTIVITIES
Games	Playing by passing the ball from left to right hand in one place (H) Dribbling the ball with the left and right hand in a straight motion (H) Dribbling the ball with the inner side of the foot (F) Passing and stopping the ball with the inner side of the foot (F) Banging on the door with the inner side of the foot (F) Rolling two or three balls on the floor (B, V, F, H, T) with hands, in motion to the agreed marking
Agility	Run through with one foot in (AL*) Run through with two feet in (AL*) Icky shuffle (AL*) In-in, out-out (AL*) Lateral in-in, out-out (AL*) Lateral High Knees (AL*) One foot in, two feet out (AL**) Sprint and back pedal (CD*) Side shuffle (CD*)
Balance	Standing on one leg with open and closed eyes Walking along a line Walking along a rope Carrying a ball on a ping-pong racket Fencing with balloons on a bench Lifting a skittle when standing on one leg
Precision	Shooting a target on the wall with a tennis ball Throwing a ball in the basket on the floor 8 Kicking the ball in the goal Darts (vacuum) Shooting a target on the wall by bouncing it off the floor (T)



















UNITS ANS TOPICS	ACTIVITIES
Walking and running	Cyclic movements at various speeds up to 3 minutes 1 Fast walking up to 40m from standing start Rhythmic running over hurdles up to 30cm high Walking along a line 2 Walking along a rope Walking up a slope on a narrow bench 3 Running over low hurdles (5-10 hurdles in a row, 15 – 25cm high)
Jumping	Two-leg hops over small obstacles Side step with legs together over small obstacles High jump from horizontal run-up and takeoff with left and right foot Jumping over a long rope Jumping up onto a support structure by squatting at an elevation of 60 cm, straight dismount
Throwing	Throwing the long ball from a running start Throwing a medicine ball of 1 kg with both hands – put Shooting a target on the wall by bouncing it off the floor Passing the ball from one place to a team member in motion H, B) Passing the tennis ball in motion (T)
Rolling	Rolling forward Rolling forward from one place over a low obstacle (ball, medicine ball etc.) Fall over the shoulder (J) Fall backwards (J)
Climbing and crawling	Dragging along a slope Climbing on square ladders
Support	Mount on the lower bar into the front support Cartwheel 7
Pulling and pushing	Pulling and pushing a team member in various manners without equipment

UNITS ANS TOPICS	ACTIVITIES
Games	Passing and catching the ball in one place (H) Dribbling the ball with the left and right hand in one place and in a straight movement (B) Basic passing and catching the ball with two hands in one place (B) Passing and catching the ball with two hands in motion – basketball two-step (B) Dribbling the ball by rolling it with a bottom part of the foot (F) Dribbling the ball by rolling it with a sole (F) Passing the ball in motion (F) Stopping the ball with the bottom part of the foot after bouncing it off the floor (F)
Agility	Run through one Foot in (AL*) Run through two feet in (AL*) Icky Shuffle (AL*) In-in, out-out (AL*) Lateral in-in, out-out (AL*) Lateral high knees (AL*) Triple step (AL**) Quad step (AL**) One foot in, two feet out (AL**) X drill (CD*) S-10-5 drill (CD*) W drill (CD*)
Balance	Standing on one leg with eyes open and closed 7 Walking along a line Walking along a rope Carrying a ball on a ping-pong racket Fencing with balloons on a bench Lifting a skittle when standing on one leg Passing the ball with one hand in support Shooting a target on the wall with a tennis ball
Precision	Throwing a ball in the basket on the floor 3 Kicking the ball in the goal Darts (vacuum) Shooting a target on the wall by bouncing it off the floor (H) Passing the ball from one place to a team member in motion (H)

















UNITS ANS TOPICS	ACTIVITIES
Running	Cyclic movements at various speeds up to 4 minutes  Fast running up to 50 m from standing start Running over low hurdles (5-10 hurdles in a row, 15-25cm high)
Jumping	Two-leg hops over small obstacles 2 Side step with legs together over small obstacles High jump from side run-up with left and right leg Two-leg mount on the take-off board and straight jump Jumping over a long rope with two-leg hops and steps 3
Throwing and aiming	Shooting a moving target with a ball from the distance of 3-5 m (T) Throwing a medicine ball of 1 kg with two hands from various positions Aiming at a target on the wall by bouncing off the floor (H) Passing the ball from one place to a team member in motion (H,B) Passing the tennis ball in motion (T)
Rolling	Connecting rolling forwards and backwards in various ways Falling over the shoulder (J) Falling backwards (J) Goalkeeper's roll
Climbing	Climbing on a sailor's ladders Climbing on a rope and a pillar up to 2m high
Hanging and support	Front hanging on the rings Standing hang with front swing into the standing backward hang

UNITS ANS TOPICS	ACTIVITIES
Pulling and pushing	Pulling and pushing a team member in various ways with the help of equipment 4
Games	Passing and catching the ball in motion (H) Mini handball (H) Dribbling the ball with a change of direction in motion (B) Throwing the ball in the basket with one hand above after dribbling – basketball two-step (B) Children's basketball (B) Passing and catching the ball from overhead passing in the volleyball position (V) Dribbling the ball in the middle of a foot ridge (F) Hitting the door in the middle of a foot ridge (F)
Agility	Icky Shuffle (AL*) In-in, out-out (AL*) Lateral in-in, out-out (AL*) Lateral high knees (AL*) Triple step (AL**) Quad step (AL**) One foot in, two feet out (AL**)  X drill (CD*) 5-10-5 drill (CD*) W drill (CD*) Slalom weave drill (CD*)
Balance	Standing on one leg with eyes open and closed Carrying a ball on a ping-pong racket Fencing with balloons on a bench Lifting a skittle when standing on one leg Passing the ball with one hand in support (T)











## 5.1. List of equipment needed for the implementation of the programme

- Agility ladders
- Plastic cones
- Jumping rope
- Micro hurdles
- Tennis balls
- Handball balls
- Basketball balls
- Footballs
- Exercise mats
- Swedish bench
- Swedish ladders
- Rope thick (walking)
- Table tennis racket and ball
- Balloons
- Baskets (mobile on the floor)
- Scarves
- Darts with vacuum

#### In the initial set each school will get:

- Agility ladders
- 10 plastic cons
- 10 ropes
- 10 micro hurdles

#### **6** PROGRAMME

In this chapter a working programme of 20 lessons will be elaborated so that the structure of each lesson will have corresponding contents and duration. Generally the introductory part consists of running and simple elements of movement, the preparatory part consists of dynamic exercises of strengthening, stretching and relaxation, while in the main A part the contents are mostly games in which the acquired motor skills are applied. In the main B part of the lesson with the application of games the competition character is represented, while the final part consists of selected contents with which activities of physiological and physical functions are lowered with the aim to reach effective recovery.

The first lesson introduces the basic movements to the child while it emphasises the correct execution of the exercises and the proper body position. In the second lesson basic movements are stressed through various forms of running and jumping and how they are used through games. For the third and fourth lesson the goal is to influence the neuromuscular stimulus with elements of muscular endurance, balance and agility. The fifth suggests introducing motor movements into tasks for agility and games. The following lessons are based on biotic and fundamental kinesiologic motor knowledge from the areas of running, jumping, balance and precision. On the eighth lesson the exercises should have a higher intensity, especially in the area of running and applied in games, while the ninth should have a lower intensity.

The tenth lesson focuses on development of explosive strength, where jumping, agility and quick changes in direction take place, as well as throwing and aiming. Each following lesson should emphasise high level of adopted motor skills, so that in the following classes it would be possible to acquire and perfect the more advanced motor skills and knowledge. In the fifteenth lesson lie modified biotic and fundamntal kinesiology motor skills, such as elements from higher hanging and resisting, as well as climbing and crawling. The last lessons should be dominated by low intensity, such as balance and precision, focus on acquired skills reached through activities and games. The last lesson should be directed towards acquired motor skills through games, agility and precision.



## / EMCA STUDIA /

# Lesson 1

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Agility
Main part A of the lesson	18-20 min	Rolling
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Climbing and crawling

# Lesson 2

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Jumping
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Precision

# Lesson 3

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Hanging and support
Main part A of the lesson	18-20 min	Climbing and crawling
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Balance

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Pulling and pushing
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Throwing and hitting
Final part of the lesson	4-5 min	Precision

## Lesson 5

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Rolling
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Throwing and hitting

# Lesson 6

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Jumping
Main part A of the lesson	18-20 min	Balance
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Precision

# Lesson 7

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Hanging and support
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Climbing and crawling
Final part of the lesson	4-5 min	Throwing and hitting

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Pulling and pushing
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Precision

## / EMCA STUDIA /

# Lesson 9

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Rolling
Main part A of the lesson	18-20 min	Climbing and crawling
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Balance

# Lesson 10

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Jumping
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Throwing and hitting
Final part of the lesson	4-5 min	Precision

# Lesson 11

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Hanging and support
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Climbing and crawling

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Pulling and pushing
Main part A of the lesson	18-20 min	Balance
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Precision

# Lesson 13

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Rolling
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Throwing and hitting
Final part of the lesson	4-5 min	Climbing and crawling

# Lesson 14

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Jumping
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Precision

# Lesson 15

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Hanging and support
Main part A of the lesson	18-20 min	Climbing and crawling
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Balance

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Pulling and pushing
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Throwing and hitting
Final part of the lesson	4-5 min	Precision

## / EMCA STUDIA /

# Lesson 17

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Rolling
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Climbing and crawling

# Lesson 18

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Jumping
Main part A of the lesson	18-20 min	Precision
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Balance

# Lesson 19

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Hanging and support
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Throwing and hitting
Final part of the lesson	4-5 min	Climbing and crawling

Part of the lesson	Duration	Lessons and topics
Introductory part of the lesson	4-5 min	Running
Preparatory part of the lesson	8-10 min	Pulling and pushing
Main part A of the lesson	18-20 min	Agility
Main part B of the lesson	8-12 min	Games
Final part of the lesson	4-5 min	Precision

## PHYSICAL EDUCATION LESSON PLAN

School					
Instructor					
Lesson / Unit					
Grade		Numb child		M	F
Date					
Objectives					
STRUCTURE			ACTIVITY		DURATION
Introductory part					
Preparatory part					
Main A part					
Main B part					
Final part					
Equipment					
Facilities	Indoor gym		Outdoor gym	Other	



#### 6.1 The Smileyometer

In order to assess the children's happiness through a multisport approach during PE lessons, a PE enjoyment rating scale will be used. It uses a Likert-type scale with five drawings of faces ranging from very sad to very happy.

The most used instrument in the Fun Toolkit is the Smileyometer (Read, 2008). This is a VAS based on a 1–5 Likert scale, and uses pictorial representations as shown in Pic. 3. The Fun Toolkit is presented to the children in a horizontal row with supporting words under the faces, as recommended by Borgers et al. (2002); children are asked to tick one face. PE enjoyment is assessed with the question: "How do you feel about PE classes"? Response options were five "sad/happy" faces from a frowning to a smiling face. The measure provided an indication of direction and intensity of PE enjoyment.



#### **6.2.** Alternative programmes

If there is the possibility, a part of the programme can be substituted with the following:

- Swimming teaching beginners or teaching swimming techniques
- · Skate board















- 1. Barić, R. i Horga, S. (2007). Psychometric properties of the Croatian version of task and ego orientation in sport questionnaire (CTEOSQ). Kinesiology, 38 (2), 135-142.
- 2. Balyi, I. and Hamilton, A. (2001). Key to Success: Longterm Athlete Development. Sports Coach, Autumn.
- 3. Brustad, R. J., Babkes, M. L., & Smith, A. L. (2001). Youth in sport. In R. M. Singer, H. A. Hausenblass, & Janelle, C.M. (Eds.). Handbook of Sport Psychology. 2nd edition, pp. 604–635. New York: Wiley.
- 4. Cecić Erpič, S. (2005). Psihološki vidiki usmerjanja otrok v kakovostni in vrhunski sport. U: G. Jurak (ur.), Jurak, G., Kovač, M., Strel, J., Starc, G., Žagar, D., Cecić Erpič, S., Paulič, O., Bednarik, J., Bučar Pajek, M., i Lorenci, B. "Sportno nadarjeni otroci in mladina v slovenskem šolskem sistemu". Ljubljana, 2005 (str. 37 53). Ljubljana: Fakulteta za sport, Inštitut za kineziologijo; Koper: Univerza na Primorskem, Znanstvenoraziskovalno središče, Inštitut za kineziološke raziskave, Založba Annales.
- 5. Crnokić, S. (2010). Testovi AST 6-11, http://www.skolski-sport.hr/testovi-924.html accessed, 25-05-2017.
- 6. Crnokić, S. (2011). Opće koordinacijske vježbe u treningu djece 6-10 godina starosti.
- 7. Denham, S. A., Mitchell-Copeland, J., Strandberg K., Auerbach, S. & Blair, K. (1997). Parental contributions to preschoolers' emotional competence: Direct and indirect effects. Motivation and Emotion, 21:65–86.
- 8. Drabik, J. (1996). Children and Sports Training. Island Point, VT: Stadion Publishing Company.
- 9. Eisenberg, N. (1997). Handbook of child psychology (5th ed., Vol. III). New York: Wiley.
- 10. Findak, V. (1989). Metodika tjelesne i zdarvstvene kulture Priručnik za nastavnike razredne nastave. Školska knjiga, Zagreb.
- 11. Findak, V. (2001). Metodika tjelesne i zdravstvene kulture. Školska knjiga,
- 12. Fry, M.D., Duda, J. L. (1997). Children's understanding of effort and ability in the physical and academic domains. Research Quarterly for Exercise and Sport, 68, 331 334.
- 13. Grosser, M., Schonborn, R. (2002). Competitive Tennis for Young Players: The Road to Becoming a Top Player. Meyer & Meyer Sport Verlag, Hamburg.
- 14. Haywood, C. i Getchell, N. (2005). Life Span Motor Development. IL, Human Kinetics.
- 15. Horga, S. (2000). Children in sport and physical activity: match or mismatch of needs and demands. U: R. Pišot i V. Štemberger (ur.), A child in motion Proceedings, Ljubljana: Univerza v Ljubljani, 24 38.
- 16. ITF School Tennis Initiative: teacher's manual. ITF, London.
- 17. Joao, P.V., Simoes, I., Alves, L., Santos, L., Pereira, A., Mota, M.P. (2014) Physical activity with agility motor development for children ages 6–10. Science & Sport. Volume 29, Supplement, October 2014, Page S48.
- 18. Kelley, P., Beebe, V. (2001). Introducing children to the game of tennis. Loomis Graphics, Clearwater, Florida.
- 19. Kelvin B. G., Penfold, L., and Giorgi, A. (2005) A Guide to Developing Physical Qualities in Young Athletes. Printed in Australia for Movement Dynamics Pty. Ltd.
- 20. Kujundžić, F. (2016). Višestrani razvoj sposobnosti i znanja djece tenisača. Kineziološki fakulteta Sveučilišta u Zagrebu (Diplomski rad).
- 21. Medbery, R. (2002). Coaching Youth Tennis 3rd Edition (Coaching Youth Series). Human Kinetics Publishers, Champain, Illionis.
- 22. Mejovšek, M., Vukotić, E. (1954). Metodika nastave fizičkog odgoja. Školska knjiga, Zagreb.
- 23. Milanović, D. (2010). Teorija i metodika treninga. Zagreb: Kineziološki fakultet
- 24. Neljak, B. (2011). Opća kineziološka metodika. Priručnik za studente VI. semestra Kineziološkog fakulteta Sveučilišta u Zagrebu, Interno izdanje.
- 25. Read, J.C. (2008). Validating the Fun Toolkit: an instrument for measuring children's opinions of technology. Cogn Tech Work 10:119–128
- 26. Shephard, R. J. (1994). Aerobic Fitness and Health. University of Toronto, Human Kinetics, Toronto.
- 27. Study on Sport Qualifications Acquired Through Sport Organisations and (Sport) Educational Institutes, (2016), Call for Tender, http://www.blosokics.be/Sporteneu/Documents/160901\_Study\_on\_Sports\_Oualifications 2016.pdf accessed 26-6-2017
- 28. U Jukić, I., Gregov, C., Šalaj, S., Milanović, L.,Trošt-Bobić, T., Bok, D. (ur.), Kondicijska priprema sportaša, Zbornik radova 9. godišnja međunarodna konferencija, Zagreb, 25.-26.2.2011. (str. 105 114). Zagreb: Kineziološki fakultet Sveučilišta u Zagrebu; Udruga kondicijskih trenera Hrvatske.
- Vasquez, R. J. (1999). Tennis For Kids: Over 150 Games to Teach Children the Sport of a Lifetime. Carol Publishing Group, Secaucus, N. J.
- 30. Vasta, R., Haith, M.M. i Miller, S.A. (2005). Dječja psihologija. Jastrebarsko: Naklada Slap.

- PICTURE 1. HAŠK Mladost presents multisport at European week of sport in Zagreb, presented by HAŠK Mladost, photographer Ines Jakopanec
- PICTURE 2. Children asking questions, presented by HAŠK Mladost, photographer Ines Jakopanec
- PICTURE 3. Project program implementation by Olympiacos, presented by Olympiacos
- PICTURE 4. Instructors explaining the exercise to children, presented by HAŠK Mladost, photographer Ines Jakopanec
- PICTURE 5. HAŠK Mladost programme implementation, presented by HAŠK Mladost, photographer Ines Jakopanec
- PICTURE 6. Sensitive motor skill phases during growth and development, http://advancedathletesperformance.com.au/ programs/long-term-athlete-evelopment-ltad/10-key-factors-that-effect-ltad/ accessed 20-05-2017
- PICTURE 7. Long term athlete development, http://canadiansportforlife.ca/sites/default/files/LTAD%20Stages%20 horizontal.jpg accessed 20-05-2017
- PICTURE 8. Implementation of the activities in schools, presented by HAŠK Mladost, photographer Ines Jakopanec
- PICTURE 9. Aalborg programme implementation, presented Aalborg
- PICTURE 10. Lazio programme implementation AL drills, presented Lazio Basket
- PICTURE 11. Smileyometer awaiting completion, http://www.mlevel.com/blog/designsprint/ds-happinessrating-png/accessed 20-05-2017
- PICTURES 12. Summer Camp MyWay in Zagreb, photographer Ines Jakopanec
- PICTURES in chapter 5 were ceded by the head of photography and filming of the video materials Marijeta Čelić

A PDF of this Multisport handbook EMCA Studia I, together with the videos and photos that explain the exercises can be downloaded from following URL: www.multisportclubs.eu/emcastudia







In the modern world children tend to perform in the physical sense worse than children 25 and 50 years ago. Reasons for this are cultural, social, civilisational and technological. In order to provide a new approach, based on centuries of experience from the most prestigious European sport families, such as Lazio, Olympiacos, Sporting, HAŠK Mladost or Red Star, have entered an Erasmus+ Sport project to procure an inclusive and complementary method of tackling this negative trend for children in the age group 6-11 years.

The multisport approach consists of a programme that envisages practical exercises that can be introduced to the first 4 grades of elementary schools. The expert guidance was lead by Professor Goran LEKO, PhD from the University of Zagreb (Faculty of Kinesiology), who is also a member of the Executive Board of the oldest Croatian multisport organisation HAŠK Mladost from Zagreb. Apart from the already mentioned sport organisations, the project was realised by Aalborg 1885, APOEL and by supporting organisations such as CONI Servizi and EPSI (European Platform for Sports and Innovation). This multisport handbook that explains the fundamentals and the concept for each of the school grades can also be downloaded from the following website address:

www.multisportclubs.eu/emcastudia

