Guidebook

“Using NFE and sport methodology for inclusion of youngsters with disabilities”

With the support of the Erasmus+ Programme of the European Union

PROJECT:

"Overcoming the limiting realities creatively: Sport methodology in youth work for inclusion", funded by the JUGEND für Europa, the German National Agency for the Erasmus+ Youth programme.

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PUBLISHER:
Youth Power e.V., Germany

Berlin, Germany
2020.

With the support of the Erasmus+ Programme of the European Union

INTRODUCTION

This Guidebook “Using NFE and sport methodology for inclusion of youngsters with disabilities” is made for education of youth workers and sport coaches with the aim of including youngsters with disabilities into their everyday activities using sport as a method and a tool. It serves as a basis for quality knowledge management and future capacity building of organisations which work with youth, including non-governmental organisation, governmental institutions and sport clubs. The guidebook provides an in-depth overview of all the topics relevant to inclusion in sport – non-formal education, sport methodology, disability and recommendations for methodology.

Beginning of the booklet provides the explanation of the basic terminology which will be used throughout the text. The focus then changes to sport methodology from a general perspective. This chapter provides introduction to sports training and session planning.

Inclusive space chapter offers practical advices on how to enable equal participation by adapting the space, equipment and the attitude toward inclusion. Adapted physical activity is proven to be highly effective when working with participants with disability, so this chapter gives a detailed overview of models, types and exercises for this methodology.

As we are aware of the benefits of physical movement, youth work and sport help develop a wide range of competences – social, lingual, cultural, etc. We further analyse aims and objectives of working with youth and we explain how sport youth work can improve different competences of its beneficiaries of different abilities.

This booklet gives a number of practical advices on how to work with different abilities’ youth, how to prepare yourself as a youth/sport worker, your participants and your surroundings to include those with different needs. It provides a template of Individualised education plan and helps in setting up one’s first training plan with sport activities.

ABOUT THE PROJECT

According to the World Health Organisation (WHO) and their Factsheets on Health-enhancing physical activity (2015), physical activity can take place in a range of settings. Alarming figures from Member States of the European Union (EU) indicate that 6 in every 10 people above 15 years of age never or seldom exercise or play a sport, and more than half never or seldom engage in other kinds of physical activity, such as cycling or walking, household chores or gardening. Research also indicates that adults and older people from low socioeconomic backgrounds, minority ethnic groups, as well as people with disabilities engage in less physical activity and are harder to reach than others in terms of the promotion of physical activity.[1]

Sport is important for everyone, also for people with disabilities. It's important because it's good for health and offers the chance to know people and to make new friends, as well as it can become a very serious passion, useful for further personal development. Playing sports is a right of people with disabilities, as it is also written in the UN Convention. Active lifestyles, physical activities and sports are fundamental elements for the cognitive development and the social inclusion of the people with disabilities. Physical activity promotes well-being, physical and mental health, prevents disease, improves social relations and quality of life, produces economic benefits and contributes to environmental sustainability.

Nowadays, still it is reality that people with disabilities have less opportunities and arguably less favourable experiences than their peers, in the sport area of life. “Typical barriers for people with disabilities to participate in sport include lack of awareness on the part of people without disabilities as to how to involve them in

[1] World Health Organisation (2015): “Factsheets on health-enhancing physical activity in the 28 European Union member states of the WHO European Region”; https://ec.europa.eu/assets/eac/sport/library/factsheets/eu-wide-overview-methods.pdf,accessed April 2020

teams adequately; lack of opportunities and programmes for training and competition; too few accessible facilities due to physical barriers; and limited information on and access to resources."[2]

Through youth sport work and sports, persons without disabilities interact with persons with disabilities in a positive context forcing them to reshape assumptions about what persons with disabilities can and cannot do.

However, non-formal education (NFE) educators and youth workers/leaders working with this target group often have little or no experience in using sport as an educational tool. Many do not know how to maximise the potential of sport as a method within their regular youth work, despite of the fact that sport activities can be considered one of the most valuable NFE experiences for children and youngsters. On the other hand, the sport trainers often are even less ready and prepared to work with special needs youngsters and they often don't have skills or time or resources to promote inclusion of people with disabilities.

Our project is trying to put the above-mentioned needs and EU Guidelines/policies into action by developing new curricula and methods for empowering both youth (work) organisations, as well as the sport organisations - to increase their capacity building and human resources for quality envisioning and promoting the physical activity events (youth sport work and sport events) that thus contribute to increasing participation in quality sports by more youngsters, and especially by children and youngsters with disabilities.

Therefore, objectives of the project are:

- Bring positive and long-lasting effects on participating and indirectly on non-participating (youth and sport) organisations and youth/sport workers by enhancing knowledge management with new innovative youth work and sport resources and training models/curricula in order to provide quality youth sport work programmes for inclusion of youngsters with different abilities in our communities.
- Support youth workers and sport trainers in acquiring and developing key competences as youth trainers (of other youth/sport workers) in the field of using sport methodology in youth work and sports for inclusion of different abilities' youngsters.

[2] Kiuppis, F.: "Sport and Disability: From Integration Continuum to Inclusion Spectrum"; Routledge; 2018

- Engage into intensive dissemination and exploitation activities of existing and newly produced products and attract more different abilities' youngsters to our youth/sport work activities, and thus increase inclusion among youngsters.

Project activities are:

- A1 – Project Management activities
- M1 – Kick-off transnational project meeting of the partners
- O1 – Guidebook "Using NFE and sport methodology for inclusion of youngsters with disabilities"
- M2 – 2nd transnational project meeting
- O2 – Curriculum "Training youth workers and professional sport trainers in using sport methodology for inclusion and interaction of different abilities' youngsters"
- C1 – LTTA Training of trainers, piloting of the O2 - Curriculum
- M3 – 3rd transnational project meeting
- O3 – Toolkit "Sport methods/games – adapted for using in youth / sport work for inclusion and interaction of different abilities' youngsters"
- M4 – 4th transnational project meeting
- E1, E2, E3 – National conferences in Italy, Croatia and Serbia
- E4 – International conference, Germany
- M5 – Evaluation transnational project meeting

Project partners are:

1. Youth Power Germany e.V.
2. Udruženje Aktivni mladi u Europi – Serbia
3. Basketball club „Virtus Basket" – Serbia
4. Udruga za unapređenje suvremenih životnih vještina Ostvarenje – Croatia
5. Wizard, obrt za savjetovanje – Croatia
6. Fondazione Don Giovanni Zanandrea Onlus -Italy

CONTENTS

1 BASIC TERMINOLOGY -INTRODUCTION TO YOUTH WORK, NON-FORMAL EDUCATION AND DISABILITY

Educators working in the world of sport are often trained as sport coaches. As such, they are experienced in playing and organising sport activities. However, traditional sport organisations and clubs are "made up largely of youngsters with a talent for sport, whose families actively support their participation and who have the financial means to pay for it."[3] One consequence is that the sport coaches and the sport organisations usually have little or no experience in dealing with young people with fewer opportunities (with mobility issues, any form of disability, poor family, no motivation for sport, etc.). As much as they are experts in physical development, it happens that they often lack the theoretical knowledge or general competences for working with this target group of youngsters.

On the other hand, most "**youth workers** work with young people with fewer opportunities on a regular basis. They are mostly trained to recognise the social needs of individuals and to propose methods which directly respond to those needs."[4] However, youth workers are usually not experts nor practitioners in sport methodology. They might have some experience in "traditional activities like football, basketball or excursions to the swimming pool to supplement their programme, they are generally not trained to steer the learning processes which come out of sport activities."[5] It happens that youth workers are not sport enthusiasts and they are not familiar with different sport options for young people, regardless of their background or abilities. They might not have the equipment, facilities or the support from the local community to initiate sport activities.

Both groups and sectors are looking in to expanding their area of work, to innovate it and include more. This booklet offers insight from both perspectives..

1.1 YOUTH WORK IN GENERAL

Youth work, as a practice and the field of work, has emerged in late 20th century to answer a growing need of the developing modern-day competences of young people. General social work had already been focused on young people with fewer opportunities, including those with disabilities, but mainstream youth were expected

[3] Schroeder K., Geudens T. - "Fit for Life"; SALTO Inclusion Resource Centre, 2011. Available from https://www.salto-youth.net/downloads/4-17-628/FitForLife.pdf, accessed April 2020; page 9
[4] Ibid.
[5] Ibid.

to develop competences in formal education system, through family or friends or even later in their life, through work life.

According to the Council of Europe, "youth work had been recognised as broad term covering a wide variety of activities of a social, cultural, educational, environmental and/or political nature by, with and for young people, in groups or individually. Youth work is delivered by paid and volunteer youth workers and is based on non-formal and informal learning processes focused on young people and on voluntary participation. Youth work is quintessentially a social practice, working with young people and the societies in which they live, facilitating young people's active participation and inclusion in their communities and in decision making."[6]

Youth work has three essential features[7]:

- Young people choose to participate;
- The work takes place where the young people are;
- It recognises that the young person and the youth worker are partners in a learning process.

From the beginning, it has been widely accepted that youth work usually takes place in organisations, profit or non-profit, such as youth centres, youth clubs or institutions working directly with youth. However, European Union recognised the need for inclusion of young people with fewer opportunities. Based on the Salto Inclusion and Diversity, these include[8]:

- Social obstacles: young people facing discrimination (because of gender, ethnicity, religion, sexual orientation, disability, etc.), young people with limited social skills or anti-social or risky sexual behaviours, young people in a precarious situation, (ex) offenders, (ex) drug addicts, young and/or single parents, orphans, young people from broken families, etc.
- Economic obstacles: young people with a low standard of living, low income, dependence on social welfare system, long-term unemployed youth, homeless young people, young people in debt or in financial problems, etc.

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[6] Council of Europe, https://www.coe.int/en/web/youth/youth-work, accessed April 2020

[7] "Working with young people: the value of youth work in the European Union"; European Commission, 2014; http://ec.europa.eu/assets/eac/youth/library/study/youth-work-report_en.pdf; accessed April 2020, page 4

[8] Kloosterman P., Brown C. - "No offence"; Salto Youth Inclusion Resource centre, 2010. Available fromhttps://www.salto-youth.net/rc/inclusion/archive/archive-resources/inclusiongroups/inclusionoffenders/InclusionOffendersWho/, accessed April 2020

- Disability: young people with mental (intellectual, cognitive, learning), physical, sensory or other disabilities.
- Educational difficulties: young people with learning difficulties, early school-leavers and school dropouts, lowly or non-qualified persons, young people that didn't find their way in the school system, young people with poor school performance because of a different cultural/linguistic background, etc.
- Cultural differences: young immigrants or refugees or descendants from immigrant or refugee families, young people belonging to a national or ethnic minority, young people with linguistic adaptation and cultural inclusion problems, etc.
- Health problems: young people with chronic health problems, severe illnesses or psychiatric conditions, young people with mental health problems, etc.
- Geographical obstacles: young people from remote, rural or hilly areas, young people living on small islands or peripheral regions, young people from urban problem zones, young people from less serviced areas (limited public transport, poor facilities, abandoned villages...), etc.

This guidebook will focus on young people with disabilites and their integration and inclusion. Last 20 years, European Union and relevant stakeholders have been promoting development and integration of youth work in a broader range of areas – mainly sport clubs, IT sector and schools.

1.2 NON-FORMAL EDUCATION

Non-formal education (NFE) has been developing in parallel with youth work and eventually became its essential component. It reinforces youth work's essential features, mentioned above, and uses them as a basis for the learning. We usually differentiate 3 basic types of the education – the formal, the non-formal and the informal one (picture 1)[9].

Formal	Non-formal	Informal
Usually at school	At institution out of school	Everywhere
May be representative	Usually supportive	Supportive
Structured	Structured	Unstructured
Usually prearranged	Usually prearranged	Spontaneous
Motivation is typically more extrinsic	Motivation may be extrinsic but it is typically more intrisic	Motivation is mainly intrisic
Compulsory	Usually voluntary	Voluntary
Teacher-led	May be guide or teacher-led	Usually learner-led
Learning is evaluted	Learning is usually not evaluated	Learning is not evaluted
Sequential	Typically,non-sequential	Non-sequential

Picture 1[10]

Non-formal education methodological features are[11]:

- Balanced co-existence and interaction between cognitive, affective and practical dimensions of learning;
- Linking individual and social learning, partnership-oriented solidarity and symmetrical learning/teaching relations;
- It is participatory and learner oriented;

[9] Eshach H. (2007.) - "Bridging In-school and Out-of-school learning: Formal, Non-Formal and Informal Education"; by. Journal of Science Education and Technology, 16 (2), 171-190; p.174
[10] Ibid.
[11] Youth work essentials, https://www.coe.int/en/web/youth-portfolio/youth-work-essentials

- It is oriented to learning by doing, using intercultural experiences and encounters as a learning device.

Therefore, taking into account characteristics and methodological features of non-formal education, we can point out these basic values of non-formal education:

Values liked to personal development:

- Autonomy;
- Critical attitude;
- Openness and curiosity;
- Creativity.

Values linked to social development:

- Communication capacity;
- Participation and democratic citizenship;
- Responsibility;
- Team work;
- Conflict resolution.

Ethical values:

- Solidarity;
- Tolerance and respect.

Interestingly enough, sport is based on the same values as the non-formal education. For many years, it was thought that sports education for young people is primarily focused on physical development of talented individuals or recreational players. Now, we recognise that sports teaches young people the same values as non-formal education, even youth work in general. The question remains - why sports coaches don't use the non-formal education methods and why youth workers don't use more sports methods?:

1.3 DISABILITY – TERMINOLOGY, MODELS AND CLASSIFICATION

Understanding of reduced and limited physical or mental functionality is important for the work of experts in the field of physical activity and youth sport work activities. Knowledge of the changes that occur due to an impairment and disease, whether they occur at the level of physical function, anatomical structures/function and/or mental function, are equally important for the creation and successful implementation

of the youth sport work programmes/activities. Physical activity is one of the most important prerequisites for the human health. When it comes to people with disabilities, participation in physical activity is far more significant. In addition to the positive effects on biological health, participation in physical activity, sports and sports recreation, enables individuals with disability to reintegrate into society, and thus contributes to their mental and social health.

According to the World Health Organisation (WHO) "around 15% of the global population – over a billion people – lives with some form of disability, of whom 2–4% experience significant difficulties in functioning. Many of these people require assistive technologies such as low-vision devices, wheelchairs or hearing aids. This number is expected to double to 2 billion by 2050." (WHO global disability action plan 2014-2021", 2015[12]). And for sure, this is something that concerns all of us. The people with disability usually are exposed to discrimination, exclusion and marginalisation. Since it concerns all of us, it means that we are also the ones who can change and improve that. The youth sport work activities get all the people closer, improve the physical and mental activities of everyone no matter of their disability/ability.

Before entering into details on how the youth sport activities are improving the quality life and inclusion of the people with disabilities, it is important to **define the terminology used, models of disability, classifications and different perception**.

When it comes to the issue of disability, the first obstacle that experts face is related to the choice of the most appropriate terminology to define a person with a disability. In recent years, several experts have favoured the expression "situation of handicap". The privilege of this terminology is the reflection of a more complex condition about the individual; it involves the context in which a person is living (material and relational aspects) and also the historical and cultural context. D. Mautuit (1995[13]) saw the three aspects in the "situation of handicap": the first one concerns the individual and the identification of his deficit; the second one concerns the context and the identification of possible obstacles; the third one concerns the necessary relations providing help, which are important for each human being, in particular for the people with disability. We can add to this last aspect also the need to accept the challenge to reduce handicaps with a join power. Nowadays, it is

[12] WHO Global Disability Action Plan 2014 - 2021 https://www.who.int/publications-detail/who-global-disability-action-plan-2014-2021, accessed April 2020

[13] Matuit D. - Uintégration sociale et professionnelle des personnes en situation de handicap: des concepts à l'évaluation des actions; Revue Europeenne du Handicap Mental, 1995

difficult to have clear ideas about the name to use. However, the reasons for not having the clear ideas are rather interesting, positive and legitimate. Each name can either widen the distance or, on the other hand, increase the common belonging and the proximity. Claudio Imprudente, an Italian expert with a serious congenital brain injury has proposed the term “diversability” in a provocative way; the same provocation that could provoke to define a poor person, differently rich. Even though we are aware that every person possesses skills and possibilities, the risk for some people of not discovering their own ability is strong.

According to the Convention of the Rights of Persons with Disability “Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others” (article 1 of the Convention[14]).

In general, the term disability refers to some condition or characteristic that is linked to a particular individual and, therefore is to some extent embodied. Disabilities are present when activities that are routinely performed by people (e.g. walking, speaking, reading) are somehow restricted or cannot be done in accustomed ways. A person who has congenital blindness, has a disability[15]. An individual who had a stroke in the right hemisphere of the brain and consequently has little mobility in his/her left leg, has a disability. Disabilities can also occur in a combination (mobility and speech limitations).

According to the International Classification of Impairments, Disabilities and Handicaps (ICIDH[16]) published by the World Health Organisation, the following terms are defined as:

- Impairment as "loss or abnormality of a structure, psychological, physiological or anatomical function";
- Disability as "any limitation or loss (resulting from impairment) of the ability to perform an activity in the manner or extent considered normal for a human being";

[14] Convention of the Rights of Persons with Disability https://www.globalhealthrights.org/wp-content/uploads/2013/10/Convention-on-the-Rights-of-Persons-with-Disabilities-CRPD.pdf

[15] Dunn D. - The Social Psychology of Disability; Oxford University Press, 2014; available at https://books.google.hr/books?id=1oMjBQAAQBAJ, accessed April 2020

[16] International Classification of Impairments, Disabilities and Handicaps https://apps.who.int/iris/handle/10665/41003

- Handicaps such as the "condition of disadvantage resulting from an impairment or a disability which in a certain subject limit or prevents the fulfillment of the normal role for that subject in relation to age, sex and socio-cultural factors".

In this conception, the distinction between impairment, disability and handicap was interpreted in terms of the relationship between causes and effects: the impairment determines the disability and the disability causes the handicap.

Models of disability

Throughout the history, there have been various theories about the disability, from the traditional, the medical, to the social model with all its variations. Today, we could say that the dominant model is the one that unites both the disability and the social aspects of the phenomenon itself because it poses the problem of disability outside the individual, in the relationship between individual disability and barriers in society and the environment.

The traditional model sees disability as a burden imposed on the community by one of its members and is addressed by rejecting or isolating the member who is the bearer of that problem. According to the medical model, disability is a health condition and as any disease should be treated/healed. The last model that mainly dominates today, is the social model that sees disability as a social issue, and the problem does not lie in the disability of the individual but in society itself. This model evolves as the movement of people with disabilities is strengthened, from the motive of charity, through the viewing of disability from the point of view of human rights, to the creation of conditions for equal opportunities for people with disabilities with others.

The medical model of disability sees disability as a problem that belongs to an individual with disability.[17]It is not seen as an issue to concern someone else with, rather than the individual. In this approach, it is believed that the individual with disability has a problem with his or her body thereby, limited in preforming their daily role as a result of the body problem.

The social model has been developed by the people with disabilities themselves and is a different way of looking at disability. This model says that disability is actually the result of an interaction between people who have a certain physical, intellectual or

[17] The social and medical model of disability, https://www2.le.ac.uk/offices/accessability/staff/accessabilitytutors/information-for-accessability-tutors/the-social-and-medical-model-of-disability

sensory disorder and the environment, which is filled with physical, communication and social barriers. According to this model, the environment is the one that needs to be changed in order to enable people with disabilities to fully participate in society on an equal basis with everyone else. The social model sees people with disabilities as subjects with their own rights, not as objects, and therefore emphasises the respect for their rights equally with other people in society.

The biopsychosocial model of disability leads to new ways of classifying people's disabilities depending on whether you focus on the body functions and structure, on the person's activity or participation, or on the contextual factors. The biopsychosocial model of disability emphasises the fact that disability is not only caused by impairments or because of pathophysiological reasons but also due to some psychosocial and lifestyle factors (Gatchel, 2015)[18].

Classification of disability

The International Classification of Functioning, Disability and Health [19] - ICF's advantage is that it maps health components as the basis for understanding the dynamics between health problems, functioning, disability, and contextual factors. Functioning and disability are understood as a result of complex interactions between biological, psychological, and social factors. The ICF offers a common language for studying the dynamics of these components and their implications, and therefore the basis for understanding drivers' understanding of improving the living conditions of people with disabilities. The general purpose of the ICF classification is to provide a standard and unified language that serves as a reference model for the description of health and related states.

The ICF is organised into two main parts. The first part deals with *functioning* and *disability*, while the second part covers *contextual factors*. Each part has two components:

- Functioning and disability - a component of bodily functions and body structures, and a component of activity and participation;
- Contextual factors - environmental factors and individual factors.

[18] Petasis A. - "Discrepancies of the Medical, Social and Biopsychosocial Models of Disability; A Comprehensive Theoretical Framework"; The International Journal of Business Management and Technology, Volume 3 Issue 4

[19] International Classification of Functioning, Disabilities and Health https://www.who.int/classifications/icf/en/

The primary focus of the classification is on functioning and disability as health and health-related components of well-being. Contextual factors represent external (environmental) and internal (individual) factors that affect functioning in specific life situations.

Definitions (as per The International Classification of Functioning, Disability and Health; WHO, 2001)[20]:

- Body functions are the physiological functions of body systems (including psychological functions).
- Body structures are anatomical parts of the body such as organs, limbs and their components.
- Impairments are problems in body function and body structure such as a significant deviation or loss.
- Activity is the execution of a task or action by an individual.
- Participation is involvement in a life situation.
- Activity limitations are difficulties an individual may have in executing activities.
- Participation restrictions are problems an individual may experience in involvement in life situations.
- Environmental factors make up the physical, social and attitudinal environment in which people live and conduct their lives.

If we follow the ICF we have the following classification of disability:

BODY	
Function: • Mental Functions • Sensory Functions and Pain • Voice and Speech Functions • Functions of the Cardiovascular, Haematological, Immunological and • Respiratory Systems • Functions of the Digestive, Metabolic, Endocrine Systems • Genitourinary and Reproductive Functions • Neuromusculoskeletal and Movement-Related Functions	Structure: • Structure of the Nervous System • The Eye, Ear and Related Structures • Structures Involved in Voice and Speech • Structure of the Cardiovascular, Immunological and Respiratory Systems • Structures Related to the Digestive, Metabolic and Endocrine Systems • Structure Related to Genitourinary and Reproductive

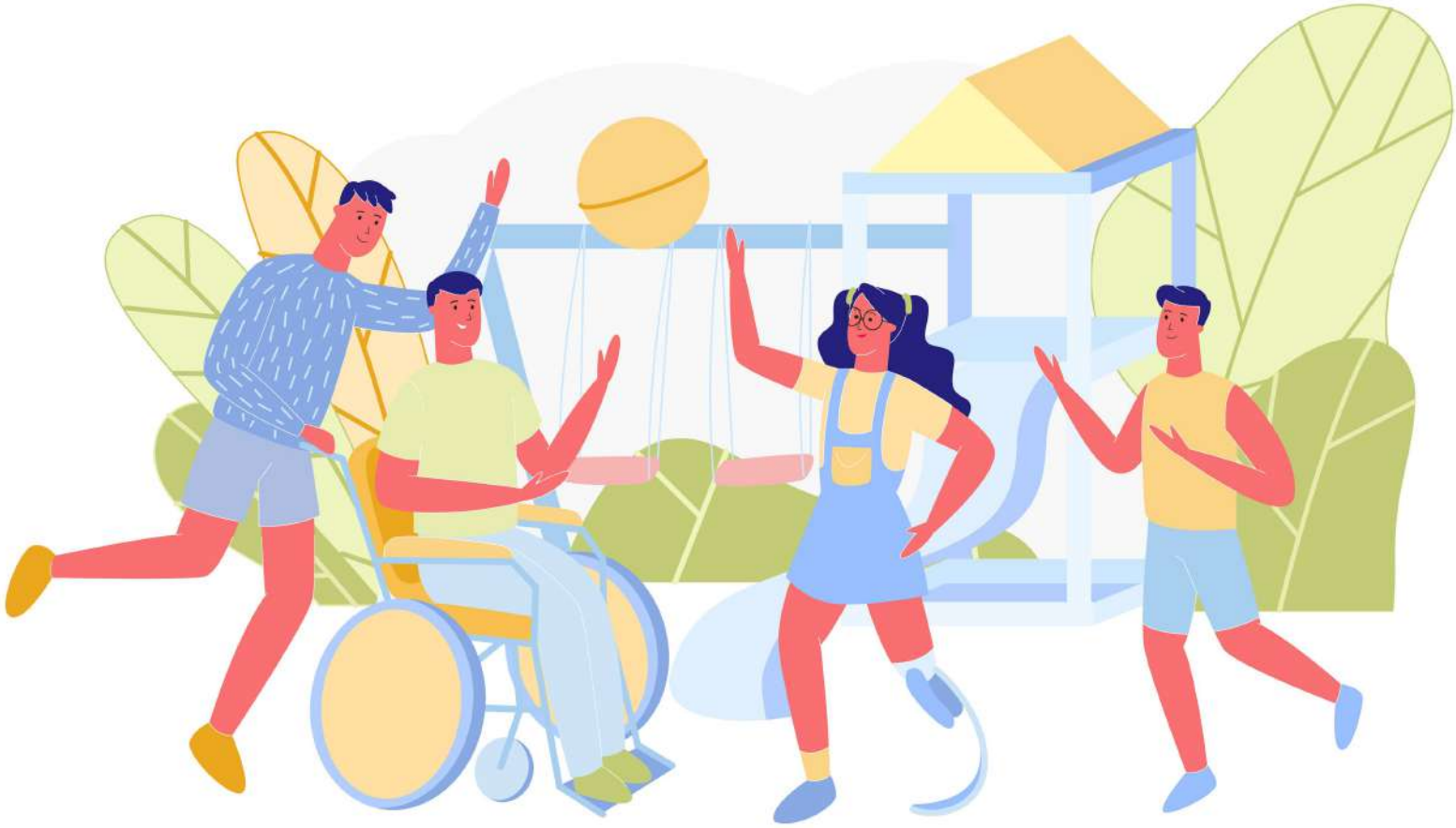
[20] Ibid.

• Functions of the Skin and Related Structures	Systems • Structure Related to Movement • Skin and Related Structures
ACTIVITY AND PARTICIPATION • Learning and Applying Knowledge • General Tasks and Demands • Communication • Mobility • Self-Care • Domestic Life • Interpersonal Interactions and Relationships • Major Life Areas • Community, Social and Civic Life	
ENVIRONMENTAL FACTORS • Products and Technology • Natural Environment and Human-Made Changes to Environment • Support and Relationships • Attitudes • Services, Systems and Policies	

Based on the International Classification of Functioning, Disabilities and Health (ICF)[21]

The basic knowledge about disability and different body functions is necessary when working with this target group. As youth (sport) workers, the focus shouldn't be much on the medical side of the disability, but on the ways that the environmental and social factors can be modified and adapted according to the needs beneficiaries. The role of the youth (sport) worker is to adapt the activities/programmes, games and the attitudes of the people without disability towards disability, to create inclusive space for every participant and each young person with or without disability can fully enjoy and participate in the youth (sport) work activities.

[21] International Classification of Functioning, Disabilities and Health https://www.who.int/classifications/icf/en/



2 SPORT AS A METHOD AND A TOOL

2.1 OVERVIEW OF SPORT METHODOLOGY

Sport can be divided into many levels – professional, amateur, school or recreational (sport for all). Sport training, in a broader sense, is a technical-pedagogical process aimed at the formation of skills, development of abilities and improvement of motor skills. The Training theory encompasses all aspects of fitness knowledge, including social, psychological, and scientific. The coach uses this information, along with the knowledge about the athlete as an individual, to devise the most effective training programme[22]. Depending on the level and the desired outcome, sport training and methodology may differ, but the objectives of the training should be[23]:

- To invoke adaptation changes;
- To connect new type of physical and mental labor;
- To implement it regularly and repetitatively;

[22] Brown C.H. - "Medical Manual / IAAF Medical and anti-doping commission"; International Association of Athletics Federations, 2006; available at: https://www.worldathletics.org/about-iaaf/documents/health-science, https://www.worldathletics.org/download/download?filename=f9fa48c2-2a0c-46f3-88b9-149f4d561326.pdf&urlslug=Chapter%203%3A%20Training,accessed in April 2020, p 1 of Chapter 3.

[23] Milanović D.V., Theory and methodology of Training (2009); p.38.

- To be specific according to the level of readiness;

Physical recreation, or recreational sport, is an great form of learning, entertainment and healthy lifestyle. It provides the movement of the body, necessary for normal functioning of the human body. It also supports the biological side of the body-movement – cognitive, cultural, communication, entertainment elements, which offer a co-solution to the problem.[24]

Therefore, we can name the following sports training components[25]:

- Physical component which consists of basic biomotor abilities:
  - Strength
  - Endurance
  - Speed
  - Flexibility
  - Coordination
- Technical component which can be divided into:
  - Fundamental skills - based on natural ontogenetic development of a human. It includes gait, run, jump, climbing, basic overarm throwing, etc.
  - Sports skills - based on contents of a specific sports discipline.

- Tactical component which focuses on different ways to conduct sports competition towards victory. Key terms of this component are strategy and tactic.
- Psychological component focuses on positive influence on the athlete's personality as far as fair play is concerned.

However, not all these elements can receive equal emphasis throughout the training cycle. Many factors determine the type of training programme, and the stress placed upon each element. These include the age and sports maturity level of the person, his or her prior state of fitness, and, of course, possible level od disability. Taking all of this into account, we can say that sports training is a process of motor learning. As

[24] Cieślicka M., Szark-Eckardt M. - "Methodology of physical recreation: problems, experience, recommendations"; Journal … of physical training …, 2013. Available from: https://www.researchgate.net/publication/313882248_Methodology_of_physical_recreation_problems_experience_recommendations, accessed April 2020

[25] Zahradník D., Jorvas P. - "The Introduction into Sports Training"; Masaryk University, 2012. Available from http://www.fsps.muni.cz/emuni/data/reader/book-6/02.html, accessed April 2020

such, according to El Haouat and Zahradnik, the learning takes place in several stages[26][27]:

Phase 1: gross coordination

This is the first phase which is focused on creating the initial ideas about the movement task and design flaws. The movement is very challenging at the first look, the result is generally imperfect movement with many errors. A high degree of mental and sight check.

Phase 2: fine coordination

The overall structure of motor skills gradually improves, the movement becomes more economical, temporal and dynamic parameters are stabilized, the individual begins to realize the movement as a whole.

Phase 3: stabilization (automation)

There is a stabilization of performance, the individual is able to perform movements without conscious control, movement is more coordinated and the performance of the athlete becomes better.

Phase 4: variable creativity

High-acquired skills to creatively apply even in complex changing conditions. This can be called as sports mastery and it applies to world-class athletes. It requires years of training and perfecting the skills in particular sport.

To achieve the goals mentioned above, sport coaches plan every training session to match the needs and readiness of the individual. Usual training process looks like:

1. Introductory part – warming up all body parts and basic motor exercises.
2. Main part A is mostly focused on learning or perfecting a specific technical skill. In football, that would include dribbling the ball. In tennis, it would be learning forehand or backhand.
3. Main part B is focused on applying the knowledge or the skills from part A – playing the sport, either in a team or indivudually. That would include playing a mock game or practising with a coach.
4. Closing part – in the last part of the training session, coaches usually finish with a easy and fun activity. Last part of the session is reserved for streching and verbal evaluation of exercises and general progress of the athlete.

[26] Ibid.
[27] MedHassan, EL HAOUAT. “Basis of Sports Training.” nataswim.info. https://www.nataswim.info/blog/item/14-basis-of-sports-training, accessed April, 2020

2.2 CONNECTING SPORT AND NON-FORMAL EDUCATION

Participation Model of Sport	Integration Model of Sport
Characteristics: • sport for the sake of sport (for movement, fitness, general health…) • sport is for everyone – all members of the community should participate and have access to sport • cooperation with other institutions is possible, but not necessary	Characteristics: • sport is a means to achieve something else (other learning goals) • focuses on problematic youth and problematic areas • focuses on "trendy" activities in order to attract the youngsters • cooperation with other institutions is necessary to achieve learning goals
Advantages: • costs are relatively cheap (only costs are to implement activities, no follow-up is needed) • attracts heterogeneous groups	Advantages: • Sport is used as a lure – a fun and safe way to attract young people to the organisation. From here they may get involved in other activities • sport is used for both physical fitness as well as for the development of personal and social skills
Disadvantages: • young people who are not interested or who have little aptitude for sport may not be attracted by this model • the model does not take full advantage of the learning that comes out of sport	Disadvantages: • costs are higher due to monitoring and follow-up of the young people • by focusing on specific groups of youngsters there is a slight risk of making the group too homogenous

Picture 2[28]

„Sport provides the "hook" that draws otherwise disconnected, marginalized young people into a program, and then that gets them actively involved and invested in its activities taken as a whole".[29] While sports are competitive by nature, two aspects of a healthy balance between cooperation and competition are important to take into account.

[28] Schroeder K., Geudens T. - "Fit for Life"; SALTO Inclusion Resource Centre, 2011. Available from https://www.salto-youth.net/downloads/4-17-628/FitForLife.pdf, accessed April 2020; page 15

[29] Hartmann D., Kwauk C. - "Sport and Development An Overview, Critique, and Reconstruction"; Journal of Sport & Social Issues, 2011. Available from: https://www.researchgate.net/publication/258158933_Sport_and_Development_An_Overview_Critique_and_Reconstruction, accessed April 2020.

First, it is inevitable that in a competition, only one wins while the rest fail. Competition leads people, especially young athletes, to define themselves by the outcome.[30] They can be either winners or losers. When this happens, their self-esteem and self-worth will depend on their ability to beat others. „Cooperation, on the other hand, helps build self-esteem, helps children learn to communicate, and does not depend on the ability to beat others.“[31] Competition and cooperation are not mutually exclusive and coaches don't need to choose between these two. People may have a tendancy toward each, but those who a generally more competitive don't necessarily reduce cooperativeness. However, young people, while still in formative years, may focus only on winning and define their performance and personality based on their ability to win. This can be unhealthy for both physical and mental state of a person. Therefore the term cooperative competitiveness is used to describe training environment where both cooperation and competition are focused on.[32]

This is where the non-formal education can step in by helping the participants to focus on the process of sports and learning from it, not on the competition or cooperation itself. By preparing the participants for sport environment and including youth with fewer opportunities, youth workers and sport coaches can help them in understanding that the aim is not winning, but rather learning or improving physical capabilities. Many non-formal education methods help facilitators to ask participants to set their own aims, which can be a great way to start a sports activity.

Evaluation, which is an essential step in the non-formal education, is proving to be very important in sports activity, as well. Instead of telling participants of a certain activity to improve in a particular skill, it is recommended to ask them to evaluate themselves or to focus on good and bad outcomes of a certain sport activity. Evaluation is especially important when including youth with disability, because it helps all participants, with or without the disability, to learn and to find a meaning in a sport activity, apart from winning.

Usually, when adapting sport games/methods for usage in youth work, we can use following types of activities related to the competition and/or teamwork[33]:

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[30] Cooperation and Competition in Sport, https://academy.sportlyzer.com/wiki/cooperation-and-competition-in-sport/, accessed April 2020.
[31] “Competition-vs-cooperation.” educatedsportsparent.com. http://educatedsportsparent.com/competition-vs-cooperation/, accessed April 2020.
[32] Ibid.
[33] Matorčević, D., “Youth Sport Work for Intercultural Learning and Acceptance of Diversity”; Active youth in happy Europe, 2018; page 35.

- COMPETITION based activities / sport games - games that assume Individual involvement of participants competing against all other participants, and usually the whole group of individuals / participants are involved in the same specific activities.
- TEAMWORK based activities / sport games - games that assume involvement of individual participants as a part of a team, and usually the whole groups of participants are divided in one or more teams, where each participant contributes, not necessarily by being doing same physical activities, but contributing complementarily to the team success and to the building positive teamwork feeling among them.
- TEAMWORK-COMPETITION activities / sport games - games that assume involvement of individual participants as a part of several teams, and usually the whole groups of participants are divided in two or more teams, where each team is competing with the other teams in the group of participants. Each participant complementarily contributes to the success of his/her team in competition with other teams.
- TEAMBUILDING activities / sport games - games that assume involvement of individual participants as a part of the overall group / team, where all participants are involved in order to build the team feeling and trust level within the whole group.

Sports key benefits in learning

Figure – Sports' key benefit sin learning[34]

According to the group of authors in "Move and Learn" publication there is a distinction between 3 concepts of education for, by and trough sport. Not all of them can go along with the interest of youth work and NFE.[35]

„Education for sport is typical for already mentioned sport clubs and organisations. Sport itself is the reason why these places exist and the ultimate aim is winning, thou they spread positive values all around the world like Olympic Games do. These values can be in a line with youth work but still from the field of non-formal education this concept is at least of our interest.

[34] McCoshan A. - "Sport: a key subversive learning tool"; 2018. Available at: https://epale.ec.europa.eu/sl/blog/sport-key-subversive-learning-tool, accessed April 2020

[35] Foldi L. - "Training manual for NFE trough sport and physical activities with young people"; International Sport and Culture Association, 2013; https://www.moveandlearn.org/files/Move&Learn.pdf; accessed May 2020, p.12.

Education by sport goes wider than professional sport. Its educational goals move toward improving social welfare. Exercises and sport activities are used to benefit health, wellbeing or inclusion. Examples of this concept are different national or international campaigns for promotion of sports among citizens as the Move Week is.

Education trough sport is a concept that brings the best of sport and NFE into the same field. Using sport here means performing all different forms of physical activity to improve physical fitness and mental wellbeing as it is express in the revised European Sports."

„ETS consists of adapting sport and physical activity exercises to the objectives of the planned learning project. It is a matter and a process of adaptation of sport and physical activity, both in terms of their expression and their representation, which characterises specifically the ETS approach. It does not propose any actions where sport becomes a central objective as/for a carrier solution. For instance, the practice of a martial arts without any specific project behind it, led only by the desire for technical progress, remains a FOR sport involvement, but it may also develop self-control and respect for others."[36]

It is important to implement sport and other physical activities as a tool to support general aims and objectives, mostly those educational or developmental. Sport becomes secondary and it's role is redefined. There, sport becomes an inclusive tool in the social and physical education of young people, regardless of the cultural, socio-economical, educational or any other background.

2.3 NON-FORMAL EDUCATION AND SPORTS-WHICH METHODS TO USE?

Non-formal education is characterized by a specific usage of methods, usually different than those implemented in formal education. While formal education is known for a traditional method of lecture, non – formal education encourages a wide range of interactive methods in which a participant takes a more active roles, rather

[36] "WHAT IS EDUCATION THROUGH SPORT?", mvngosportbranch.com. http://www.mvngosportbranch.com/ets-methodology/, accessed May 2020.

than a being a passive listener. Usual non-formal education methods include (Table1)[37]:

Method	Characteristics
Discussion	Discussion of a problem common to all. Conclusion reached by learned responding to guided questions.
Brainstorming	To generate many alternative solutions to a problem or topic.
Ice breaker	Short activity with participants aiming to bring more non-formal atmosphere and get participants bit closer to each other.
Case study	Learners analyse prepared description of problem situation. Usually in printed version.
Group work	Participants are divided into smaller working groups, where they work or discuss on one or more themes.
Role play	Learners try out behaviours in a simulated situation in a limited amount of time.
Simulation game	Participants are part of created situation, where every person have got a task. It is extended role-plays with extensive design.
Buzz Groups	Smaller discussion groups, sharing opinions on given or any topics without presence of trainer.
Open Space	Participants suggest topics for discussions and workshops and they are taking place with participation of others. It is a method which request high level of responsibility from participants.
Self-reflection	Time for self-reflection on activities that happened before
Excursion	Planned trip during training, which can give more information from practice to the topic.

All these methods can be used in any learning setting, including sport, and are highly applicable when working with youngsters with disability.

Unlike the traditional movement games, the non-formal games take place in the non-formal setting and atmosphere with an uncertain ending and they are accompanied by intensive social group processes leading to awareness of individual skills. In

[37] T-STEY, Training course for starting trainers in European youth work, November 2010, Prague, Czech Republic

addition, through the scenarios involved (choice, leadership and evaluation), they can improve the dynamic personal development, as we established before.

Here are a few recommended methods for youth workers and sport coaches who want to use the sport methodology within the activities of the non-formal education:

1. Getting-to-know each other games which involve physical activity;
2. Trust games;
3. Team building activities;
4. Games developing communication and cooperation;
5. Evaluation games;
6. Games which help cover a specific topic such as inclusion, discrimination, values, identity.

These methods can easily be modified to suit the needs of all participants, can be played indoor and outdoor, and adjusted according to the STEPS model for disabled persons.

3 SETTING UP AN INCLUSIVE SPACE

3.1 INCLUSIVE PHYSICAL ACTIVITY FROM YOUTH WORK PERSPECTIVE

Inclusive physical activity is a practice of making sure that all individuals, regardless of ability or age, have equal opportunity in physical activity. This opportunity should include a right to make decisions and to successfully and actively participate. “In other words, inclusive physical activity is defined as **accessible physical activity programs provided to all individuals across the age span in a wide range of settings**.”[38]

Truly inclusive physical activity includes all of the following[39]:

- Infant and toddler movement experiences;
- School-based physical education programs;
- Community-baseed recreation adn leisure activities;
- Exercise and fitness programs;
- Multilevel sport opportunities.

Inclusive physical activity is not necessarily based on a particular setting, depending on the level of dissability among participants, but rather on participation in meaningful activity selected from a range of options. To do this, youth workers and sport coaches need to be able to modify methods and tools, in order to meet the needs of all involved. Sport educators should have the attitude and skills they need to allow all youngsters to succeed, both in their non formal physical education classes or within smaller gropus of youngsters with and without differences in abilities.

Inclusion of youngsters with disabilities

BELIEFS ABOUT PARTICIPANTS[40]:

- Each person is unique with differing physical, cognitive, emotional and social capabillities and needs;
- Everyone has a right to and can benefit from inclusive physical activity opportunities;

[38] Kasser S.L., Lytle R.K. - Inclusive Physical Activity, A Lifetime of Opportunities (2013); p.8.
[39] Ibid.
[40] Ibid.

- The abillities of an individual are always changing and are a result of relations among the individual, the context and the particular task of activity;
- Participants have a right to personal choice and decision-making;
- Each individual ina n inclusive physical activity setting benefits from the experiences of others.

BELIEFS ABOUT PRACITITIONERS AND PROGRAMS[41]:

- Practitioners value the diversity and range of participants within their programs;
- Practitioners consider individual interests and needs and demonstrate equitable practice in attending to these considerations;
- Physical activity experiences are enjoyable, empowering and personally meaningful;
- Inclusive physical activity programs value, accept, support and respect each person for what he or she brings to the situation;
- Inclusice physical activity programs involve individuals with a range of differing abillities;
- Inclusive physical activity programs allow equal access to enviornments and equipment and include shared activities with individual outcomes.

„Sport isn't just a competition, it is an opportunity for people to come together, demonstrate their skills and enhance their ability to community with one another."[42] Sport provides an opportunity for young people to participate. Iti s the reason why it is an ideal mechanism for practical implementation of inclusion and equality.

3.2 INCLUSIVE SPACE

Sports educators and youth workers often find themselves designing and implementing Integrated Sport activities, without having suitable spaces available for the inclusion of young participants.

Inclusive Space means not only the physical space available and its characteristics, but also the type of supports that can be found in the playing space, the ease of access to it and finally the game setting (the working climate and the social approaches of the peers that the youngster with disability meets in the playing field). The environmental factors suggested by the ICF (International Classification of

[41] Ibid

[42] Kelly F., Southwell K., Teow K. - "Youth can open doors to all abilities through sport"; ENGSO Youth with the European Paralympic Committee, 2011. Available from https://b2edbaa4-f3ed-4569-9d16-de917ed9777c.filesusr.com/ugd/6fa9e5_676d81cb60c74581896b10a841b82b87.pdf, accessed May 2020.

Functioning) may generate barriers or facilitate participation, therefore having a major impact on the success of the activity.

The difference is made by the availability of the following components:

- Accessibility of the space for the activities;
- Environment and equipment: e. g. lowering the height of the net; reducing the size of a playing field, adapting the rules and using different materials and balls of different sizes;
- Products and technologies that facilitate accessibility;
- Support and relationships of the family members and other people who are relevant to people with disability;
- Attitudes of instructors, youth workers and peers;
- Services, systems and policies, including transport;
- Equipment;

Further here we analyze the categories on which the youth worker and sport trainers must be informed in order to plan correctly the activity to be carried out.

The physical place where an integrated sports activity is carried out has an important role in itself in making the activity inclusive. The places that are most often available, are mainly of 2 types: sports facilities and free open spaces (parks, gardens etc.).

Sports Facilities

In order for the Youth Integrated Sport to be functional, the sports facilities must be made accessible to all, by constructing the new facilities or adjusting the existing ones. Main entrances, changing rooms and activity rooms must all be on the same level of height. The legislation governing this type of adaptation differs from country to country. In general, the most important architectural adaptations include the following:

- *Entrance doors*: they must be easy to open; if necessary, automatic doors must be provided.
- *Reception*: must be able to accommodate both wheelchair users and non-disabled persons. The height suitable for wheelchair users is 750-800 mm.
- *Lifts*: they must be larger than normal lifts; in addition, the buttons must be at a height suitable for wheelchair users and other users.
- *Stairs*: they must be as straight as possible, with easily visible steps.

- *Corridors*: they must not present obstacles of such to present a risk; furthermore, their width must allow easy access to wheelchairs and other mobility aids for disabled people. The walls must be equipped with handrails, so as to provide support for people with problems of balance or limitation of motor functions.
- *Toilets*: they must be accessible all the time, in public areas or in changing rooms. In addition, they must have sufficient space to allow people with disability to move from the wheelchair to the toilet bowl; from the front or from the side. The foldable armrests must be placed on both sides of the toilet bowl.
- *Locker rooms*: they must have large space to move around. On the walls there must be support handles at different heights to allow the disabled person to stand up. Lockers with locks must also be put on different height than usually.

There are also more specific adaptations concerning certain sports facilities.

- *Swimming pools*: they must be equipped with facilitated steps, with handrails on both sides and with the lift.
- *Gymnasiums and related equipment*: gymnasium must be on the same level of height as the sports hall or be accessible by ramps or lifts. Gymnastic equipment must be suitable to be used independently by people with different types of disabilities (for example weights must be indicated in Braille alphabet for the visually impaired), seats must be removable in order to make space for wheelchairs.
- *Dance halls*: wheelchair users can access dance halls which must be larger than traditional halls, and must be able to listen to music anywhere. People with hearing impairments can use special induction loop systems.
- *Riding stables*: they must have covered spaces in which to park wheelchairs. People with disability has to have at his/her disposal a ramp and a special scaffolding to get on horse's back; moreover, he/she must be able to rely on a quiet horse and on experienced instructor, so that they can ride pleasantly and safely.

Open Spaces

We are not always lucky enough to be able to take advantage of spaces to use for integrated sport, but this does not mean that we do not have other possibilities to implement Youth Sport Work activities. However, it is possible to make use of city parks and easily accessible green areas (fortunately, many parks have been made

accessible, thanks to the impetus European legislation, which is concerning the issue more and more). On the other side adaptations are more difficult, because the natural conformation of the park is difficult to change, so it will be up to the Youth Sport Worker to evaluate the most suitable area for everyone to participate. Precisely because a public park is difficult to shape, it is *recommended to make a patrol of the area after conception of the activity, as it will be the activity that will have to be modified to adapt to the available space* and not vice versa.

However, it is important to note that “inclusive parks” are increasing in all Europe. These parks, besides being easily accessible, are designed with “Inclusive Design"; which is a design methodology of objects, structures and infrastructures, that can also be used by people with physical and mental disabilities. In these areas youth workers and trainers could find game and activity facilities that can be used by all participants in the activity designed by them. Types of equipment for inclusive parks:

- Sensory games that allow people to interact through touch, smell, hearing, as well as eyesight;
- Playgrounds with no physical barriers for the passage of wheelchairs and with systems to safely stabilize people with limited or no physical stability;
- Devices for the development of motor coordination and for the development of logical capabilities;
- The urban arrangement for parking without barriers and with variable heights;
- The green spaces – properly dimensioned and with the appropriate equipment – where it’s possible to interact with natural elements such as plants, soil, water.

Game setting

Once the place is defined, youth/sport worker can intervene by changing the game setting to make the activity space even more inclusive. The main aspects that can be modified are following three: (1) structures (nets, baskets, etc.), (2) spaces (field dimensions) and (3) instruments (balls, rackets, etc.). As far as the facilities are concerned; if for example the youth worker or sport trainer wants to design a sports activity that takes its cue from basketball, he may want to consider lowering the basket if he knows that one or more of the participants would not be able to reach it. Or he could plan two different ways to score by placing two baskets at two different heights.

The playing space is also an important adaptable element. Going back to the previous example of basketball, if there are young people in the wheelchairs taking part in the sport activity, it might be useful to consider widening the court to avoid unnecessary crashes.

The third element, the most easily adaptable, are the objects used during the sports activities (balls, rackets, etc.). Thanks to the development of technology and materials, we can find the game tools in different variations, specially designed to be more manageable and inclusive. Referring again to the previous example, youth workers or sport trainers might decide to use a smaller ball with more grip on the surface, to allow a young participant with limited strength in the upper limbs to be equally effective in controlling the ball and thus in the game.

Transforming and adapting the environment means giving everyone involved in the activity the opportunity to be an active part of the game. However, it is important, as well, to avoid offending the sensitivity of the participants. **Adaptations should not be explained to participants as a solution for an individual or a group** with specific characteristics, but rather as a variation of the rules that changes the game experience of all players, improving it.

Products and technologies that facilitate accessibility

Many people with disabilities lead an independent life and need few facilities and support to carry out daily activities. There are, however, people for whom various types of support are required, from wheelchairs to guide dogs and prosthetic aids. The progress made in the field of specialized equipment has helped people with disabilities to be more independent and has also helped to loosen prejudices and social barriers. Participation in leisure and recreational activities is important in order to follow an active lifestyle and maintain good health.

Sports techniques and equipment

People with disability have more and more opportunities to take part in sports activities, despite the large number of barriers that prevent their fully participation. Adapted sports equipment is available for any discipline in which the people wish to take part. For example: some special equipment such as mono-skis and sledges allow people with disabilities of all kinds to participate in winter sports. Techniques and equipment vary according to:

- the sport;
- the type and degree of disability;
- personal preparation and skills;

- individual preferences.

Sports equipment is an important aspect for the athletes of the future. Whether limb prostheses, competition wheelchairs, cycles of various kinds or equipment adapted for archery; the equipment must be adapted to the individual athletes. They may be adapted at home or in specialized workshops. The most important thing is that the athlete benefits from optimal adaptation and can use the equipment safely. Equipment adaptations range from minor (changes to the width, length or material of a belt) to complex (shape of an artificial prosthesis or competition wheelchair).

An example of an adapted instrument is the hand bicycle, which is also defined a manually operated bicycle or a manually propelled bicycle. This type of bicycle allows people with disability with a passion for cycling and with functional limitations of the lower limbs, to practice an alternative sport to cycling. These cycles are equipped with three wheels instead of two and allow the vehicle to be driven using only the upper part of the body, while limiting the need for balance.

A very important tool for people with motor disabilities is for example the Petra bicycle. It is a modification of the tricycle, specially designed and adapted to ensure the “fast" mobility of people with disability. This vehicle allows you to proceed easily and stably even on sand, gravel or grass, thanks to the size of the wheels and the exclusive maneuvering system. Ease of control and stability allow even the most severely disabled to move around. The Petra bike eliminates the barriers that separate different areas, such as training, learning and playing. In addition, it serves as a means of transport, therapeutic or educational equipment and recreational and leisure facility. Although the movement does not always keep up with normal walking or running, the overall motor experience and the degree of skill achieved, offer numerous advantages to person with disability.

Advances in technology have significantly improved the performance of the wheelchair for everyday and sports use. The results achieved have made it possible to create new models with wheels of various sizes, as well as different types of wheel rims and seats adjustable in size and inclination.

Wheelchairs for sports use are lighter and at the same time designed to reduce drag and improve wheel performance. The size, weight and height of a wheelchair for sports use can be adapted to the needs of the disabled person. The shape of the seat can be changed according to the physical features. We can also find special foam pillows that prevent forming of ulcers. Nowadays disabled sportsmen and women can have special wheelchairs: some are motorized, others are designed for

road races, others are customized for participation in specific activities such as wheelchair basketball, rugby or tennis.

Attitudes of instructors, youth workers and peers

Another important factor that allows defining the inclusiveness of a space, are the attitudes of those who live in that space.

Youth workers and sport instructors, when planning non-formal education sessions, devotes great attention and energy to creating a serene and open working environment, which is important to effectively achieve the goals. Although these aspects may seem secondary, in activities where participation and interaction are the cornerstone of the methodologies, devoting attention to them and planning them in detail, makes the difference between success and failure.

The proof of this particular attention lies in the fact that in non-formal education, ice-breaking and team building are key activities of the sessions and also the methodologies help to create connections between participants and encourage collaboration. Youth sport Work activities do not go beyond this need. In particular, there are attitudes on the part of instructors, youth workers and peers who, more or less consciously, contribute to ruin the working climate and make a non-inclusive space for young people, especially those with disabilities. Youth workers and instructors can become the first barrier to the inclusion of the target group. A few attitudes are enough to frustrate all the efforts to make the space inclusive. Here are some examples:

- threatening a young person who does not obey orders;
- mocking a young person for his or her inability;
- excessively protecting a young person in such a way as to prevent him/her from doing any autonomous activity;
- deciding for a person what is good and what is bad for him/her;
- impose the competitive spirit while participants are still learning to perform a basic task;
- to have a cynical attitude towards a participant.

These attitudes create a real separation between the young person and the activity and are difficult to repair. At the same time, an instructor or youth worker can use the attitudes that, on contrary, facilitate the young person's perception of an inclusive space. For example:

- adopt minimal changes for the activities;
- provide support so that there is no emphasis on disability;

- recognize the skills of a young person rather than his or her disabilities;
- make the young person participate in the decisions taken in relation to the changes to be implemented;
- ensure an atmosphere and a sense of entitlement.

However, the instructor/youth worker, must pay attention not only to his own attitudes, but also to those of the whole group. Peers are able to assume attitudes that can contribute to making a space unsuitable for integrated sports activity. Some examples of interaction behavior of peers, considered by young people with disabilities as real barriers:

- mocking a young person who misses the target or the ball, who stumbles over an obstacle, etc.
- mocking a young person for his/her obesity;
- over-protecting a participant in such a way as to prevent him or her from carrying out any autonomous activity;
- ignoring a young person in social activities;
- feeling pity for him/her;
- insisting on staring at a young person who is different from the others;
- taking away from a disabled person the auxiliary that allows him/her to move (wheelchair, crutches, etc.).

These attitudes can be contrasted with the behavior of peers who can act as facilitators. For example:

- accepting him/her into a social group;
- visiting him/her during their free time;
- inviting him/her to social activities during free time, e. g. birthday parties, going to the cinema, etc.
- to let him/her to participate in different games;
- morally supporting him/her in case of discriminatory situations.

When planning the activities, the youth sports worker, should try to stimulate this positive kind of attitudes in the participants and should raise awareness of the importance which these attitudes have on the game climate and the success of the activities.

4 ADAPTED PHYSICAL ACTIVITY – SPORT AND DISABILITY

4.1 HISTORICAL OVERVIEW

Today when we talk about sport, we often take for granted the positive aspects of the movement itself. Sport is universally recognized as a tool of integration, as a facilitator of person's development and consequently, development of our society. It is known from many studies that sport benefits not only the physical, but above all, the mind. In addition to these advantages, there are other equally important positive aspects, such as: development of self-esteem, ability to self-organize and self-regulate, ability to cultivate resilience, ability to develop problem-solving, ability to facilitate relationships with other people, to develop the ability to adapt and the possibility of developing loyalty and honesty through defeat and victory. [43]

But behind what today we take for granted, there is actually a very long historical process, made of continuous revisions of the role sport had in different historical periods. Over the centuries, sport had to struggle to become what it is today; an incredible tool for integration. Before we start talking about adopted sport, it seems right to briefly analyze this course by retracing the most significant stages of approaching the concept of modern sport that has led our society to recognize sport as a powerful tool of inclusion.

Sport from antiquity to the Industrial Revolution

Sport does not have a certain date of birth. In antiquity sport was essentially athletic tool for hunting and survival. With the birth of the first civilizations, the purpose of the sport was training for a war; swimming, horse riding and fighting firstly appeared for that reason. Ancient sport is activity reserved for the upper classes. Just in ancient Greece sport became a widespread phenomenon, in some ways similar to the sport of modern times. The cult of beauty and divism makes sport a mass event that leads

[43] Council of Europe - CDDS (Committee for the Development of Sport) - "European Sports Charter" - 7th Conference of European Ministers responsible for Sport, Rhodes, 13 - 15 May 1992. Commission of the European Communities - "White book" -Brussels, 11. 7. 2007, 391 final. t for all

to the birth of the Olympics; athletic games that were held in the name of the sanctuary of Olympia in Ilia. During the period of the games the wars were suspended and Greek athletes participated in the competitions with the highest sporting spirit. In the Latin world the Etruscans played sports games only in conjunction with funeral celebrations, while the Romans played sports on the Campus Martius for military purposes. With the fall of Greek civilization, sport took on an increasingly marginal role in the society of the Roman Empire. In Middle Ages sport became elitist and was practiced only by knights, with the purpose to develop skills useful on the battlefield such as riding, running, wrestling, tournament, jousting and “gualdana” (a kind of battle simulations). It was only in the following centuries, with the evolution of the industrial process, that working time was reduced, allowing to fill leisure time with various less demanding and recreational activities; among these - sport.

Re-birth of the Olympics

With the appearance of physical education and the main sports, the nineteenth century can be defined as the century of the birth of modern sport. In fact, in this century all the main modern sports disciplines are being codified, but most important; with the discovery of the city of Olympia, the ancient Olympics are rediscovered. This discovery is due to classical archaeology, that in the mid-1700s had become a real “race to the excavation". In 1829 a group of French archaeologists began the first excavations in Olympia, which were then resumed between 1875 and 1881 by a group of German archaeologists[44]. Baron De Coubertin, inspired by the findings of Olympia and firmly convinced of the importance of sport in education, in 1892 acknowledged in front of the Congress of the French Union for Athletic Sports, that he wanted to bring the Olympic Games back to life. His project was to organize a world event open to all non-professional athletes, to be held every 4 years like the ancient games, involving all nations. Under the motto “Citius, Altius, Fortius!"[45]; the Olympic Games represent the first attempt to integrate people through sport. In fact, since the first edition of Athens in 1896, the Olympics have been a mirror of today's society, reflecting the ideologies of the period. In the various editions, politics, counter-culture and discrimination have crossed the paths of the games and often for the participating nations, the Olympics were only a way to assert their supremacy over the others. George Orwell called the sport and the event of the Olympics “a war

[44] http://www.treccani.it– digital encyclopedia

[45] From lat. “Faster, higher, stronger!”

without shooting”[46]. The Olympics, which should have been an instrument of equality, peace and integration throughout its history, have often turned out to be an instrument of propaganda with phenomena of racial and gender discrimination; from the “Olympics of Shame" in Saint Louis in 1904, to those of “Montreal" in 1976, passing those of “Berlin" in 1936 and those of “Mexico City" in 1968. Another fact that is throwing shadows on the Olympics, are the different percentages of male and female athletes participating; numbers that have always been unbalanced in favor of the first. Only in the last editions of the Olympics these phenomena have been mitigated with ever higher numbers of women (6213 men and 5090 women participated). In the current highly controversial social landscape, where there is a return to discriminatory and intolerant phenomena, sport must play a crucial role in fighting against these phenomena. In this context a leading role is played by adapted sport, that like the Olympics over the years, has become more and more visible, indicating the state of culture of the society. But when was the adapted sport born?

International games for hearing – impaired people

The birth of adapted sport occurred quite recently, because in the past a person with disability was seen in contrast to the harmony that represented the ideal of the “classic model” and therefore a person with disability was not allowed to participate in sports and competitive activities. The vision of disability changed after the First World War; in Paris were organized the first “International Games for the Deaf" (now called Deafolympics). This event attended by 11 nations is considered to be the first official sporting event in favor of disability. After this experience, right after the end of the Second World War, the competitive activities were extended to other types of disabilities. Neurosurgeon Ludwig Guttman (naturalized English with German origin) came out with the idea of using sport as a rehabilitation tool for the treatment of spinal cord injuries. Guttman in his centre in Stoke Mandeville (Aylesbury) welcomed veterans who had suffered marrow injuries during the Great War; with the current rehabilitation methods, patients had a very low life expectancy. The neurosurgeon had the intuition to use a kind of sport-therapy as a treatment tool and as he had good results; soon his approach became a working protocol. In fact, he noticed that subjects undergoing this particular therapy obtained benefits from the respiratory and muscular point of view with consequent improvement in balance and motor skills. These improvements were also evident in daily life; patients with paraplegia, for example, showed greater dexterity when driving a wheelchair.[47]

[46] Orwell G. – ‘The Sporting Spirit’, Tribune, London (GB), 14 December 1945.

[47] www.treccani.it – encyclopedia of sport

Ancestors of the Paralympics: the “Stoke Mandeville Games"

The success of this method led Guttman to organize in 1948 the Stoke Games reserved for athletes with disabilities; an event attended by colleagues and doctors from all over the world to study the method proposed by the English neurosurgeon. This first event was attended by 16 paraplegic soldiers engaged in the archery competition. The game became a regular event and in the 1952 edition, with the participation of a Dutch delegation, the event became international and started up the international Paralympic movement with the foundation of the ISMGF (International Stoke Mandeville Games Federation). The fame of the games and the use of sports therapy was no longer only linked to an improvement of the patient’s physical condition, but also to the improvement of the spirit that benefited from sports activity in terms of self-esteem and energy. In 1956 the International Games for the disabled were officially recognized by the IOC (International Olympic Committee) as a testimony of the human and social value they represented; everything was ready to recognize the Olympic spirit to those games.[48]

Rome 1960: the first Paralympic Games in history

In 1960 the Olympic Games took place in the beautiful scenery of Rome; the Italian edition besides remaining in the history of the Olympics as one of the most spectacular editions ever, will be remembered because it was also the venue of the first Paralympic Games. The Guttman Games, which for the first time had crossed the English Channel and opened to the world in an exceptional showcase, were organized by the English man in collaboration with the Italian agencies of CONI (Italian National Olympic Committee) and INAIL (National Institute for Occupational Accident Insurance).[49] By now the die was cast; shortly afterwards in 1964 Guttman became the first President of ISOD (International Sport Organization For The Disabled). The new organization immediately ed to bring together under its representation not only spinal cord injuries, but also other types of disabilities (blind, amputees, cerebral palsy, etc...). This effort allowed amputees and cerebrophysics to take part in the games that took place at the 1976 Olympics in Toronto.

[48] Ibid.

[49] Piccioni V., Bondini G., Maiorella I., Sbetti N. - “On your marks. Sport, the Olympics, the champions who won and those who did not make it”; Publishing House Booklab, 2016. Available from http://www.uisp.it/nazionale/pagina/ai-vostri-posti accessed June 2020

The birth of the IPC

After the birth of the ISOD in the 70's other federations representing other disabilities were born, acting separately but with the sole purpose of representing athletes with disabilities and promoting sport as a therapeutic and social tool for the inclusion of people with disabilities. In 1882 the ICC was founded and became IPC (International Paralympic Committee), currently the only international body of people with disabilities, recognized worldwide. The committee, which is governed by a statute aims to organize, supervise and coordinate the Paralympic Games and other sports competitions involving the categories of athletes with disabilities.

4.2 ADAPTED PHYSICAL ACTIVITY

Studies have shown significant improvements of physical fitness and general body health from particpation in all physical activites, from walking to marathon. As we established, sport and physical activity have mental health benefits for children, youth and adults, helping reduce levels of stress, anxiety, and depression.[50]

However, it is widely accepted that disabeled individuals can not participate in a sports activity on the same level as a healthy ones. Therefore, it is necessary to adapt the space and the process of the training or physical activity. This is why sports methodology for disabled is sometimes called **adaptive sports or adapted physical activity**. The Inclusion Spectrum Framework and STEPS model (Stevenson & Black, 2011) are designed for practitioners to adapt activities to remove barriers to participation and make activities inclusive[51]:

[50] Ryan J., Katsiyannis A., Cadorette D., Hodge J., Markham M. (2013). Establishing Adaptive Sports Programs for Youth with Moderate to Severe Disabilities. Preventing School Failure: Alternative Education for Children and Youth. Available from: https://www.researchgate.net/publication/271929792_Establishing_Adaptive_Sports_Programs_for_Youth_with_Moderate_to_Severe_Disabilities, accessed April 2020.

[51] Kelly F., Southwell K., Teow K. - "Youth can open doors to all abilities through sport"; ENGSO Youth with the European Paralympic Committee, 2011. Available from https://b2edbaa4-f3ed-4569-9d16-de917ed9777c.filesusr.com/ugd/6fa9e5_676d81cb60c74581896b10a841b82b87.pdf, accessed May 2020.

The Inclusion Spectrum Framework

Everyone can play – naturally inclusive activities based on what everyone can do with little or no modifications, for e.g. warm ups and cool downs, where children can find the level of participation that suits them. Another idea may be collecting or gathering games, for e.g. gathering up objects scattered around the playing area and arranging them by colour.

Change to include – everyone does the same activity using adaptations to provide both support and challenge across a range of different abilities. The STEPS model (space, task, equipment, people and success) can be used to provide a structure for adapting and modifying the activities.

Ability groups – participants are grouped according to ability: each group does a version of the same activity, but at a level which suits the individuals in each group, for e.g. creating two or more versions of the same activity (a standing version and a seated version of volleyball).

Alternate or separate activity – individuals work temporarily on specific skills leading to more successful inclusion in the whole group. Sometimes, in order to include someone more effectively, they need to practice separately first. Make sure this is not the case most of the time though.

The definition of Adapted Physical Activity (APA)

The term Adapted Physical Activity (APA) was introduced in 1973 by IFAPA[52], although an exhaustive definition was delayed. This delay was partly caused by the ongoing European debate on the meaning of sport, which at that time was still oriented to consider competitive sport as a priority, at the expense of sport for all. The increased focus on “elite sport" required to create a document guaranteeing the rights of everyone to be able to practice sport: the “European Sport for All Charter"; was born in 1975. Article 1 of this very important document mentions “Everyone shall have the right to sporting activities"[53]

In 1984 the European Charter was updated and the social value of accessibility to sport for disabled people was underlined: “accessibility to sport for disabled users (public and athletes) becomes more and more an indispensable condition to make sport a service and a phenomenon that responds to the society's expectations"[54]. This step is very important because it is aimed at extending the right to do sport for all, to those who until now had no access to sports activity. This concept is complemented by another equally important one, that aims to consider sport not only as a competitive activity, but also in other forms. With “sport for all” we consider[55]:

- Top level sports for elite sportsmen (representative level);
- Participation in sports organized on a regular basis;
- Recreational sports for personal enjoyment;
- Sport practiced mainly for medical reasons or for personal well-being.

This concept overturns the meaning of sport, which until then was meant only for athletes with certain abilities. With this reflection the principle is completely overturned, as Guttman had done in 1948 with the adaptation of sport for his patients. Sport therefore becomes an activity adapted to the real abilities of the subject that starts from what the athlete can do, I. e. from his residual resources.

From this new point of view, in 1989 an attempt to give an initial definition of APA was made; APA refers to movement, physical activity and sports in which special emphasis is placed on the interests and abilities of individuals with disadvantaged

[52] International Federation of Adapted Physical Activity.

[53] Conference of European Ministries responsible - European Charter for Sport for All People with Disabilities - Strasbourg, 1987, p-10

[54] Bianco A., Tasso E., Bilard J., Ninot G., Varray A. - “Teaching adapted physical activities”; The otter, Genoa, 2004, p.365.

[55] Conference of European Ministries responsible - European Charter for Sport for All People with Disabilities - Strasbourg, 1987, p-9.

physical conditions; such as disabled, sick or elderly.[56] In essence, in this type of activity the operator in the first phase must not train the athlete, but must **“qualify" him/her to a particular physical activity as a rehabilitative, recreational and therapeutic form**. Sporting competitiveness can enter only if conditions are created and only after this first phase, when the subject has reached an optimal psycho-physical state to face the next step. This modality of programming starting from the real abilities of the subject, over the years becomes applicable to disability transversally and acquires more and more relevance in teaching methodologies for disabled subjects.

It is therefore essential to update the definition of APA by extending it to other contexts and redefining the fields of intervention and methods that developed in those years. In 2000, the International Council of Sport Science and Physical Education (ICSSPE) redefined APA in its meaning as “used worldwide; to identify an interdisciplinary area of knowledge and activities including physical education, leisure, dance, sport, fitness and rehabilitation; addressed to individuals with impediments, of any age and throughout the entire life cycle. This concept contains information and research results from sub-disciplines of the movement and sports sciences (e. g. biomechanics, sports psychology, sports pedagogy, etc.), as well as other scientific areas (medicine, rehabilitation science, psychology, etc.) which are dealing with the physical activity and sport of people with special needs and individuals with disabilities."[57] Some scholars believe that APA represents an “umbrella" term; where umbrella represents the metaphor of the wide range of people that the adapted activity wants to cover; in fact with this new definition APA no longer remains confined only to the field of action of the motor area and the action of the individual sports operator, but becomes a common action of all parties involved in the process of training a person with disability. In concrete terms, the new definition, compared to the previous one, forces operators of all fields and also the persons to take common action to design and plan objectives.

A person with disability, to whom the APA is addressed, must not passively undergo the adaptation action, but must actively participate in the process by carrying out a self-evaluation and programming of objectives. On the contrary, the operator must overcome a vision centered on the deficit and on improvement solutions for themselves in order to assume a personalized vision that starts from the

[56] ADAPT - European Programme of Adapted Physical Activity - document edited by Prof.Herman Van Coppenolle.

[57] Pioletti A.M., Porro N. - The sport of Europeans. Citizenship, activities, motivation. - Franco Angeli, Milan 2013.

residual abilities of the disabled person, but also from his needs and expectations in order to build an individualized path shared with the team (teachers, doctor, family, disabled person him/herself, etc.).

APA and adaptation

As substantiated so far, it seems correct to consider APA not only a tool to improve the quality of life, health and well-being of people with disabilities, but also a means to facilitate the processes of integration and social inclusion. In fact, the term “adapted" can be considered as a means of mediation between exercise and the difficulties of execution expressed by the person in a social context. Therefore, APA can be linked to social dynamics centered on adaptation theory, individual differences and physical activity. The central focus to fully understand APA is to discover the meaning of the word adaptation, because we all agree on the meaning of physical activity, while it is more difficult to explain the term "adapted".

We start from the assumption that “each individual possesses the potential and abilities, that allow him/her to modify and adapt the context in which he/she lives to his/her advantage in order to encourage the expression of personal well-being"[58]. In a case of a disabled person, this initial condition does not always correspond to effective research of a personal well-being. The reason for this behavior lies in the fragility which disabled person often experiences and perceives; that roots in the daily life, when a person is not being able to adapt adequate responses to the social context of reference. All this leads to a lowering of the sense of self-efficacy (Bandura 1997)[59]. The aim of APAs is therefore to break the chain linked to the subject's inadequacy in front of a motor task and to improve through positive physical practice the processes of self-efficacy, empowerment and self-determination.

In order to do this, it is necessary to intervene on the process of adaptation, which represents “the art and science of knowing how to control variables in order to obtain the desired results"[60]. This definition is translated into operational field with the action of APA, which should be aiming to promote continuous two-way interactive

[58] Reid G. - “Defining Adapted Physical Activity”, the chapter 2 of the “Adapted Physical Activity” by Steadward D., Wheeler G.D., Watkinson E.J.; (eds.); The University of Alberta Press and The Steadward Centre, 2003; pages 11-26

[59] Bandura A. - “Self-efficacy: theory and applications”; Edizioni Erikson, Trento, 2000.

[60] Sherrill C. – Adapted physical activity, recreation, and sport: Crossdisciplinary and lifespan – (V ed.), Wm. C. Brown Publishers, DubuqueIA 1997, p. 60.

processes between individuals and environments, in order to influence each other and to improve physical performance and personal well-being. The bi-directionality of the interaction is the key to the adaptation process, because it is not sufficient only to modify the environment; APA with its action must provoke interactive adaptations involving both environmental and individual variables. This interaction besides facilitating the adaptation movement, in disabled person promotes fun factors and self-efficacy processes related to the success of one's motor action. Ultimately, three interdependent and interacting variables are involved in the adaptation process: the disabled person, the social environment and the motor task.

Different visions of APA

In order to plan an adaptation, it is therefore necessary to take into consideration these 3 variables, but it is also necessary to look for a background that orients the action of the adapted activity; it is necessary to define a reference framework of the activity in which a disabled person can be placed. Indicatively, there are 4 logics in which to insert the APAs; these categories are taken from the indications of the “European Charter of Sport for All 1984" already mentioned above. APA’s can be seen in the following **perspectives**:

- perspective of sport;
- social perspective;
- psychomotor perspective;
- therapeutic perspective.

We are especially interested in the first three, leaving the fourth to more specific areas that are not pertinent to our manual.

The **perspective of sport** follows a logic of reproduction of sporting activity and sports performance; training and practice organized by specific Federations. This level includes, for example, basketball and wheelchair athletics. In this context, the operator's attention is certainly focused on performance and the achievement of objectives and skills in the physical and emotional sphere (self-efficacy and sense of belonging).

The **social perspective** invests the leisure time of the disabled person and requires the construction of social networks within which the subject must feel pleasure for the physical activity practiced, while following the guidelines of the context. For example, if a running activity is organized for a group of cognitively disabled people in a city environment, this could be organized in small groups with support of operators and with attention to the rules of the traffic laws in order to achieve

autonomy in travelling. From this point of view, the operator's action is directed not to the performance of the subject, but to the construction of the network and a construction of a project, that involves all the parties and that has the disabled subject in its centre. The sense of self-efficacy and the aspects of socialization are mainly affected in this adaptation.

From a **psychomotor perspective** the subject is not able to choose independently to practice a physical activity due to lack of desire or incapacity. In this kind of perspective, the subject will be oriented towards discipline, involving him/her emotionally in the practice of activities that lead the disabled person to feel a sense of pleasure in performing a motor task. In this context, the search for motivation, takes over everything else; the aim of the operator will be to excite the disabled person for the proposed activity.

Choosing an APA and the operational tools for managing the activity

In choosing the most appropriate APA for the person with disability, we must first of all start from the assessment of the ICF classification and the emotional state, as well as the social context in which we are going to operate. In fact, the person could show difficulties in relation and adaptation to the environment, due to alterations on the perceptual level (for example, an incorrect perception of the body pattern or proprioception), on the cognitive level (for example, disturbances at attention levels) and on the emotional level (for example, past experiences that have left anger and frustration). Therefore, in the choice of the APA, in addition to considering the ICF, we must evaluate well the possible alterations of our subject, in order to have a clear idea of the activity to be proposed or planned.

On the basis of this initial evaluation we could plan the activity in his/her curriculum, choose teaching strategies and select the context conductive to learning.

Once we have evaluated the potential of the subject and the points of programming, we will be able to take into consideration the operational tools to modify an ad to adapt to the subject or build it by going to modify the tools. The operational tools can be related to the environment and the motor task. With regard to operational tools that may affect the environmental context, we can act on:

- **Physical and social environment**: with this tool I can modify the game space by adapting it not only in size, but also in the equipment. We could then think about widening the playing field in sports where wheelchair users are involved, or use raised signs on the ground to direct movement in activities for the blind people.

- **Equipment**: with materials we can facilitate the execution of motor gestures (e. g. with larger balloons for easier grip), protect athletes (foam pads or the use of light balloons) or facilitate the analysis of the movement (use of sound balloons or companions as a guide).
- **Regulations**: this tool allows us to change the rules, scores, times to ensure greater ease in the game.
- **Language**: also, language becomes an important operational tool because it can be simplified in the case of a mental disability (use of imitation, expressive language and use of simple terms) or it can be an aid in the movement of the blind person (use of a language rich in spatial information).

Another important aspect is the modification and the alignment of the motor task to the real potential of a person with disability. It is in fact equally important that within the APA the subject who participates in it can interact physically to the fullest potential, while maintaining an active role in the activity. It is therefore necessary to take into account 3 other elements and act on them, to make the motor gesture effective and motivating. The three elements are[61]:

- **Biomechanical characteristics of the motor gesture**: in this adaptation the subject may not be able to perform a technical gesture according to the rules for that activity. Let's think about the adapted archery where amputees shoot with biomechanically different gestures from the original technique (see fig. archery with the mouth).
- **Coordination complexity and required cognitive and attention skills**: in these activities' adaptations are foreseen to overcome a mental and cognitive disability or disabilities on the neuronal level. The complexity of the gesture and the demand for complex coordination require good capacity of intersegmentary and dissociative ability, and for this we can intervene by reducing the complexity of the gesture (example of artistic gymnast with cognitive disability).
- **Affective-emotional component of the generated sensorimotor pleasure**: in this last component the motor gesture is not directed towards the performance, but towards the emotional part, seeking pleasure in moving for the simple pleasure of doing so. Let's think, for example, of all the psycho-motor activities designed to seek compatibility with the motor gesture, although simplified.

[61] Janney R., Snell M. – "Modifying schoolwork"; Paul H. Brooker, Baltimora, 2000.

Summing up the APAs: they are choosed by starting from the initial evaluation of the subject's potential and by any alterations on the perceptive, emotional and cognitive level. From this first evaluation, objectives are established and an individualized and personalized project is built, designed especially for a person with disability. The project becomes a program and the activity is modulated according to the scope of the subject. From here we use the operational tools to make adaptations to the environment (physical and social environment, equipment, regulations, language) and to the motor task (biomechanical, coordination/attentive and emotional/motor characteristics). A final consideration concerns the intensity of the adaptation which will result in a higher or lower intensity. Therefore, we distinguish different types of adaptation's intensity:

- minimal changes: they concern aids to students such as guides and visual and audio signals;
- moderate changes: they concern equipment, rules and roles in the activity;
- considerable changes: they concern a high level of individualization, such as a companion who acts as a guide giving verbal indications on the route to avoid dangers.[62]

4.3 ADAPTIVE PHYSICAL ACTIVITY MODELS AND TYPES

For adaptation of methodology, sport coaches and youth workers can use STEP or TREE model.

The STEP or TREE model comes from the change of the perception of international disability sport. It provides a useful way for practitioners to structure changes to sporting activities. STEP is an acronym derived from the word 'Space', 'Task', 'Equipment' and 'People'. STEP was developed in Youth Sport Trust resource material as a simple tool for assisting teachers, coaches and community sport deliverers in adaptation of the process. As a structure, STEP can be used to ensure that participants with different abilities can be included in physical activities. For each word represented by the letters of the acronym, the authors offer the following examples[63]:

[62] De Potter C. – Adapted physical activities and sport for sensory impaired individuals: barriers to full participation – First European Conference in APA and Sport: a white paper on research and practice, Acco, Leuven, 2003.

[63] Kiuppis F. (2018) - Inclusion in sport: disability and participation, Sport in Society, 21:1, 4-21, available at: https://www.tandfonline.com/doi/full/10.1080/17430437.2016.1225882, accessed April 2020

- Space – Increase or decrease the size of the playing area; vary the distances to be covered in practices to suit different abilities or mobility levels; use zoning, for example where players are matched by ability and therefore have more opportunity to participate.
- Task – Ensure that everyone has equal opportunity to participate, for example in a ball game, all the players have the chance to carry/dribble, pass, shoot, etc.; break down complex skills into smaller component parts if this helps players to more easily develop skills; ensure there is adequate opportunity for players to practice skills or components individually or with a partner before including in a small-sided team game.
- Equipment – In ball games, increase or decrease the size of the ball to suit the ability or age range of the players, or depending on the kind of skill being practiced; provide options that enable people to send or receive a ball in different ways, for example using a chute or gutter to send, a catching mitt to receive; the use of bell or rattle balls can assist the inclusion of some players.
- People – Match players of similar ability in small-sided or close marking activities; balance team numbers according to the overall ability of the group, that is, it may be preferable to play with teams of unequal numbers to facilitate inclusion of some players and maximize participation of others.
-

Sometimes, practicioners add another letter to STEP model – letter S meaning Success. Here is an example of possible adaptations using STEPS model[64]:

[64] Ibid.

	Possible adaptations
S pace Where is the activity happening?	■ Targets nearer or further away ■ Height and distance ■ Zones of play
T ask What is happening?	■ Try different ways of taking part (e.g. different movement patterns) ■ Change rules to aid inclusion ■ Be flexible
E quipment What is being used?	■ Size, shape, weight ■ Playing surface ■ Sound
P eople Who is involved?	■ Coach positioning ■ Group dynamics (e.g. working in pairs/small groups) ■ Different roles
S uccess How did it go?	■ Challenge ■ Timing ■ Attainable

The other model is TREE, which is an acronym derived from the words 'Teaching or coaching style', 'Rules and regulations', 'Equipment' and 'Environment'[65] . It is slightly different from STEPS because it also focuses on the teaching style and general facilitation of the coach or the youth (sport) worker. Is recognises the role of a teacher/coach in the learning process.

The types of APA

As we have seen, there are many types of APA, which is implied in the meaning of the term "umbrella"; it is sincerely very complex and difficult even for us, to be able to give a broad and exhaustive picture of all the existing ones. The first classification of APAs can be made on the basis of the intensity of adaptation in the discipline. We are talking specifically about:

- Unchanged sports: in these disciplines, the athletes with minor disability are able to reach levels of development and performance similar to the ones without disability.
- Sports with adapted rules: these sports are meant for the people with average to severe disability.
- Adapted motor activities: these activities are mostly meant for the people with severe disabilities.

[65] Ibid.

Another classification concerns the grouping of disciplines according to the functional classification of the athlete's disability. This classification, however, is partial because in it we find only the sports disciplines regulated by the Federations and therefore referable to the sporting sphere. APAs from a social and psycho-motor point of view remain excluded. As a result, there are APAs for all disability categories that can be traced back to the three macro-categories:

- **Motor disabilities** that include neuro-muscular-skeletal impediments:
  - **decreased strength**
  - **decreased range of motion**
  - **limb deficiency, i.e. amputations**
  - **different limb length**
  - **hypertonia**, i.e. abnormal increases in muscle tension and reduced muscle lengthening capability
  - **ataxia**, i.e. lack of coordination in movements
  - **athetosis**, i.e. uncontrolled movements with difficulty in maintaining a stable posture
  - **short stature**, i.e. dwarfism
- **Visual disabilities**
- **Intellectual disabilities** [66]

From these 3 categories, all the sports of the Paralympics have origin; furthermore, those can be classified in these additional categories:

- **team sports** (basketball, football, baseball, cricket, “goalball”, tandem, sailing)
- **individual sports** (tennis, biathlon, judo, athletics, fencing, alpine and Nordic skiing, showdown, archery)
- **sports with animals** (horse riding)
- **aquatic sports** (rowing, canoeing, swimming, water skiing)[67]

In addition to these strict and standardised classifications by the Federations that are managing the adapted sport, there are also all the APAs that are designed within the social and psycho-motor sphere and that are subject to personalisation. These APAs do not have the fixed rules but arise, as we have seen, from the operator's ability to analyse the residual capacity of the subject and the objectives to be achieved to design the motor task. The difference in organisation between sports APAs and motor / psycho-motor APAs is that the sports APAs are focused on the training process in search of performance; the motor / psycho-motor APAs are focused on designing a process and on the emotional impact they have on a person with disability.

[66] https://www.abilitychannel.tv/classificazioni-funzionali-le-categorie-paralimpiche/; accessed April 2020 and https://www.paralympic.org/classification accessed April 2020
[67] Ibid.

To conclude, in the APA we can also add integrated sports, which can be defined as "sporting activity of an educational nature for all athletes, with and without disabilities, with the intention of building together a group or a competition situation. Through the practice of sport this situation develops and promotes a culture of integration and solidarity, with the acceptance and appreciation of diversity and individual limits at all levels"[68]. In these activities players with and without disabilities play together with the different equipment, rules and roles cooperating to achieve the same goal. An example of integrated sport is "baskin", a very young sport that includes people with physical disability in wheelchairs, those with mental disabilities and those without disability, all playing together. Surely this last formula of APA is the most innovative form of sports activity, because it really integrates disability within integrated sport. Everyone offers their own contribution to the success of the game, everyone is indispensable; profitable and collaborative exchange between the subjects is crucial, which leads to undoubted favourable outcomes for both subjects; and finally, to a new concept of diversity, which is the foundation of the existence itself.

4.4 INTEGRATED SPORT

Declination of sport dedicated to youngsters with disability has also changed during the time. Youngsters with disabilities have the right to participate in sport activities, specific or ordinary, at all levels. There are different models of sport accessible to persons with disabilities: those in which only persons with disabilities participate and those in which persons with and without disabilities participate together. All these models allow inclusion in terms of access and participation in sports activities. Which models promote social inclusion through sport? The 'Integrated Sport' model, developed in Italy within the school integration system, would seem to be on of the most consistent to the pedagogical architecture of inclusive sport[69]. This model contains a set of ludic (playful) and motor situations, codified in a cooperative and competitive form; in which persons, with and without different types of disability, both men and women, through roles, spaces and materials suited to the abilities and potential of each, can participate actively and competently.

[68] CSEN (Centro Sportivo Educativo Nazionale) - Integrated Sport: book of regulations - November 2015.

[69] Magnanini A., Moliterni P., Ferraro A., Cioni L. - "Integrated Sport: Keywords of an Inclusive Model"; 2018. Available from https://www.researchgate.net/publication/329775201_INTEGRATED_SPORT_KEYWORDS_OF_AN_INCLUSIVE_MODEL, accessed April 2020

They are those activities of gymnastics, play, exercise, movement, performed together by normally endowed people and people with disabilities; where everyone sees their potential, thanks to the precise roles of play, fundamental for the success of the activities. The workouts are held together, in the same space and at the same time. Given this meaning of sport, which goes in contrary to the officially accepted one, we must try to overcome the exclusive idea of transforming existing motor and sports activities to adapt them, inventing new ones instead, where we start from the subjects “tout court” and not from the disabled. Integrated sport has a twofold advantage: on one hand, to improve health, physical and mental performance through motor activities and, on the other hand, to be able to apply what has been learned in practice, to different areas of life. Thanks to integrated sport, we can adjust in the exercises, using different tools for each one, adopting micro-spaces for individualized training, using the help of companions who act as Tutors, always guided by the background perspective that accompanies the game.

Inclusion through integrated sport allows the construction of a common space, in which everyone is acting and growing together, enhancing their skills. A person changes individually, but at the same time is influencing the other person to change. This is triggering a transformative process, which is always aimed to improve everyone. It is not aimed at eliminating diversity in order to create a homogenous, homologated world, populated by similar people; it focuses precisely on diversity, of whatever kind it may be.

Integrated Sport keywords can be summarized as[70]:

1) Active and competent participation of persons with and without disabilities;

2) Codified and flexible rules;

3) Roles, spaces and materials suited to the person's abilities;

4) Result obtained only with cooperation between all roles;

5) Competition;

6) Always dynamic and enjoyable game.

[70] Ibid.

5 AIMS AND OBJECTIVES IN USING SPORT METHODOLOGIES WITH YOUNGSTERS WITH DISABILITY

First sporting events for individuals with disability started in 1948 which soon was followed by the first Paralympic competition in 1960. Awareness and changing the perception towards participation of young with disability in sport competition directed different beliefs, values and assumptions.

Physical activity became a universal need for all the youth not just relying on sport but any sort of recreation, past time, non-formal gatherings, rehabilitation and physical activities that bring overall well-being.

When thinking about the goals and objectives of sport activities for youth with disabilities, **it is very important that the environment provides engagement that benefits the healthy development of the whole person**. This leads towards researching the community where young live, accessible facilities and information, health awareness, safety, organizations and associations offering active programs. Developed areas offer a more diverse spectrum of activities for youth with disabilities which does not exclude participation of the non-government sector in less developed areas and involvement of youth workers. As well as, community efforts to produce not just sport but also pass time activities.

5.1 BUILDING SELF-ESTEEM AND PARTICIPATION

This calls for aiming towards enabling coaches, educators, youth workers to approach the inclusion of youth with disability with confidence and enhancing participation.

Enhancing the **participation** actually means working on development of youth with disabilities not to feel unprepared and uncertain about their abilities and performances.

When it comes to participation it is very important to say that sport helps challenging normative assumptions, and diminishes typical barriers for youngster with disability which is lack of awareness, lack of opportunities, limited information and fighting stereotypes. Participation should not be compared to inclusion.

Sport activities, actually, help promote access to sport for all, encouraging involvement, talks about barriers and restriction, as well as, providing solutions for most appropriate forms which can be researched by couches, teachers, doctors and youth workers while working directly with youth. Important observation is that young with disabilities sometimes cannot reach school outcomes without facing a failure, but if sport education is taken into the context of developmental chances, **building self-efficiency and individual social identification**, youngsters with disabilities are seen as progressing in the school and improving their academic achievements.[71]

Transition into secondary school takes a very important role. This is especially important because of adolescence years, creating self-image, social skills and educational achievements. This age is also important for creating a future path. Sports and pastime activities could be used as providing positive stimulations which leads towards positive schooling and non-formal experience. This actually means that sport can be used as the universal/common ground to show that they can do the activities not that distinctively than any other typical student.

Actually, sport creates positive stimulations and a **positive learning environment**, mostly because changing quality of life in social context. Motivation, spending time with volunteers, youth workers or coaches can positively impact youth to be persistent for more demanding challenges. Positive interactions from sports activities, encouragement from teachers, youth workers and peers are sources of self-efficacy. This also refers to empowering youth with disabilities.

Working on developing social skills sometimes brings more impact than relying on making improvements in physical well-being.[72] Even if participation in sport sometimes will be modified, it is very important that regular physical activity can foster **independency, coping abilities** (related to transition to secondary school) **competitiveness and team work**.

Working on physical health as well as emotional involvement in the sport prepares people for different life situations. Youth with disabilities generally are functioning among a small circle of people, those people are usually their parents, teachers, volunteers and some of peers, this circle mainly functions on a daily basis helping a

[71] Watson A., Timperio A., Brown H., Hinkley T., Hesketh K.D. - "Associations between organised sport participation and classroom behaviour outcomes among primary school-aged children"; 2019. Available at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0209354, accessed April 2020

[72] Kızar O., Dalkılıç M., Uçan İ., Mamak H., Yiğit Ş. - "The importance of sports for disabled children"; 2015. Available from https://www.researchgate.net/publication/281086748_The_importance_of_sports_for_disabled_children, accessed April 2020

child to get over the daily activities. Lack of social relationships sometimes can lead towards loneliness, which appears quite often among youth with disabilities. Sometimes loneliness and depression can appear as a consequence of negative experiences within daily functioning and facing different daily problems. As a consequence of negative experience during daily living, loneliness appears as a notion that certain relationships didn't work as the youngsters with disabilities expected. Examples can be found in basic life situations, like reaching a park, or playground, fairies, exhibitions etc. This leads towards isolation, rejecting having interactions, not doing well in school and losing motivation. Depression and loneliness lead towards inability to make different relationships, lack of friends, frustration and dissatisfaction. Sometimes it can turn inwards of aggression, behavioral problems and not seeing consequences of one's actions.[73]

Emotional consequences in youth with disabilities especially appear during the adolescence. Age of adolescence brings problems with self-awareness, social pressure, lack of positive experiences especially for youth with disability. Taking sports into this context, youth with disability being involved in sports brings a wide range of benefits such as, **support and motivation, spending time with peers, taking part in all aspects of planning and engagement and preparing them for life within their social community.**

Effective social interaction results within not having difficulties to apply social skills in any different social situation. Involvement in sport activities with youth of the same age is important because of the feedback and sense of being accepted among different groups. Youngsters with disability are more likely to be aware of others negative attitudes towards themselves, they already are prepared to encounter prejudice and discrimination, even though many steps are taken to fight the above mentioned.[74] "Although a lot of effort is taken, this kind of assumption mainly comes from visible lower levels of cardiovascular functions, muscular endurance, flexibility and problems with weight."[75]This still doesn't mean that youngsters with disability should be deprived from growth and development. This is why sport as physical

[73] Heiman T., Margalit M. - "Loneliness, Depression, and Social Skills Among Students with Mild Mental Retardation in Different Educational Settings"; The journal of special education vol. 32/no. 3/1998/pp. 154-163. Available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.911.681&rep=rep1&type=pdf, accessed April 2020

[74] Murphy N.A., Carbone P.S., MD, and the Council on Children With Disabilities - "Promoting the Participation of Children With Disabilities in Sports, Recreation, and Physical Activities"; American Academy on Pediatrics, 2008. Available at: https://pdfslide.net/documents/promoting-the-participation-of-children-with-disabilities-promoting-the.html, accessed April 2020

[75] Ibid.

education should have primary objectives. Simple movements and games can reinforce better physical conditions.

The goal is for sport activities to be repetitive. Repetitive sports activities and games are considerate to bring positive effects. These activities should be in accordance with individual disabilities, adequate and equipped people such as teacher, coach or youth worker, consultation with doctors along with participation of volunteers or assistants. For this reason, physical activity should be used as an instrument for increasing motor behaviors, cognitive skills, attention, self-confidence and social relationships.

When it comes to aims and goals, it is very important to provide a role model. Role models are seen as people who possess certain qualities which youth would like to acquire. Taking into consideration that goals and interests differ when it comes to career choices and future paths, providing role models in sport shows a more attainable picture.[76] Presence of a positive role model helps build self-esteem, awareness, media champagnes and making differences. Seeing their active role, being able to work and have a social life, earning and taking control of their life can be a great determinant towards normalizing beliefs, attitude and fighting stereotypes.

Sports activities provide also mentoring, either it is a peer, volunteer, teacher or a coach, he/she can motivate a youth person with disability to become a mentor one day, too. Positive images and representation help diminishing social barriers, as well. Advocating changes in society also sets new standards that can majorly change youth's participation in sports and physical activities.

Sport can change attitude about a youth with disability focusing on their skills and talents by reducing stigma and discrimination This way, sport activities can also make a shift in perception of seeing a person and not just disability. Through sports, a youth without disability can spend time with a youth with disabilities and see what she/he can or cannot do. Along with this interaction they can see that young with disability can take an active role, have capacity and determination.

Sometimes youth's participation in sport is avoided because of the fear of injuries. This is where talking about sport for youth with disability helps making new standards whereas prevention and adequate equipment and safety precautions would be taken beforehand, in the preparatory phase.

[76] Zinkin P. & McConachie H. (1995). Disabled Children & Developing Countries. Cambridge University Press. 238 pages.

Preparatory phase should be considered an important goal, this phase highlights several points. Firstly, benefits of sport activity should be clear to all cross-sectors helping a youth with a disability to develop, **be aware of resources, identify the needs and plan activities to minimize injuries, adapt the activity and motivate for any recreational event**.

5.2 PSYCHOSOCIAL, PHYSICAL AND PSYCHOLOGICAL BENEFITS

When it comes to aims and goals of sports activity among youth with disabilities, we should state three different areas of benefits: psychosocial, physical and psychological benefits.

Psychosocial benefits of sport include participation, quality of life, community without stigma, positive experiences, identity and self-efficacy.[77] Positive experiences stem from our understanding of the environment, in fact how fulfilling the events in which we participate are or are closer to our goals or expectations, this especially evokes feelings of insecurity or unpreparedness. The goal is to achieve active participation that will offer joy and will to participate without expecting whether they will succeed or not.

Sport can facilitate real social interaction, actually it can be a substitute for other social interaction that they can not approach for several reasons. Social interactions help us build social identity.

Building identity differs, from finding yourself working on your body shape and strength, discovering a group of people who share your interests to creating new friendships. Sport, recreation and past-time activities offer a wide range of options.

Even if social interaction could not be provided in other social contexts, sport either as educational activity in schools, or past-time activity offers a basis for social interaction and new relationships.

What should specially be brought to highlights is the possibility that certain interaction, and sport events won't bring wider community participation.

Benefits of physical activity are most often reflected through increased self-esteem, reduced stress, depression and anxiety, better cognitive and listening skills,

[77] REPPSI, & Hanass-Hancock, Jill. (2014). “Psychosocial Support for Children with Disability and their Carers”. Available at: https://www.researchgate.net/publication/307575395_Psychosocial_Support_for_Children_with_Disability_and_their_Carers, accessed April 2020

attention, higher level of energy and preventing development of illnesses.[78] Of course, this shouldn't bring discouragement and ignore the fact that one of the main aims and goals of sports activities for youth with disabilities is working on self-esteem. If we wonder how sports activities can help build self-esteem, we should consider planning activities with proper guidelines.

If aiming towards reaching self-esteem within youth with disabilities through sport, primary goals would be teaching them that lack of confidence doesn't mean lack of ability to do something, sport activities should not be based on unrealistic expectations, comparison or competition, sports activities should not test your skills but your motivation to learn and have fun, sports activities help fighting generalization. Building self-esteem through sport activities youth with disability gain new tools, new skills to manage different social situations.

Undoubtedly, above mentioned skills are part of the knowledge that will stay with youth forever, knowledge that can be applied from one life situation to another.

5.3 IMPACT ON MENTAL HEALTH

Emotional well-being as a result of several factors relies on mental health aspects such as, stress and relaxation, depression, anxiety, expressing emotions and mood swings.[79] During adolescence years (12-19) emotional well-being takes an important rule, especially because children have to be prepared to learn a new way of functioning, adapting, understanding and accepting. This doesn't always refer to accepting responsibility of being a grown-up person but also accepting oneself.

Emotional well-being comes from relationships between others and with ourselves, also.

Youth with disabilities have problems coping with changes in relationships.

If the setting is more formal and activities are regularly provided such as going to school or rehabilitations, children develop co-dependency. This way they meet a lot of difficulties when they have to adjust to unfamiliar situations. If sport activities are introduced as fun games, games that stimulate creativity that dealing with unfamiliar situations could be more manageable for youth with disabilities.

[78] CHILDREN WITH SPECIAL NEEDS: BENEFITS OF PHYSICAL ACTIVITIES AND ADAPTIVE SPORTS, available at: https://kidcompanions.com/children-with-special-needs-benefits-of-physical-activities-and-adaptive-sports/
[79] Disability in Sport, available at: http://psychology.iresearchnet.com/sports-psychology/disability-in-sport/

Furthermore, benefits of sport activities while creating firm relationships and facing unfamiliarity would be; **ability to solve social problems, ability to adjust different people, giving and accepting different opinions, not feeling isolated in smaller or bigger groups, accepting failure, more tolerance,** etc.

The main aim while building emotional well-being with sport activities would be happy and enjoyable activity that improves performance. Happy and self-aware youngster who receives support **creates great internal values, which lead to emotional intelligence and willingness to adapt, participate, take risks**… Working with this aims, especially in adolescence leads towards a greater goal and that is a child who is able to set goals, have a positive self-talk, knows how to cope with different situations and build quality relationships with oneself and with others.

Sport activities can benefit in learning important life skills. When we talk about life skills, we can refer to developmental, affective and societal. Learning developmental skills while being exposed to sport activities means we learn how to lose, we learn how to cope with disappointments, unpleasant experiences and we get mature with the time.[80] Participation in sport, recreation, gatherings or pass time activities are always about positive messages. It is very important to repeat positive and encouraging messages very often. Those messages can be very simple, such as, “You can do this”, “I believe in you”, “You got this”, etc. Positive messages build trust and firmer relationships. This means that a youngster will share their concerns, interests and needs and that you as a teacher, couch or youth worker will be cacheable to fix it on the way.

Staying positive and spreading positive messages doesn't actually mean hiding the truth or masking it but empowering.[81] In the phase of developing it is very important to know how to control emotions and channel negative emotions. Since sport has a competitive spirit and involves a lot of emotions, while producing sport activities for youth with disability it is very important to talk about rules and possibilities of losing and winning.

Developmental skills also mean understanding that sport needs a lot of practice and that it is a process not just a goal.

Affective skills refer to relationships towards obligation such as school or sport, confidence and belonging. Sense of belonging through sport is built by being involved, invited, welcomed, known, accepted, supported and cared for. Youth

[80] Koenderink F. “Intellectual Disability Among Children Everywhere”, Orphanage Projects (2018)
[81] Byers T. - “Contemporary Issues in Sport Management: A Critical Introduction”; SAGE Publications, 2015

workers and organizations providing activities for youth with disability take a primary role in developing a sense of belonging. Non-formal atmosphere, volunteers, equipped youth workers provide a basis for feeling accepted, understood, involved and becoming a multiplier for other youngsters with disabilities. Belonging also means accepting the rule of being a part of the team and accepting yourself as "I matter and I contribute to this".

Societal development through sport refers to listening better, organizing, making decisions, free choices, discipline and making friends outside of the school circle.

Last but not the least, sport does not only benefit in developmental sense but also stimulates intellectual progress. This progress is seen in the **ability of problem solving and planning**. Sport participation requires being involved in planning and ability to plan alone. Working together with the coach/youth worker in adaptation and modification of activities, suggesting new activities and improvement of current ones.

Youngsters also become observers and judges if the activity is good for them or not. They also learn that rules are important in order to understand the game as a whole, not as a punishment. They also learn that sport does not test their abilities but is the activity that requires certain skills.

Well planned sport activities for youth with disabilities, either regular, parallel, inclusive or modified in school of settings outside the school benefit is several areas, such as: being motivational, developing new friendships, helping social integration, adaptation and social engagement, stimulates physical and psychological well-being, contributes problem-solving and organizing, develops positive sense of self and sense of belonging, builds identity and possibility to make individual and independent choices, meets individual needs, builds up-skilled person who can become trainer itself, person who is reflective, challenges normative assumptions, fights stereotypes and works on long term objects of inclusion, participation, special education and non-formal education.[82]

[82] Lakowski T., Long T. - "Physical Activity and Sport for People with Disabilities"; Washington, DC: Georgetown University Center for Child and Human Development, 2011. Available at: https://ucedd.georgetown.edu/documents/athletic_equity/Physical_Activity_Proceedings.pdf, accessed April 2020

6 DEVELOPMENT OF COMPETENCES FOR MAINSTREAM AND YOUNGSTERS WITH DISABILITY THROUGH SPORT AND NFE

The term competence is used in different contexts and disciplines, but a single shared definition does not exist. There are number of different ones, which also depend on the context and culture to which the term refers.

The Recommendation of the European Parliament and of the Council of 23 April 2008, presents the European Qualifications Framework (EQF); a unitary system of certification of citizen's competences, whether they have been acquired formally, **non-formally** or informally. The Recommendation also clarifies the meaning of the terms “knowledge", “skills", “competences" in the European framework.

- “**Knowledge**": means the result of the assimilation of information through learning. Knowledge is a set of facts, principles, theories and practices related to a field of work or study. Knowledge is described as theoretical and/or practical.
- “**Skill**": means the ability to apply knowledge and use “know-how” to complete tasks and solve problems. Skills are described as cognitive (including the use of logical, intuitive and creative thinking) or practical (including manual skills and the use of methods, materials, tools).
- “**Competence**”: means proven ability to use personal, social and/or methodological knowledge, skills and abilities in work or study situations and in professional and personal development. **The competences are described in terms of responsibility and autonomy.**
- To complete the definition of competence, it is necessary to insert one last term: “**aptitude**". The aptitude indicates an inclination or predisposition or potential ability to carry out a given activity, which is only realized as such, if it finds external (contextual, i. e. environmental) and internal (motivational) conditions. The aptitude is understood as an innate individual predisposition, either influenced by the environment or acquired through experience or learning.

Having defined these terms we can then conclude that each competence is made up of knowledge, skills and aptitudes.

The 8 Key Competences of European Citizenship

On 22 May 2018, the European Council, accepting the proposal made on 17 January 2018 by the European Commission, launched the Recommendation on key competences for lifelong learning and the European Framework of Reference Annex, replacing the Recommendation of the European Parliament and the Council of 18 December 2006 and its Annex on the same subject. On the same day, and again on the basis of another Commission proposal of the same date, the Council adopted the Recommendation on the promotion of common values, inclusive education and the European dimension in education, complementing and strengthening the first one. The European Commission has also updated a list of 8 transversal competences that are listed as the key competences of European Citizenship. These competences have been identified by the European Commission as the core competences necessary to be an active European citizen.

These transversal skills, although in a limited form, are to be taken into account when designing any type of activity, motor activity or other types.

The competences are:

- **Functional alphabetical competence** - This is the full ability to communicate, both in oral and written form in a proper language, adapting one's register to contexts and situations. Critical thinking and the ability to evaluate reality are also part of this competence.
- **Multi-lingual competence** - Provides knowledge of the vocabulary of languages other than the proper language, resulting in the ability to communicate both orally and in written form. Finally, the ability to fit into socio-cultural contexts other than the proper context is also part of this competence.
- **Mathematical competence and competence in science, technology and engineering** - Mathematical competences considered indispensable are those that allow to solve problems related to everyday life. Those in science and technology, on the other hand, are presented in the ability to understand the basic natural laws that govern life on earth.
- **Digital competence** - It is the competence of those who know how to use the new technologies with familiarity, for education, training and work purposes. For example, computer literacy, online security, digital content creation are parts of this competence.
- **Personal, social and "learning to learn" competence** - It is the ability to organize information and time, to manage one's training and career path. It also includes the will to insert one's own contribution in the contexts in which

one is called to intervene, as well as the ability to reflect on oneself and to regulate oneself.

- **Competence in citizenship** - Everyone must possess the skills that enable them to act as a conscious and responsible citizen, participating fully in the social and political life of their country.
- **Entrepreneurial competence** - It is the creative ability of those who know how to analyze reality and find solutions for complex problems, using imagination, strategic thinking, critical reflection.
- **Competence in cultural awareness and expression** - This particular competence includes both, knowledge of cultural heritage and the ability to connect the individual elements that are part of it, tracing mutual influences.

6.1 COMPETENCES IN INTEGRATED SPORT

Thanks to the International Classification of Functioning, Disability and Health (ICF) and the use of the individualized diary of objectives (seen in the previous chapters), we are therefore able to define the individual objectives for each of the young people (with and without disability), participating in the planned activity. In fact, it is important to remember to take into consideration both, the objectives and related skills of the individual and the objectives of the group, which contribute to make the practice of sport fun and engaging. In integrated sport and youth sport work activities, in fact, the goal of the individual, created and calibrated according to the individual's abilities, is as important as the team goal, also created and calibrated according to the group's abilities and set in such a way that any participant of the sport practice is able to give a contribution to reach it.

We can divide the competences that are acquired through the integrated sports practice into two types: **motor competences** and **transversal competences**.

Motor competence represent the proven ability to use personal, social and methodological knowledge, skills and abilities in play, expression, sport, wellness and leisure. Competences are expressed in terms of responsibility, autonomy and awareness.

The identified competences cover **eight fundamental macro-fields**:

1. knowledge and mastery of your body
2. sensory perception

3. coordination
4. expressivity
5. game, game-sport and sport
6. safety and health
7. natural environment
8. aquaticity

These competences will have a strong impact on the growth of participants, (both normally-endowed and with disabilities) and on the youth sport work activities. But attention, working in the field of integrated sport and consequently setting individualized goals, each participant will get different form and declination of the competences. This is not only a problem, but it is a strength of integrated sport, which allows to achieve specific objectives, calibrated to the capabilities of each individual. The young normally-endowed will have developed competences that will mostly refer to the physical and motor sphere, training motor skills and physical condition.

The young person with disability will also develop competences on individual and personal level, closely related to the physical sphere, but in this case the impact they will have on his daily life may be even greater. In fact, in these cases we talk about transfer of competences. We can take a person in a wheelchair as an example. The physical and proprioceptive development he might develop by practicing "baskin" (the “integrated" version of basketball) will help him to manage better the wheelchair also in city contexts and in contexts where there are some barriers. He/ she will therefore develop skills that will empower him/her in terms of autonomy and self-awareness. This type of competences is particularly important for young people with motor disabilities who, through fun activities conducted and designed for their possibilities and skills and develop capacities that are fundamental to their daily lives and can help them to overcome limitations and open up new possibilities for them.

However, not only the motor competences are learned through integrated sport, but also social and transversal competences. We have seen some of them defined as the 8 key competences of European citizenship, but the transversal competences category is wider. These are all those competences that represent personal knowledge, skills and qualities that characterize the person’s way of being; in study, at work and in daily life.

Precisely for this reason they are called “transversal", because they do not refer to technical areas or specific knowledge of a subject of study, but call into question all those aspects of personality and knowledge that everyone uses every day in different contexts.

Transversal skills emerge when we have to make decisions, when we try to get out of a difficult situation, when we try to change things we don't like, when we are with others, every time we have to learn something new. The WHO identifies a list of 10 life skills[83], for which it also provides a short description and some ideas at educational level for their understanding:

1. Ability to make decisions: to be able to deal constructively with decisions in different periods of life, evaluating different options and the consequences that possible choices may involve;
2. Problem-solving skills: knowing how to deal constructively with life's problems, which, if left unresolved, can cause mental stress and physical disturbances;
3. Creative thinking: it contributes to decision-making skills and to the ability of problem-solving, allowing us to explore available alternatives and the various consequences of our actions or non-actions; it helps us to look beyond direct experiences and to respond with adaptability and flexibility to everyday situations;
4. Critical thinking: being able to analyze information and experiences objectively; helps to recognize factors that influence attitudes and behavior, such as values, peer pressure and the influence of the media;
5. Effective communication: knowing how to express yourself, verbally and non-verbally, in a way appropriate to your culture and the situations in which you find yourself; it means being able to express opinions and desires, but also needs and fears and being able, in case of a need, to ask for advice and help;
6. Interpersonal skills: being able to interact positively with others; being able to establish and maintain friendly relationships; being able to end a relationship constructively;
7. Self-awareness: includes the ability to knowing yourself, your character, strengths and weaknesses, likes and dislikes; it can help recognize when we are stressed or under pressure; it is a prerequisite for effective communication, positive interpersonal relationships and developing empathy with others;

[83] http://origin.searo.who.int/entity/mental_health/documents/who-mnh-psf-93.7Arev2/en/

8. Empathy: being able to imagine what another person can feel, even in unfamiliar situations; helps to understand and accept others, even when they are very different from us; can improve social interactions especially in situations of ethnic or cultural differences or with the people in difficulty;
9. Managing emotions: recognize our emotions and those of others, be aware of how emotions influence behavior, and be able to manage them appropriately;
10. Stress management: recognizing the sources of tension in a daily life, what effects they have on us and being able to identify the appropriate actions to control them.

These skills, some more than others, can be acquired through the practice of integrated sport, both by normally-endowed and participants with disabilities. A normally-endowed person for example will be able to manage the emotions through the team play, recognizing the emotions of the group and understanding the relationship between one's own actions and the response emotions of one companion.

Bringing the same example to a person with Down's syndrome with proven aggressive tendencies in response to certain external demands, he can learn to manage that emotion by passing the ball to his teammates in an integrated football context. Again, for a participant with a disability, the importance of learning these skills is even greater as it has a real impact in everyday life and for some cases it can also mean acquiring skills that can enable him/her to be placed in other contexts, such as work.

6.2 ABILITY TO RECOGNIZE THE COMPETENCE

The acquisition of the competences mentioned in the previous chapter is very important, but often, in the practice of sport an aspect, which contributes in parallel to allowing this competence to be effectively applied also in contexts other than sport, is underestimated. We're talking about being able to recognize proper competence. This allows the young person to recognize its usefulness and consequently to apply it in other contexts.

An element that distinguishes sporting activity from sports training is the process that allows the young participant to achieve awareness and master competence in all contexts in which it is required. To achieve this goal, it is important to apply the paradigms of non-formal education appropriately.

Let's take a standard session of non-formal education. Once the training objectives have been set, youth worker plans the session by preparing all the elements. Presumably the first activity will be an energizer or ice-breaker that will aim to activate the group of participants and introduce the theme of the activity. After that there will be a main activity that will deeply involve the group and that will have as primary objective to make the group work on the learning objectives that will be immediately followed by a **Debriefing** that will have the objective to bring the participants to reflect on the activity carried out and to reach the awareness of the acquired competences. The session will presumably end with a possible less intense activity to strengthen the concept and a “wrap-up” activity that quickly summarizes the session and the objectives achieved.

Example of a session schedule:

- Introduction or quick ice-breaker (5/10 min)
- Overview of the days’ activities (2 min)
- Main activity (30/60 min)
- (break)
- Debriefing of the main activity (25 min)
- 1 or 2 activities to solidify the learning objectives (30 min)
- “Wrap-up” (2 min)

As a Youth Sport Worker our goal is to combine Integrated Sports Activity with Non-Formal Education. Using the previous scheme, the above proposed session can evolve into:

- Introduction and Energizer (heating) or Ice-Breaker (giving priority to movement activities)
- Integrated Sports main activity
- Debriefing of a main activity
- 1 or 2 movement activities to consolidate learning
- Summary of the day

It is important to focus on the debriefing, in order to make participants aware of the competences they have acquired. Debriefing is the moment where the youth sport worker analyses an experience with participants in order to focus on and compound what they have learnt from it. It is a moment to take a step back, review the objectives of the activity and spend the time drawing ideas, conclusions and

questions from the experiential component. In short, it is like taking somebody by his/her hand and guiding him/her through the experience, stopping to collect what has been learnt.

Like in any other youth work activity, after the integrated sport activity it's important to have a proper debriefing of the experience. It is usually easier to have participants first share their general impressions and then ask specific questions to drill down into different aspects of their experiences. Most participants will naturally be excited and want to go over what has happened. However, it's better to limit this open sharing to 5/10 minutes so that the youth worker can focus the group on their learning objectives. In general, during the debriefing, it is important to give the opportunity to everyone to share and if some participant is faster than others and doesn't give the possibility to everyone to share, the youth worker / facilitator should simply ask the whole group to write down the answers and share afterwards (verbally or as an exhibition). Thus, also the quiet/shy participants will have a chance to share their thoughts with the others. Since the group is made up of normally-endowed and people with disabilities, it is important that the educator prepares different strategies in advance that allow all participants, if they wish to do so, to share their ideas and reflections. For example, by providing communication channels such as drawing and mime, giving appropriate time to each participant to communicate, using support tools (augmentative communication) and finally making use of co-facilitators who will support the participants with communicational problems in sharing with a group.

To guide the discussion, you can find here some possible questions.

- How do you feel now?
- Has anything changed since the beginning of the activity? Why? Why not?
- What have you learnt?
- What have you not understood or appreciated?
- Does this relate to the situation in...?
- If you were to do this again, what would you do differently?
- You/the team faced some difficulties? Who solved them? How?
- How was conflict handled?
- What patterns did you notice in how your team worked together?
- Did you personally feel like you contributed?
- Who was "checked-out" or didn't contribute as much, and why?

- How did you communicate among the players? Did you develop new strategies of communication? If yes, would they be useful even outside the sport activity?
- Would you be able to recognize a role for each person of the team?
- Has something happened in the field related to the real world?

It is important to note that not every moment in the activity needs to be talked over. As a youth sport worker who is aware of the individual and team's challenges and goals, one will want to draw attention to the patterns and moments that will best meet those goals. Since the target group is an integrated group of youngsters and the main goal is to go toward inclusion through sport, it will be important to highlight moments of successful joint effort and shared emotions, moments of problem-solving process and moments when the different approach helped to reach the goal. It is recommended to write down these moments during the Integrated Sport Activity in order to recall them precisely during the debriefing.

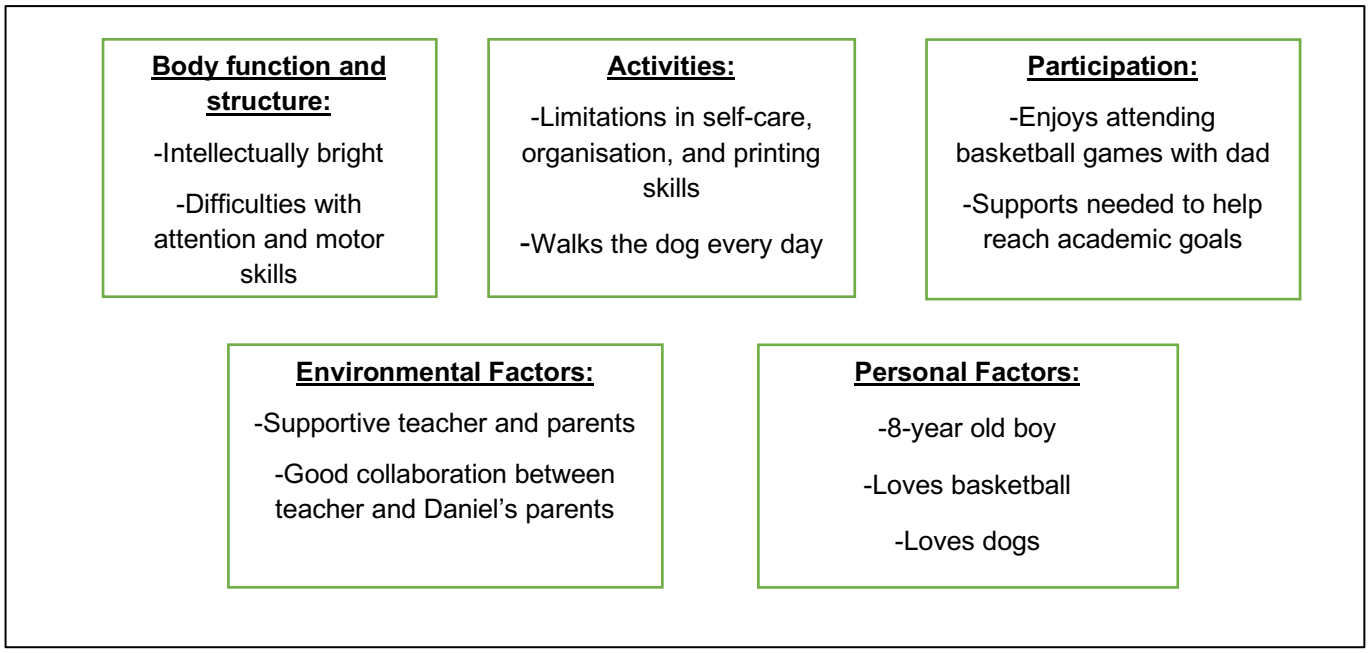
The debriefing is the most important moment of the facilitation. With a proper debriefing the participants will feel to have enjoyed a funny game and meanwhile empowered themselves as people.

In conclusion, integrated sports activity, combined with the principles and methodologies of the non-formal education, can lead a group composed of normally-endowed and people with disabilities to achieve personal and group goals and to acquire competences consciously and then use them in the challenges presented to them in daily life, greatly improving their psychophysical state.

7 INDIVIDUALIZED EDUCATION PLAN (IEP)

When talking about empowerment and achievement of new results and competences for youngsters with disability it is important to consider the IEP model: we as youth sport worker should work for the development of people according to his life needs and aims. The Individualised educative plan is a pedagogical document which ensures the adjustment and adaptation of the educational learning process to the disabled youngsters, based on his/her abilities and needs. The IEP defines academic/life goals, methods and educational intervention (activities, supports and services) in order to achieve the defined objectives (on a long/medium/short term range) and it is the result of a collaborative effort that involves the school special education team, the teachers, the parents, other relevant educational and medical stakeholders, as well as, whenever possible, the pupil[84]. The approach as explained by Ernesto Ciraci, teacher-trainer expert in school inclusion and president of the association of specialized support teachers MiSoS, it is the bio-psycho-social approach of the ICF, which investigates the functional aspects of the pupil with disabilities, providing us with the methods to describe the impact of environmental/contextual factors (school context) in terms of facilitators or barriers, with respect to the activities and participation of the pupil and to a specific "health condition". The IEP can be adopted to the needs of the youth (sport) workers and trainers when delivering activities and programmes in mixed groups (with and without disabilities) in order to follow the social and persona development of the participants.

[84] Ianes D, Cramerotti S (2009) Il Piano educativo individualizzato - Progetto di vita Vol.1-2-3 (Erickson, 2009).



Classification of Daniel's case study using the ICF framework. Adapted from World Health Organization (2013) (Box 1: the ICF model: interaction between ICF components, p. 7). Adapted with the permission of the World Health Organization.[85]

What should Personalised Plan consist of:

- Personal data about the participant;
- Pedagogical profile of the participant;
- Body function and structure;
- Current activities;
- Participation;
- Environmental factors;
- Personal factors;
- Assessment of the need for support - planned measures for removing physical and communication barriers;
- Activities plan - with defined areas, goals / outcomes, steps and their duration and frequency, as well as the method of measuring the achievements.

Key Characteristics of the Personalised Plan:

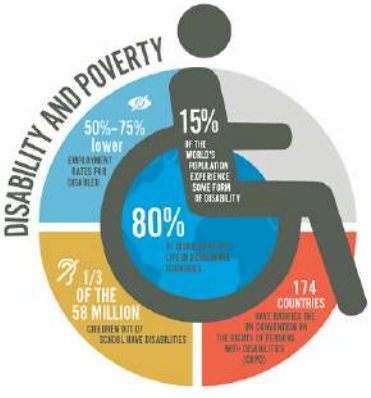
- Special;
- Individualised;
- Specify targets and goals;
- Specify working methods and supporting strategies;
- Be regularly reviewed;
- Shared with the participant;
- Shared with parents and carers;
- Make it a working document - updated regularly by answering some of the following questions:

[85] Building Bridges Between Education and Health Care in Canada: How the ICF and Universal Design for Learning Frameworks Mutually Support Inclusion of Children With Special Needs in School Settings; https://www.frontiersin.org/articles/10.3389/feduc.2018.00018/full

- What progress has the participant made?
- Which targets have been achieved?
- How successful were the strategies used?
- What are the next steps?
- Should alternative strategies be tried?
- Is a more detailed assessment needed?

An example of an IEP Form

INDIVIDUALISED EDUCATIVE PLAN		
Name:	**Surname:**	**Date of birth:**
City:	**Contact number:**	**E-mile address:**
Pedagogical profile of the participant: … .. .	Body function and structure: … .. .	Current activities: … .. .
Participation: … .. .	Environmental factors: … .. .	Personal factors: … .. .
Assessment of the need for support - planned measures for removing physical and communication barriers: … .. .	Activity plan – AREAS: - - -	Activity plan – GOALS/OBJECTIVES: - - -
Activity plan – STEPS: - - -	Activity plan – METHODS OF MESURING THE ACHIVEMENTS: - - -	Notes: … .. .



8 PRACTICAL ADVICES FOR EVERYDAY ACTIVITIES WITH MIXED ABILITIES GROUPS OF YOUNGSTERS

We have reached the last section of our manual, where we will try to link all the concepts expressed in the previous sections, to design together two APA activities. Our intention is to reflect about the argument that will lead us to the formal construction of all the components of the APA. Our proposals concern 1 APA for a social context and 1 APA in a psycho-motor perspective, leaving to each of you the research of APA in the sports context. This choice is motivated by the fact that APAs in a sports context are already codified and structured and are therefore easy to design in organizational terms.

The APA we are going to propose below are built for different disabilities; the first physical and the second cognitive, the first structured in a project and the second isolated. After this premise, we are ready to plan our first APA. While we are going to explain the APAs, we are going to point out some notions that will help us to manage better our business in a daily practice.

8.1 THE INITIAL EVALUATION

When we talk about the tools of the sport operator's profession, we talk about all those tools that allow to concretize an idea (project) and connect all the parts that compose it. Every operator when he enters the gym must feel a bit like the mechanic who has to build a car. As a first operation the mechanic tries to assess what kind of car he wants to build, but he must pay attention to the budget he has available to build it, he also needs to pay attention on the parts he owns. In the design of the APA, this first phase is called **evaluation** and has the task of assessing the objectives to be achieved, according to the capabilities of our subject. As far as the person with disability is concerned, we refer to the **IEP** where we find all the information we have collected about the disability, the residual capacities and the emotional/relational capacities of our subject. In addition, in the IEP we will have identified the **competences** we want to work on and what **objectives** our subject has.

The programming

Once this first evaluation has been made, the mechanic moves on to the design drawing, defining point by point the parts to be assembled and the exact order in which they are to be assembled. This is the operational or programming project, where we build all the activities that help the disabled person to strengthen their skills and achieve the objectives set in the APA. At this stage, in addition to building the individual activities, we must be careful to place them in the right order, using progressive criteria. We have to imagine the programming as a matryoshka, which inside the larger figure contains other smaller ones that help to compose the complete set; without one figure, the set has no value. So if, for example, we wanted to propose an APA to a paraplegic subject to learn how to use the electric wheelchair in the city (competence), we would have to build a series of activities that would lead the subject to learn how to use the vehicle progressively and with the achievement of skills and knowledge. The achievement of this specific competence falls within an area of competence, i. e. a field in which all common competences are merged. Knowing how to use the wheelchair in the city could be part of knowing how to use the wheelchair in everyday life. This could include other skills that all together allow to improve the subject's skills as shown in the table.

AREA OF COMPETENCE	USE OF AUXILIARY FOR DAILY LIFE
COMPETENCE 1	Use of a wheelchair for a spastic paraplegic in a city environment
COMPETENCE 2	Use of a wheelchair in a home environment
COMPETENCE 3	Use of a wheelchair in sport
COMPETENCE 4	Use of a wheelchair in a school / working environment

The objectives that contribute to the formation of the competence are defined as **intermediate objectives** and must all be achieved with a fair level of performance, in order to achieve the desired level of competence. All this must be included in a scheme that allows us to have an overview of the complete project. It is also useful to observe how the programming follows a **taxonomic** trend, i. e. a series of skills and knowledge ranging from bottom to top, from easy to difficult, from simple to complex.[86] This process is a special teaching method that is called "**Mastery**

[86] Tosi R., Ceciliani A., Manferrari M.R., Ricci G. - Scienze e motricita - Soc. Editrice Esculapio, 1995, Bologna, page 143.

Learning" (Carrol, 1963, Bloom 1971; Block 1978)[87] and which requires skills and knowledge learned even in a partial form, in order to reach other higher levels. While planning, it is important not only to plan the objectives, but also to quantify the **time** needed to achieve them. Time is quantified in "**Didactic Learning Units**" (D.L.U).

COMPETENCE FIELD: USE OF AUXILARY FOR DAILY LIFE					
APA – USE OF A WHEELCHAIR FOR A SPASTIC PARAPLEGIC IN A CITY ENVIRONMENT					
Objectives	***Objective 1 - Recognizing controls and their use***	***Objective 2 – Ability to move a wheelchair in a facilitate environment***	***Objective 3 – Ability to move a wheelchair in a static difficult environment***	***Objective 4 – Ability to move a wheelchair in a dynamic difficult environment***	***Objective 5 – Ability to move a wheelchair in a city environment***
Ability	- Know how to turn on the wheelchair - Know how to use visual and acoustic signals - Know how to use the joystick - Know how to tie the seat belt	- Know how to drive the wheelchair at different speeds - Know how to drive the wheelchair in curves - Know how to drive the wheelchair in reverse	- Know how to drive the wheelchair in narrow spaces - Know how to park the wheelchair in narrow spaces - Know how to drive the wheelchair up and down - Know how to use the rearview mirrors - Know how to slow down the wheelchair in small spaces	- Knowing how to drive a wheelchair in an easy environment with people moving around (e. g. gym) - Know how to drive the wheelchair following moving reference points (e.g. companion) - Know how to drive the wheelchair in dynamic situations	- Know how to drive a wheelchair in a city environment with a tutor - Know how to drive a wheelchair in a city environment with a remote tutor - Know how to drive a wheelchair independently
Knowledge	Know how to use the controls	Know how to use the controls also with the eyes closed	Know the size of the wheelchair and the possible breakdowns of it	Know the subjective and objective rhythm	Know the traffic laws

[87] Bloom B. S. – Tassonomia degli obiettivi educativi (area cognitiva) – Vol I, Ed. Giunti & Lisciani, Firenze-Teramo, 1983.

8.2 DIDACTIC LEARNING UNITS

Returning to "our" mechanic, now that he has designed the montage of the car, he will have to start getting his hands dirty to assemble his car. To do so, he needs to follow the assembly program by first mounting the frame, then the engine and then all the other parts. In order to reach the competences, we need to build the **Didactic Learning Units (D.L.U.),** those are the pieces of the car. In our case, D.L.U (training/motor activities) are those practical activities that have the task of making the disabled person acquire the skills and knowledge scheduled. As we have seen, the learning of new skills/knowledge takes time that we should plan. Going to complete our program, we have to add the D.L.U. that we believe should be used to achieve each goal, by quantifying the working time (usually are training sessions ranging from 1 hour to 2-2.5 hours).

COMPETENCE FIELD: USE OF AUXILARY FOR DAILY LIFE					
APA – USE OF A WHEELCHAIR FOR A SPASTIC PARAPLEGIC IN A CITY ENVIRONMENT					
Objectives	***Objective 1 – Recognizing controls and their use***	***Objective 2 – Ability to move a wheelchair in a facilitate environment***	***Objective 3 – Ability to move a wheelchair in a static difficult environment***	***Objective 4 – Ability to move a wheelchair in a dynamic difficult environment***	***Objective 5 – Ability to move a wheelchair in a city environment***
Ability	- Know how to turn on the wheelchair - Know how to use visual and acoustic signals - Know how to use the joystick - Know how to tie the seat belt	- Know how to drive the wheelchair at different speeds - Know how to drive the wheelchair in curves - Know how to drive the wheelchair in reverse	- Know how to drive the wheelchair in narrow spaces - Know how to park the wheelchair in narrow spaces - Know how to drive the wheelchair up and down - Know how to use the rearview mirrors - Know how to slow down the wheelchair in small spaces	- Knowing how to drive a wheelchair in an easy environment with people moving around (e. g. gym) - Know how to drive the wheelchair following reference points that are moving (e.g. companion) - Know how to drive the wheelchair in dynamic situations	- Know how to drive a wheelchair in a city environment with a tutor - Know how to drive a wheelchair in a city environment with a remote tutor - Know how to drive a wheelchair independently

Knowledge	Know how to use the controls	Know how to use the controls also with the eyes closed	Know the size of the wheelchair and the possible breakdowns of it	Know the subjective and objective rhythm	Know the traffic laws
D.L.U.	2 D.L.U. (3 hours)	3 D.L.U. (4,5 hours)	2 D.L.U. (3 hours)	4 D.L.U. (6 hours)	3 D.L.U. (4,5 hours)

8.3 VALUATION AND REPROGRAMMING

The mechanic must consider that during the montage of the car, he may have problems due to errors of programming or due to the parts that need to be modified to fit the rest of the machine. Therefore, he must check each time when he has assembled a new part, if it has been assembled correctly. In the same way the physical operator will have to make sure each time if the D.L.U. has been effective in achieving the intermediate objectives and has been rewarding for the disabled person. This phase of **verification** is usually made by trying to perform the trained motor task in more difficult situations. If the learning of the motor task has not been satisfactory according to expectations, the practitioner will be able to choose indicatively from three different solutions. The first option is to **reprogram** the activity because he/she realized that the proposed activity was not effective or suitable for the person with disability; the second way is to dedicate more time (additional D.L.U.), because learning the motor task requires more time; the third way is to go back in programming, because a skill has not been fully acquired. To better understand this, let us try to give some practical examples of the situations that we might have to face during the planning phase.

In our APA we imagine that in objective 2 – Knowing how to move the wheelchair in a facilitated environment, our subject had difficulty in knowing how to lead the wheelchair into a corner. Let's imagine that person has not acquired the lateralization[88] completely. In this case, we should reschedule a part of the project by inserting a D.L.U. or part of it on tasks that train lateralization.

For instance, let's imagine that while working on objective 4 (managing ascents/descents), we realize that our subject has difficulty in managing the descent. In programming we will have to go back and spend some time working on the ability to drive the wheelchair uphill in objective 3.

[88] Lateralisation is the ability of a subject to identify the right and left on the other body and to project these reports in relation to objects and space in general.

Finally, we hypothesize that in objective 5 the disabled person needs a greater support of the tutor in the city environment to allow the subject to acquire more security; in this case it is sufficient to dedicate more time to the achievement of the objective.

COMPETENCE FIELD: USE OF AUXILARY FOR DAILY LIFE					
APA – USE OF A WHEELCHAIR FOR A SPASTIC PARAPLEGIC IN A CITY ENVIRONMENT					
Objectives	***Objective 1 – Recognizing controls and their use***	***Objective 2 – Ability to move a wheelchair in a facilitate environment***	***Objective 3 – Ability to move a wheelchair in a static difficult environment***	***Objective 4 – Ability to move a wheelchair in a dynamic difficult environment***	***Objective 5 – Ability to move a wheelchair in a city environment***
Ability	- Know how to turn on the wheelchair - Know how to use visual and acoustic signals - Know how to use the joystick - Know how to tie the seat belt	- Know how to drive the wheelchair at different speeds - Know how to drive the wheelchair in curves - Know how to drive the wheelchair in reverse	- Know how to drive the wheelchair in narrow spaces - Know how to park the wheelchair in narrow spaces - Know how to drive the wheelchair up and down - Know how to use the rearview mirrors - Know how to slow down the wheelchair in small spaces	- Knowing how to drive a wheelchair in an easy environment with people moving around (e. g. gym) - Know how to drive the wheelchair following reference points that are moving (e.g. companion) - Know how to drive the wheelchair in dynamic situations	- Know how to drive a wheelchair in a city environment with a tutor - Know how to drive a wheelchair in a city environment with a remote tutor - Know how to drive a wheelchair independently
Knowledge	Know how to use the controls	Know how to use the controls also with the eyes closed	Know the size of the wheelchair and the possible breakdowns of it	Know the subjective and objective rhythm	Know the traffic laws
D.L.U.	2 D.L.U.(3 hours)	3 D.L.U. (4,5 hours)	2 D.L.U. (3 hours)	4 D.L.U. (6 hours)	3 D.L.U. (4,5 hours)
Valuation		Lateralization is missing		He/she can't maneuver the wheelchair uphill.	He/she needs more support from the tutor

Riprogramming		Knowing how to recognize in the space the left/right compared to my body 2 D.L.U. (3 hours)		We go back to work on the ability of objective 3 - Know how to drive the wheelchair uphill and downhill 1 D.L.U. (1,5 hours)	Knowing how to drive a wheelchair in a city environment with a tutor + 1 D.L.U. (1,5 hours)

8.4 THE PARALLEL PROGRAMMING OF SEVERAL SKILLS

We had left our mechanic to check the correct assembly of the car, leaving aside the fact that the mechanic in assembling the car cannot focus on assembling a single piece at a time. The mechanic can sometimes assemble different pieces at the same time which will then complete a more complex part of his car. Also in training methodology, when we plan in the field, we will notice that learning skills and knowledge is a continuum, it is a process that represents "the expression of a relatively permanent change in performance or potential behavior, resulting from training or previous experience in the situation."[89] This continuous process that begins with the birth of the individual and ends with his death, would hypothetically allow the acquisition of a practically infinite motor ability. The individual's motor ability would be connected with the motor experiences that the subject has experienced in his or her own life and that he/she had learned.[90] Usually in physical activity training does not practice a single skill, but more than one at the same time; when we talk about programming, it would be limiting to program activities that focus their attention on a single objective. Thus we speak of **parallel programming** that is aimed at the acquisition of more competences with D.L.U., containing **primary and secondary objectives**.[91] This process of parallel motor training is aimed at the global and harmonious improvement of the motor skills of our individual who, in achieving the objectives we have agreed with him, will find the satisfaction of his personal needs for self-realization and self-efficacy. Returning to our spastic paraplegic subject, our programming could be extended to other transversal and specific skills that could be

[89] Singer R, Robert N., - *L'apprendimento delle capacità motorie* - Società Stampa Sportiva, Roma, 1984, pag. 16.

[90] Schmidt R.A*., – Motor Learning And Performance: From Principlis To Practice* – Human Kinetics, Champaign (IL), 1991.

[91] Weineck J. - The optimal training - Calzetti Marietti Editore, Perugia, 2009.

linked to the practice of a wheelchair sport, for example *wheelchair hockey*. Our programming could thus expand to include the acquisition of additional skills, such as managing the main fundamentals of hockey in game situations. As we have done previously, competence should be articulated into objectives of learning new skills and knowledge trough training. We could then identify the specific objectives, such as:

- Ability to lead the ball in the play, using the hockey stick; in a space rather wide;
- Ability to execute short distance passes;
- Ability to execute passes from medium distance.

These objectives should be firstly declined by recognizing the skills and knowledge needed to achieve the competence objective. Once all these contents have been explained, the programming course would follow the steps explained in the APA of the use of the wheelchair in a city environment.

EXAMPLE OF PARALLEL PROGRAMMING				
USE OF AUXILARY FOR DAILY LIFE OF SPASTIC PARAPLEGIC				
COMPETENCE	**Use of a wheelchair in a city environment**	**Use of a wheelchair in a home environment**	**Use of a wheelchair in a wheelchair hockey**	**Use of a wheelchair in a school / working environment**
OBJECTIVES	1 - Recognizing the controls and their use 2 - Ability to move the wheelchair in facilitated environment 3 - Ability to move the wheelchair in a static difficult environment 4 - Ability to move the wheelchair in a dynamic difficult environment	1 - Recognizing maneuvering space 2 - Ability to get on and off the vehicle autonomously 3 - Ability to climb stairs with the stairlift	1 - Ability to lead the ball with the hockey stick in wide space situations 2 - Ability to execute short distance passes 3 - Ability to execute passes from medium distance	1 - Recognizing maneuvering spaces 2 - Ability to get on and off the vehicle autonomously 3 - Ability to enter the work emplacement 4 - Ability to move in all spaces of the environment

	5 - Ability to move the wheelchair in a city environment			

Summing up

The programming includes:

1. To choose an area of competence;

2. To chose the general and specific competences that need to be improved;

3. To define primary and secondary objectives;

4. To organize objectives in a taxonomic way;

5. To chose skills and knowledge to obtain;

6. To program individual D.L.U.;

7. To check the results each time;

8. To reprogram, if necessary.

From macro to micro: how to build a D.L.U.

We have seen in the previous section the mechanisms to do programming; in this part we will try to build a D.L.U. of an APA, to concretize all the notions that we have provided in the previous sections on NFE and on training methodology. We have already described how the D.L.U. in the sports field is represented by training or a physical education lesson; both proposals have common moments of work, within which to introduce well-defined contents. Below we will describe a motor experience related to mental disability, illustrating the example of a person with disability (his initials are G.P.), suffering from a form of autism. He is high functioning, but with reduced social skills that compromise the relationship with peers at school. The APAs in which this D.L.U. is inserted intend to develop verbal and emotional communication, through integration with school and sports psycho-motor activities. Before going to show the project of our D.L.U. it is appropriate to add some details that we thought to include in this final section.

8.5 FIELD STRATEGIES: THE TRAINING PLAN

When we get to the field, we need to get there with our activity plan. In this plan we must include all the information regarding the D.L.U. which we are going to present. First of all, we have to consider the group and the types of disabilities we are going to work with. Then in designing the training we must as always start from the main objective of the D.L.U. and from possible secondary objectives. In choosing the main objective, we can make a further distinction into a main motor objective and a psycho/social objective. In our case, the proposal is addressed to a school group within a project of integration among normally-endowed children and a child suffering from autism.

D.L.U. INTEGRATION OF AUTISTIC CHILD IN THE GROUP	
CHARACTERISTICS OF THE GROUP AND OBJECTIVES OF THE D.L.U.	
Nr. of participants	12 – group of 7 years old
Presence of any students with disability	G.P., 1 child with high functioning autism
Motor learning objectives	- strengthening the basic motor patterns - development of subjective and objective rhythm skills - development of perception of space and time
Psycho/relational learning objectives	- increase vocal communication instruments - increase the experiences of trust in companions

Once we have defined these, we must consider the organizational part of the D.L.U of the material, the training time, the space. In this operation, in preparing the space and equipment, we need to secure the space and manage time well, so that we can have the right breaks between one proposal and another.

ORGANISATION OF D.L.U	
Spaces used	School's garden
Duration of D.L.U.	1 hour, 30 minutes
Equipments and materials used	20 long and short tubulars and sponge connectors (in alternative coloured strings can be used)

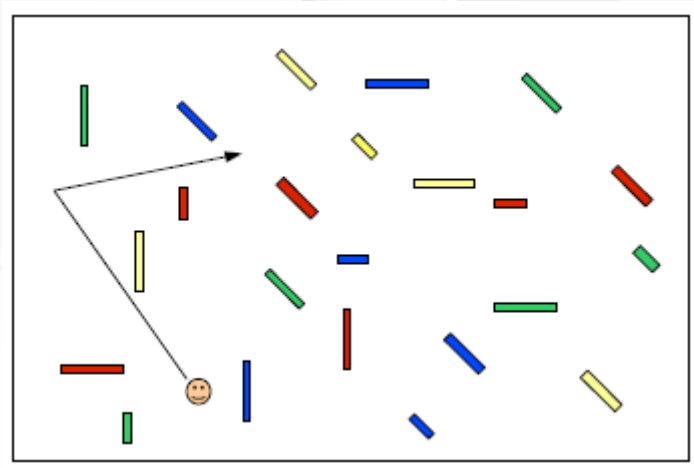
Having made all these considerations, we propose to divide the lesson in different moments. In doing so as we said, we can divide the lesson into 3 parts and we can use drawings, short explanations and notes on the methodology to be used to explain the required tasks.

ARTICULATION OF D.L.U

In this lesson we will use the tubes to work on the basic motor schemes. The tubes will be used in different ways to build obstacles or extensions of the body; the exercises will be progressive, from easy to difficult.

ACTIVATION PHASE

RUNNING IN THE SPACE WITH THE WALLS



In the first phase of the exercise each child runs freely in space trying not to touch any other companion. Then we ask the children to whom we have given a tube of the kit, to place it in the space wherever they want, taking care that the tube is as far away from the other tubes as possible. Once the field is prepared, the second phase can begin, in which each child can run freely without touching any companion and without crossing the walls (motor literacy kit tubes).

CENTRAL PHASE

1. *RUNNING AND JUMPING*

Starting from the previous game but with walls that become obstacles to jump freely. After
first approach of free jumping, we can, taking inspiration from children, propose other types jumps, such as:

- jumping with one support
- jumping with two supports
- jumping on one leg
- backward jump
- jump with rotation

2. *THE TRAIN GAME*

We make groups of three children, we give each group a tubular, long tube (1,60m). On the beginning the children are united by the tube. On the sign “start” the driver (the first wagon) takes the train around, trying to avoid the other trains. On the sign “change” we change the driver. Variant: the train has no drivers; the children have their eyes closed.

3. *TRAINING THE ANIMALS*

We form groups of three children, we give them a tubular. The game consists in training a companion to overcome the obstacle (tube) supported by the two trainers (companions). The obstacle can be placed either high or low, oblique or in movement.

4. *THE MIRROR*

Always in groups of three, we use our tubes to play the game of mirrors. The mirrors will try to imitate the head child, who can jump back and forth over the tube. On the sign “change” the children change rules.

FINAL PHASE

5. NEMO AGAINST THE OCTOPUS

In this final game we distribute in the field the circles built with long tubulars and closed with the connectors of the motor literacy kit (or circles). Inside the circles we put the octopuses with one foot inside and one foot outside, each with a tentacle (tubular 1. 6 m long). On the sign “start” Nemo (the children left outside the circles) will have to try to escape into the sea (camp) without being touched by the tentacles. Whoever gets caught is eliminated. Variant: Whoever gets caught goes to play with the octopus, becoming a mini tentacle (short tube 0. 5 m).

The last part of the lesson is a phase of verification of the proposed activity, in order to evaluate if the objectives we have set have been achieved and if G. P. has reached its personal objectives.

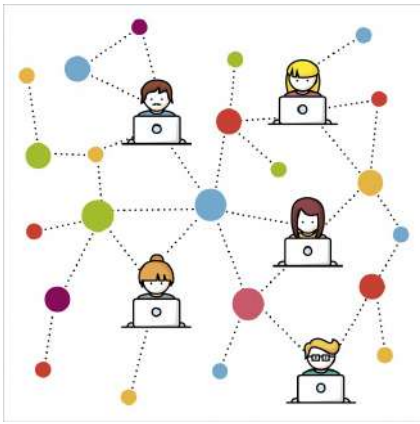
Any other considerations about the lesson (or group of lessons)	In this lesson, G. P. suffering from autism used the tube as a communication instrument and different game tool than usual, getting involved with his classmates. To get him even more involved, we've often changed his playmates. In more complex games phases, we asked to some companions to help him in respecting rules and tasks
Observations on the effectiveness of the activity	The lesson is very simple, for the content and for the objectives. Surely it is a lesson to be used as a start of the course, for the simplicity of the proposals and for the general exercises. An interesting aspect is the subdivision of the class into groups of three children, a way of working that allows the teacher or the expert to evaluate friendships and leaders of the group. This evaluation could be useful in the structuring of subsequent lessons, as it could encourage socialization among children or the sense of responsibility.
	In the animal training exercise (exercise 6), we give help on how to make companions jump or create mobile obstacles. We also pay attention to emphasize and reward groups that are able to play better and to organize role changes, thus showing a greater willingness to compare and collaborate.

Now it's your turn!

To learn how to organize your D.L.U. you can try to build one using this form.

D.L.U. INTEGRATION OF AUTISTIC CHILD/STUDENT IN THE GROUP	
CHARACTERISTICS OF THE GROUP AND OBJECTIVES OF THE D.L.U.	
Nr. of participants	
Presence of any students with disability	
Motor learning objectives	
Psycho/relational learning objectives	
ORGANIZATION OF D.L.U.	
Spaces used	
Duration of D.L.U.	
Equipments and materials used	
ARTICOLATION OF D.L.U.	
ACTIVATION PHASE **CENTRAL PHASE** **FINAL PHASE**	
Any other considerations about the lesson (or group of lessons)	
Observations on the effectiveness of the activity	


It's Your Turn!



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