

Edited at WEST UNIVERSITY IN TIMISOARA / Romania
The Centre of Research in Child-Parent Interaction (CICOP)

Today's Children Tomorrow's Parents

An Interdisciplinary Journal

**Play and Children
with Disabilities.
Interdisciplinary
Perspectives.**

No. 47-48, February 2018

Edited at WEST UNIVERSITY in Timisoara/Romania
The Center of Research in Child-Parent Interaction (CICOP)

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The Journal TCTP can be accessed at:

www.tctp.cicop.ro

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I. S. S. N. 1582 - 1889

CONTENTS

EDITORIAL

Serenella BESIO; Vaska STANCHEVA-POPKOSTADINOVA..... 3

SUPPORTING PLAY FOR THE SAKE OF PLAY IN CHILDREN WITH DISABILITIES

Serenella BESIO 7

THE RIGHT TO PLAY: A POWERFUL PROMISE MADE ALSO TO CHILDREN WITH DISABILITIES

Nicole BIANQUIN 18

“IT TAKES TWO TO PLAY” REFLECTIONS ON PLAY IN CHILDREN WITH MULTIPLE DISABILITIES

Jane BRODIN 28

WHEN THE RISK IS WORTH IT: THE INCLUSION OF CHILDREN WITH DISABILITIES IN FREE RISKY PLAY

Francesca CAPRINO..... 40

EDUCATING BEYOND THE EMERGENCY. A PRELIMINARY OVERVIEW ON THE USE OF PLAY IN SITUATIONS OF CRISIS

Mabel GIRALDO 48

BECOMING EXPERT IN PLAYING WITH CHILDREN WITH DISABILITIES. THE LUDI TRAINING SCHOOL “PLAY AND TOYS FOR ALL”

Serenella BESIO; Daniela BULGARELLI; Iolanda IACONO; Rianne JANSENS; Maria MIZZI; Odile PERINO..... 62

THE ROLE OF KNOWLEDGEABLE ADULTS IN CHILDREN WITH DISABILITIES’ PLAY. AN EXPLORATORY RESEARCH IN EUROPE

Tamara ZAPPATERRA..... 74

PILOTING INTERACTIVE KINECT-BASED GAME IN CHILDREN WITH DISABILITIES

Vaska STANCHEVA-POPKOSTADINOVA; Anna ANDREEVA..... 86

AN EXPLORATION OF THE OUTDOOR PLAY EXPERIENCES OF PRESCHOOL CHILDREN WITH AUTISM SPECTRUM DISORDER IN AN IRISH PRESCHOOL SETTING

Aine BLAKE; Julie SEXTON; Helen LYNCH; Alice MOORE; Maeve COUGHLAN..... 100

EXPLORING THE IMPACT OF SHADOW THEATER SESSIONS ON CHILDREN WITH AUTISM SPECTRUM DISORDERS (ASD)
Haim MIZRACHI; Ana MUNTEAN..... 117

PLAY DEVELOPMENT AND SYMBOLIC PLAY IN CHILDREN WITH HEARING IMPAIRMENT
Anna TROSHEVA - ASENOVA 131

PLAY FOR CHILDREN WITH DISABILITIES INTERDISCIPLINARY PERSPECTIVES

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The play of children with disabilities is an area recently brought to the forefront of the scientific research and continuously developing, also thanks to the work of the European COST Action on this theme entitled “LUDI – Play for Children with Disabilities”.¹

Play is in fact recognized as the most important engine for the development of all children, but in some cases it might result difficult to be exploited by children with disabilities. This is mainly due to the fact that the environment is generally not prepared to face their needs and their particular ways of functioning, thus disadvantaging and restricting their opportunities to grow and to take part to their peers’ life at large.

The COST Action TD1309 LUDI “Play for Children with Disabilities” is a network of European practitioners and researchers who study and approach this field from several disciplines

¹ www.cost.eu/TD1309; www.ludi-network.eu.

(pedagogy, psychology, occupational therapy, sociology, engineering, industrial design, sociology, Human Technology Interaction, Information Communication and Technology, etc.). LUDI aims at granting children with disabilities the possibility to experience play for the sake of play, in inclusive contexts, as a crucial dimension of everyday life. To reach this goal, LUDI disseminates the knowledge and the existing best practices in the field of play for children with disabilities.

Greater awareness must arise among the professionals of the involved fields, to ensure that play, a right of all children according to the United Nations, can be assured also to children with disabilities.

Educators, professionals of rehabilitation, medicine and psychology should put more and specialized attention to these aspects, should become more competent in supporting the creation of effective and playful ludic relationships, both in families and in the other life environments of the child. New educational and psychological instruments to assess and implement ludic activities should be developed. Studies in the related fields should increase. Market available toys should become more accessible, while the development of new tools and technologies to support children's play should be designed within the usability and accessibility frameworks.

Play for children with disabilities is patently located at a crossroad of different research and practice fields: psychology, pedagogy, health and rehabilitation sciences, juridical and social sciences, assistive technologies, robotics, design and other ones.

The "Today's Children Tomorrow's Parents" Special issue "Play for Children with Disabilities. Interdisciplinary Perspective" is a collection of articles from various disciplines (psychology, education, speech and language rehabilitation, occupational therapy, etc.) and offers a comprehensive perspective on play in children with disabilities, presenting the results of some experimental studies and overview of specific topics related to the theme of children with disabilities and play.

All submitted articles were peer reviewed, based on the initial editors' screening.

We gave also a chance to some young researchers, doctoral students and students to publish their results in this special issue together with the articles of the longstanding scientists in the related field.

In this special issue the play in children with disabilities is presented under various viewpoints, what witnesses on one hand the number of possible lines of development of this field of studies, and on the other hand the wide variety of possible approaches that may be adopted to this scope.

The first four studies included in the Issue explore in more detail some particular aspects of the play of children with disabilities.

Serenella Besio in her introductory paper entitled "Supporting play for the sake of play in children with disabilities", proposes a general discussion on the theme of play, focusing in particular on the play for the sake of play. Then the author underlines the limitations that play encounters in the case of disability and report some positive experiences that, on the contrary, facilitate accessibility. Finally, she summarizes the main challenges to be faced in order to succeed in establishing a breakthrough in the field of children with disabilities' play.

The article of **Nicole Bianquin**, "The right to play: a powerful promise made also to children with disabilities", presents the United Nations' perspective on the right to play of children with disabilities.

The stress is on the Article 31 of the Convention on the Rights of the Child, which is devoted to the right of any child to play, as well as on the Article 30 of the Convention on the Rights of Persons with Disabilities, which emphasizes the obligation of States parties to ensure that children with disabilities can participate in play, recreation and sport, on an equal footing with other children, including in the school system.

If family members, caregivers, professionals, policy makers and governments will be able to

implement the vision set in these two Articles of the two Conventions, and in their further developments, the world will become inhabited by happier children, committed to realise their individual potential, “whoever they are and wherever they live”.

Jane Brodin – “*It takes two to play*. Reflections on play in children with multiple disabilities” – dwells on the role of adults to support the play of children with multiple disabilities.

In particular, her research question concentrates on understanding the real meaning of play for these children. Conclusions deal with the acknowledgement of play as a tool for skill development, provided that an effective support is given by adults who take care of them. Conclusions underline that the role of adults as supporters and interaction partners for the play of severely impaired children is extremely important, and that *it takes two to play* for children with multiple disabilities.

Francesca Caprino discusses the issue of risk and play in the case of disability, in her article entitled “When the risk is worth it: the inclusion of children with disabilities in free risky play”, which is an interesting contribute to fulfil the existing gaps in the literature about this theme.

After acknowledgement that the dimensions of risk and challenge through play have undergone a decline in today’s life and upbringing, Caprino states that this phenomenon may adversely affect children with disabilities, who generally have fewer opportunities to participate in recreational activities. The author presents some Scandinavian experiences supporting the raising of a new play culture, more oriented towards the management rather than the elimination of risks. Recommendations for the future research on the inclusion of children with disabilities in risky play are then offered: closer investigation on the individual, personal, socio-cultural and environmental factors might hinder or facilitate the involvement of all children in risky play activities.

Mabel Giraldo in her article, “Educating beyond the emergency. A preliminary overview on the use of play in situations of crisis” offers a first attempt to gather in a coherent and critical *corpus* the researches on play in emergency situations (cultural humanitarian, social, political) and highlights the heuristic and pedagogical value of the use of the play in situations of crisis.

Two further papers are devoted to specific studies conducted under the aegis of the Action LUDI.

Serenella Besio, Daniela Bulgarelli, Iolanda Iacono, Rianne Jansens, Maria Mizzi, Odile Perino present the general theoretical and methodological framework of the first Training School of the Action, named “Play and toys for All”, which was held in Heerlen (NL) in April 2017.

Based on the collected knowledge and skills in the frame of LUDI, the Training School adopted a multidisciplinary approach, combining theoretical and practical experience with a user centered direction.

Their paper, “Becoming Expert in Playing with Children with Disabilities. The LUDI Training School *Play and Toys for All*”, describes the LUDI theoretical assumptions about play and disabilities on which the training model is based, stressing the importance of a multi-disciplinary approach, and of the intertwining of theoretical lessons with concrete hands-on activities. The evaluation process and methods for assessing the effectiveness of the Training School is also presented.

The article of **Tamara Zappaterra**, whose title is “The Role of Knowledgeable Adults in Children with Disabilities’ Play. An Exploratory Research in Europe”, drafts the results of an exploratory research in Europe on this theme.

The role of adults has been investigated through a multiple choice questionnaire addressed to Associations of families, including also an open-ended question addressed to parents of children with disabilities.

The author concludes – in harmony with what already stated in Brodin’s work – on the need

for knowledgeable adults to support the play of children with disabilities; they have in fact an important role in facilitating, supporting and sustaining their play activities, as well as their interaction with peers or with objects.

Related final recommendations concentrate on the need for specific and extensive training addressed to teachers, rehabilitation professionals and parents, and for additional research on play, to the purpose of identifying and planning effective interventions and specific strategies.

Finally, four papers focus on the results of detailed experimentations or experiences on play in children with different types of impairment.

Vaska Stancheva-Popkostadinova and Anna Andreeva, in “Piloting interactive Kinect-based game in children with disabilities”, present the results of their piloting experience with Kinect used with computer games, proposed to children with different types of impairments. They found improvement of motivation for play, emotional satisfaction, curiosity and proactive behavior in most of the children.

The authors suggest that the KINECT sensor in combination with selected structured computer games are a stimulus for the development of communication and physical activities in children with disabilities and a reliable tool to assist professionals working with them.

Aine Blake, Julie Sexton, Helen Lynch, Alice Moore and Maeve Coughlan present the results of a project with children with ASD. Their work is entitled “An Exploration of the Outdoor Play Experiences of Preschool Children with Autism Spectrum Disorder in an Irish Preschool Setting”.

Based on the assumptions that literature consistently demonstrates that children with disabilities have fewer occasions to participate in outdoor play, compared to typically developing peers and that little research exists with regards to outdoor play experiences of children with Autism Spectrum Disorder (ASD), the authors developed a qualitative study with the aim to better understand the meaning of play for these children, and in particular their play experiences in the preschool setting. Results showed that community playgrounds were not always usable by children with ASD, due to inadequate design for them.

Discussion leads to interesting conclusions: “while the importance of relationships cannot be overlooked, infrastructural supports both for parents, schools and community development in its broadest sense are required if we are to maximise outdoor play opportunities for children with ASD”.

Haim Mizrachi and Ana Muntean display an original study concerning the use of a traditional play activity with children with ASD. Their paper, entitled “Exploring the impact of Shadow Theater sessions on children with Autism Spectrum Disorders”, proposes that this activity can improve social and emotional state of the children with Autistic Spectrum Disorder (ASD) in particular with reference to the dimension of playfulness.

An intervention using the Shadow Theater positively leads to an improvement of social skills including attention and the expression of feelings. It also increases their emotional occurrences and opens a window to new learning possibilities for them.

Anna Trosheva-Assenova’s work – “Play development and symbolic play in children with hearing impairment” – is addressed to the study of play in children with hearing impairment, and particularly on the level of their play skills and on the characteristics of their symbolic play. After the presentation of an overview of theoretical approaches to the topic, with specific reference to the adoption of the Sign Language or the verbal educational methods, the author produces the research design and the results of the pilot experimental study. The aim of this study is to determine the level of play skills in hearing impaired children in preschool age and to analyze the role of symbols in their play activities. Qualitative evaluation of children’s play and analysis of the results were made for this purpose.

BECOMING EXPERT IN PLAYING WITH CHILDREN WITH DISABILITIES. THE LUDI TRAINING SCHOOL “PLAY AND TOYS FOR ALL”

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Abstract

The COST Action TD1309 LUDI “Play for Children with Disabilities” is a network of European practitioners and researchers who study and approach play from several disciplines (pedagogy, psychology, occupational therapy, sociology, engineering, industrial design, Human Technology Interaction, Information Communication and Technology, etc.). LUDI aims at granting children with disabilities the possibility to experience play for the sake of play, in inclusive contexts, as a crucial dimension of everyday life. To reach this goal, LUDI creates ad hoc knowledge and disseminates the existing best practices in the field of play for children with disabilities. The Training School “Play and Toys for All” is one of the tools adopted to fulfil this scope. This paper presents the first edition of the LUDI Training School and its characteristics: the theoretical assumptions about play and disabilities which it is based on; its main objectives; the methodology adopted, based on a multi-disciplinary and user-centred approach, with a balance between theoretical presentations and concrete experience; the contents; the evaluation process used to get feedback about the effectiveness and the appreciation of the initiative. Both trainers and trainees were asked to rate, through anonymous questionnaires, the effectiveness of the School in reaching its goals and in building up new knowledge about play and children with disabilities; the first results are reported.

KEYWORDS: PLAY FOR THE SAKE OF PLAY; INCLUSION; INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH; TRAINING MODEL; USER-CENTRED APPROACH; MULTI-DISCIPLINARY APPROACH.

1. The COST Action LUDI: play for the sake of play

Play is a natural, captivating activity without any extrinsic preordained goals; it is free, but not without limits, it creates its own constraints to become more exciting and challenging. It resorts to the use of routines and requires rapid changes, evolving towards new play types (Besio, 2017). Play is also an important part of childhood education where it may be exploited as a “play-like activity”, as Visalberghi stressed (1958) to identify those playful activities and contexts that are based on clearly defined educational goals, demanding a precise planning to the adults’ participation, thus sometimes narrowing the child’s initiative.

Children with disabilities experience more frequently play-like activities than autonomously driven play: they may meet barriers to play due to their mental or physical impairments, and to the unfriendly and not accessible contextual factors (World Health Organization, 2007). Furthermore, their time is highly devoted to rehabilitation and educational events, trying to heal and to contrast the impairment. In this sense they are deprived of the possibility to exercise their right to play (United Nations, 1989; 2013) and they are severely deprived of the fundamental engine for physical, cognitive and social development (Piaget, 1945/1972; Vygotskij, 1976), thus suffering from additional setbacks.

Giving children with disabilities the possibility to experience play for the sake of play is urgent and mandatory; this should be done through several actions: raising awareness about this issue both at a societal (families, schools, care facilities and professionals) and cultural level; supporting research and development of new tools, toys and play contexts that are accessible and usable; acting at a political level so that financing resources could be devoted to this topic.

The COST Action TD1309 “LUDI–Play for Children with Disabilities” (2014-2018)¹ fosters these actions in Europe. LUDI is

a network of 32 European and neighbour countries with more than 100 practitioners and researchers. All the Members are involved in the field of play and children with disabilities, and come from different scientific areas: pedagogy, psychology, occupational therapy, sociology, engineering, industrial design, Human Technology Interaction, Information Communication and Technology are some of them. The Network aims at the creation of a novel and autonomous field of research and intervention on play for children with disabilities, based on the promotion of play for the sake of play.

LUDI is organized in four multidisciplinary Working Groups, who are in charge of deepening the knowledge in 4 different areas:

1. Children’s play in relation to the types of disabilities
2. Tools and technologies for the play of children with disabilities
3. Contexts for play of children with disabilities
4. Methods, tools and frameworks for the development of the child with disabilities’ play

According to its Memorandum of Understanding (Besio & Carnesecchi, 2013), the main objectives of LUDI and its Working Groups, in relation to the multidisciplinary theme of play and children with disabilities, are the following ones:

1. collecting and systematizing all existing competences and skills;
2. developing new knowledge;
3. disseminating best practices.

In this frame, the LUDI Training School represents one of the most important steps of the Action development as well as a crucial tool to implement its results.

2. The LUDI Training School

The LUDI Training School (TS) “Play and Toys for All”,² is one of the most important events of the Action itself, and one of its main scientific tools; in fact, it covers the three

¹ <http://ludi-network.eu/>; http://www.cost.eu/COST_Actions/tdp/TD1309.

² The first edition took place in April 2017 – around the middle of the Action period – in Heerlen (The Netherlands) thanks to the collaboration of the Zuyd University of Applied Sciences.

LUDI objectives, in the sense that it gives these opportunities:

1. to share the collected already existing knowledge;
2. to share the new knowledge developed during the first two years of the Action;
3. to disseminate the existing best practices in the field of play for children with disabilities.

The LUDI TS is based on the outcomes of the work of the various LUDI Working Groups. It presents the play of children with disabilities as a holistic concept: an activity that happens thanks to a ludic and effective encounter between a child with some type of impairment/s and his or her life contexts, that include persons (peers, adults) – thus competences, relationships, attitudes and psycho-emotional elements – but also toys, technologies, natural or built environments.

To implement this scenario, the LUDI TS mirrors the multidisciplinary approach of the network. Therefore the LUDI TS aims at reaching these ultimate goals:

1. to spread the LUDI perspective on play and children with disabilities;
2. to impact the culture and the attitudes of stakeholders in various fields with respect to the play of children with disabilities;
3. to establish and make available a LUDI Model of Training, which can be used at different levels and for different purposes.

To reach these goals, a recursive process has been adopted, along the following steps:

1. design of the LUDI TS;
2. implementation of the first edition of the TS;
3. test of the effectiveness of the LUDI TS;
4. modification of the critical aspects identified during the testing phase;
5. systematization and launching of the final model of LUDI TS;
6. identification of possible remaining critical aspects;
7. development and publication of the LUDI TS model.

The first edition of the LUDI TS provided the opportunity to make field tests on the effec-

tiveness and appropriateness of content presentation as well as adopted methodologies (both didactic and organisational). The evaluation of the outcomes and the analysis of identified possible criticisms will give rise to a new version of the TS and consequently to the final LUDI Training Model.

3. Theoretical and methodological background of the Training School

The importance of play for human development is widely recognised in different research fields. Play is an essential activity in childhood. Through play children can fully develop their sensory, motor, social, communicative and cognitive skills. They explore their social environment and build relationships (Besio, 2008).

Any kind of impairment (intellectual, sensorial, motor, socio-communicative) may severely delay the social and cognitive development of a child (Besio, Bulgarelli & Stancheva-Popkostadinova, 2017).

Children with disabilities may experience difficulties in engaging in play activities or may be excluded from them, due to many reasons. Their functional limitations may challenge them in initiating play, using different toys, inventing new forms of play, involving peers (Besio et al., 2017). On the other hand, adults supporting these children often do not know and/or do not have the opportunities to facilitate the child's play at its best (Barron et al., 2017). Furthermore, for children with disabilities toys, playgrounds, parks, woods and fields are all too often inaccessible or unsuitable for playing (Barron et al., 2017).

The importance of play, though valued, seems to be, for different reasons, difficult to practice for children with disabilities. In addition, to be fun and playful, play should mainly occur in inclusive contexts, where all children may have the opportunity to share contexts, objects, intentions and rules, where they can test their abilities, imitate the others or being models for them, or they can even refuse to play and communicate their “getting out of the play”. They should have the opportunity to win, to lose, to collaborate, to build together, to negotiate and to argue, to be wrong, to

explore, to feel happy, scared, excited, concentrated.

According to Douch (2006) «inclusive play is not about meeting “special needs”; it’s about meeting all children’s and young people’s need to play, wherever they choose and in a variety of different ways». Creating inclusive play means allowing all young people equal access to and participation in play, recreation and leisure opportunities (National Children Bureau, 2007). According to PlayCore (2015), inclusive play is composed of five elements: social/emotional; communication; physical; sensory and cognitive. But to be or to become inclusive, play should offer all children the opportunity to play the type/s of play they would like to, and they are ready to, appreciate, should support them in reaching the right level of challenge that allows them to have fun and pleasure, together with their peers and with the adults of their life environments. All of these aspects are important in the play design process.

The LUDI model considers play as the main means for child development and child wellbeing. The LUDI theoretical assumptions that will be put into action within the TS are the following ones:

- play is a right and a fundamental, free and necessary activity in childhood; it should be considered for its value *per se*: “play for the sake of play” should be always pursued;
- inclusive play is an unavoidable choice;
- the child should be considered as a whole person, within his/her life context/s, and from a multidisciplinary perspective;
- society is responsible and may encourage and support play for the sake of play for all children;
- well-formed adults are one of the most important driving-forces to establish productive, playful and effective play activities including children with disabilities;
- contexts of play should be analysed and considered as barriers or facilitators, to better support inclusive play;
- knowledge and competence about the concepts of usability and accessibility related to toys, instruments and technologies is today mandatory for all profes-

sionals in the field, so that the right tools are chosen and productive play contexts and scenarios are developed;

- the users’ needs should be always analyzed in detail and taken into consideration to develop and initiate any activity in this field.

As a consequence, the LUDI Training School aims to allow the trainees to reflect and have a better understanding of the topic “play for children with disabilities”; they learn how to approach this topic in their daily work activities, so that they become the first messengers of this new trend in the various areas of the disability field.

- it is multi-disciplinary: topics cover both humanistic (pedagogy, sociology, psychology, counselling, ...), and technological (engineering, design, assistive technologies, toys, ...) fields;
- it includes both theoretical presentations and hands-on workshops, so that the various perspectives on the theme are necessarily intertwined and tested by concrete realization;
- it adopts a user-centred design approach; trainees are required to think about and design new solutions tailored to improve the play experiences of children with disabilities together with all children. They are asked to design solutions that may support inclusive play/play for all.

3.1. Close-up on the inclusive model

Underpinning the LUDI TS there is the pedagogical inclusive model, today the most widely known approach that pursues equality in education whatever the possible differences are among the population, including impairment and disabilities.

This model is well established both theoretically and methodologically and is strongly supported at international level (United Nations Educational Scientific and Cultural Organization, 2009; Watkins & Meijer for the European Agency on Special Needs and Inclusive Education, 2016). Nevertheless, it is far from being fully applied in schools and in education, and it still needs to be disseminated and developed.

According to the inclusive model, each child with disabilities should take part to the age-appropriate classes, existing in the neighbourhood, and the educational system must ensure access to curricula; provision of suitable didactic tools and contents with the needed adaptations and changes must also be ensured, to give these children the opportunity to exploit their capabilities in any field at the highest possible level.

But the inclusive approach implies a change in children's life and in society at large, not only in educational contexts: this is particularly true for what concerns play, the most typical infant activity, related at the same time to instinctuality and to pedagogical awareness. First of all, inclusion is based on extending what is ordinary available to everybody, that means to change the overall environments – including attitudes – in which the children live and grow.

This in particular means to adopt a critical point of view on how the societal structures, products and services are designed – mainly based on an able-bodied norm – and to question the impact of this on people with disabilities.

A careful analysis is needed about “what is available” (products, tools, contexts and services), to be able to extend it, or what should become available and about how to use it.

This is the main challenge for the trainees of the LUDI TS: they are required to think about the ways available toys, games and play activities are designed thinking about a “high functioning” player. Then these assumptions are unsettled and trainees are required to think differently, by concretely considering young individuals with different ways of functioning and different play needs and wishes, and by applying the constructs of usability and accessibility.

Within the TS children are looked at as the bearers of rights and of strong potentialities: they can learn and grow thanks to their relationships with the others; and indeed, they *will* learn, grow and have fun if these relationships are competent and supportive enough, with respect to their needs.

Thanks to the user-centred approach adopted during the hands-on activities, the trainees have the possibility to deepen the real needs

and modalities of functioning of children with different types of impairment, thus to experiment how the related limitations to the Activity of play, and possibly also the restrictions to the Participation to play sessions and games, can be minimized and even overcome thanks to the right modifications and adjustments to the Environment in which they live.

The ICF (International Classification of Functioning, Disability and Health; WHO, 2001) and its version for Children and Youth (ICF-CY; WHO, 2007) serve as the basic frameworks for developing and regulating these activities within the TS.

3.2. Methodological approach of the LUDI Training School

The LUDI TS methodological approach is based on a balanced mix of theory and practice; theoretical lessons are given during the morning, while the hands-on workshops are organized in the afternoon. In this way, the various topics treated during the morning under the theoretical perspective, will be then applied to concrete activities, proposed by the trainers in the afternoon.

Knowledge and competence grow along the TS development, and trainees should take into account, during their practical works, all the theoretical contents presented as well as the experiences already done in the previous days. Thanks to this activity of continuous building up new competence on previous knowledge, the multidisciplinary aspect of the theme “play and children with disabilities” gradually comes into light in all its facets.

The participants are divided into subgroups, each of them co-ordinated by a trainer; trainers coming from different disciplines present their lessons, during the morning, while during the afternoon they co-ordinate and facilitate the works of the subgroups, without strictly guiding nor interrupting them. The collaborative work in the practical workshops of the TS, inspired by the Reggio Children approach (Thornton & Brunton, 2015), is bottom-up based: many materials, many communication codes, many points of view and strategies are used, to activate contemporarily the trainees' hands, thoughts and emotions.

The user-centred approach is guaranteed in two ways: first, all the issues treated and the tasks proposed are analyzed from the point of view of different users; and second, children with disabilities and parents take part to the TS from the third day on; they act as presenters in the morning and as members of sub-groups during the afternoon, to give suggestions, comments and evaluations.

The subgroups of trainees are clustered to bring together people from different countries, different professional experience and different ages; this gives the opportunity to guarantee that multidisciplinary approach is reflected also at this level.

As aforementioned, the first edition of the TS has been included within a recursive plan of activities of the Action LUDI, where it serves as a test for the establishment of the final version and the development of the Training Model. For these reasons, the processes of evaluation and assessment of the implemented training activities as well as of the obtained results assume particular importance in this framework.

The detail of the planned actions organized to test the effectiveness of the TS is presented in what follows. All the types of participants have been consulted, with respect to different aspects of the activity and by means of different tools. Data obtained from these actions are going to be carefully analysed by the Task Force of the TS and the related envisaged changes will be implemented in the final edition and in the Training Model.

3.2.1. The evaluation process³

Due to the strong experimental value of the first edition of the TS, that is expected to result in a final Training Model, a complex and recursive evaluation strategy has been conceived, starting within the TS itself.

The group of trainers have been assisted by a group of so-called “Critical Friends” (CFs). These are LUDI researchers or professionals involved in the same – or very close – field of the trainer (with a ratio of at least 1:1), with the task of observing and registering – both during the presentations and during the workshops

– interesting or critical aspects taken from the training contexts: e.g., effectiveness (clarity, exhaustiveness, attractiveness, etc.) of the presentation, adequacy (support, responsiveness, scaffolding, etc.) of the relationship with the trainees’ sub-groups. Both trainers and CFs are present for the entire duration of the TS.

The CFs are not expected to intervene directly in the training situation. To collect their reflections, on-purpose schedules have been distributed, to serve as draft notebooks. Every day, after the workshops, a meeting has been fixed between trainers and CFs, to discuss the progress of the activities; whenever possible and if the decision was shared, general critical aspects were immediately changed for the following day, while valuable ones were stressed for replication in the future. Discussion among trainers and CFs, starting from detailed annotated aspects and not on personal impressions or feelings, have been of course orientated to collaboration and respect, aiming to the best possible result and success of the overall TS. If needed, more private meetings have been arranged between trainers and CFs of the same field to discuss detailed aspects.

At the end, the evaluation process have been enriched by data coming from the questionnaires filled in by both trainers and CFs about the final results of the TS, with respect to its effectiveness to accomplish its overall goals (see paragraph 2) and to implement its theoretical assumptions (see paragraph 3) and its methodological assumptions (see paragraph 3). These questionnaires as well as all the other evaluation tools have been developed by the LUDI Task Force for the TS.

3.2.2. The outcome assessment

Outcomes of the TS concern the trainees acquisition of knowledge and competence accordingly to the LUDI perspective. This has not been done through a traditional measure of learning objectives but through the collection of assessment sheets by the trainers and

³ Due to the unfixed way to use the two constructs of “evaluation” and “assessment”, it should be noted that *evaluation* is used with reference to judgments given by trainers and critical friends about whether the TS is meeting and has met its final goals, while *assessment* is used with reference to the success of the TS in achieving the learning objectives related to trainees.

CFs, in respect to several aspects:

- effectiveness of the presentations and the proposed activities;
- effectiveness in accomplishing the TS final goals (spreading the LUDI perspective on play and children with disabilities; impact the stakeholders' attitudes; making available a LUDI Training Model);
- effectiveness in implementing the LUDI theoretical assumptions;
- effectiveness in implementing the LUDI methodological assumptions;
- quality assessment sheets with respect to the trainees' active participation, collaborative style and effectiveness of the obtained results.

Moreover, the trainees were asked to fill self-assessment sheets about the quality of the perceived learning and their overall satisfaction about the School.

4. Programme of the first edition of the Training School

The structure of the TS is based on theoretical sessions (usually in the morning) and hands-on workshops (in the afternoon); these activities are strictly related to each other. The theoretical plenary sessions aim at progressively developing the theme "play and children with disabilities" along its various multidisciplinary components: pedagogy, sociology, psychology, medicine, rehabilitation, technology, engineering, design. Then, during the hands-on workshops, the trainees – divided into subgroups – have the possibility to apply to some practical tasks what they have learnt in theory.

The theoretical lectures of the first edition of the TS deepen the following topics:

- The importance of play and inclusive play;
- Play development and types of play, with respect to the child's development and age, in children with and without disabilities;
- Functional aspects different types of disabilities, in the framework of ICF-CY;
- Play, toys and low-tech, to give an overview of the main problems/barriers asso-

ciated with toys and low technologies as encountered by children with different types of impairments;

- Play, toys and technologies;
- Design and re-design toys and technologies;
- Accessibility, usability and user experience.

From the experiential point of view, the trainees also met some children with disabilities and their parents who have accepted the invitation of the Zuyd University of Applied Sciences, to reflect together, through the direct experience of children and their relatives, on how toys/low technologies can be improved to be used by children with disabilities.

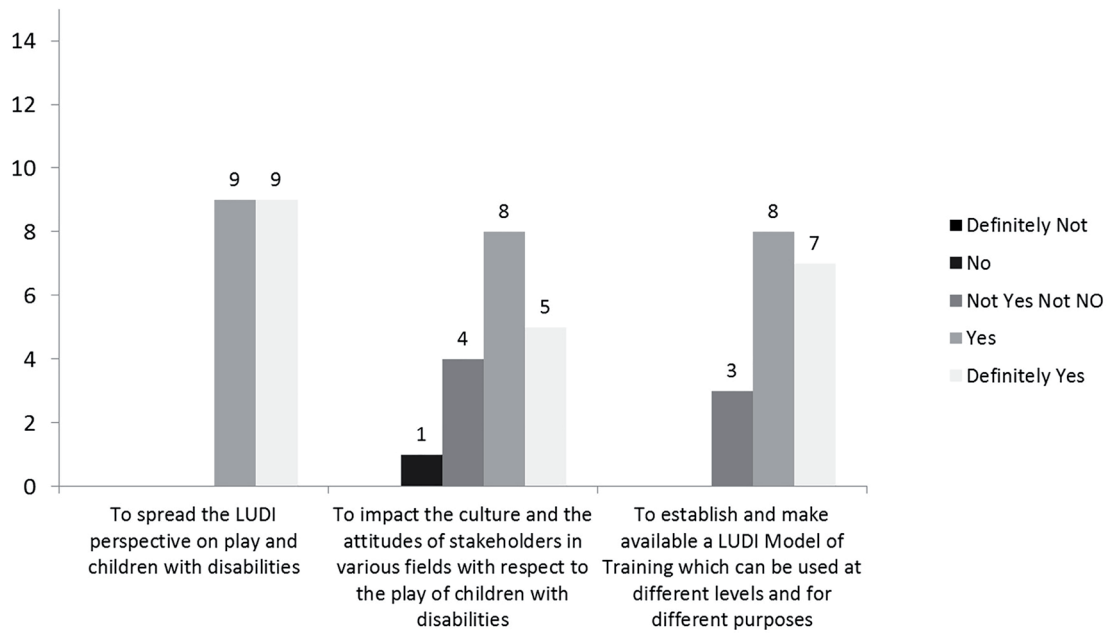
Finally, the trainees were asked to propose and/or to realize a re-design of some existing toys/technologies that are not suitable for children with functional impairments, and to plan some improvements to the scenarios of the most favourite children's play

The Training School closed with the trainees' presentation of their improvements projects.

5. First results of the evaluation process

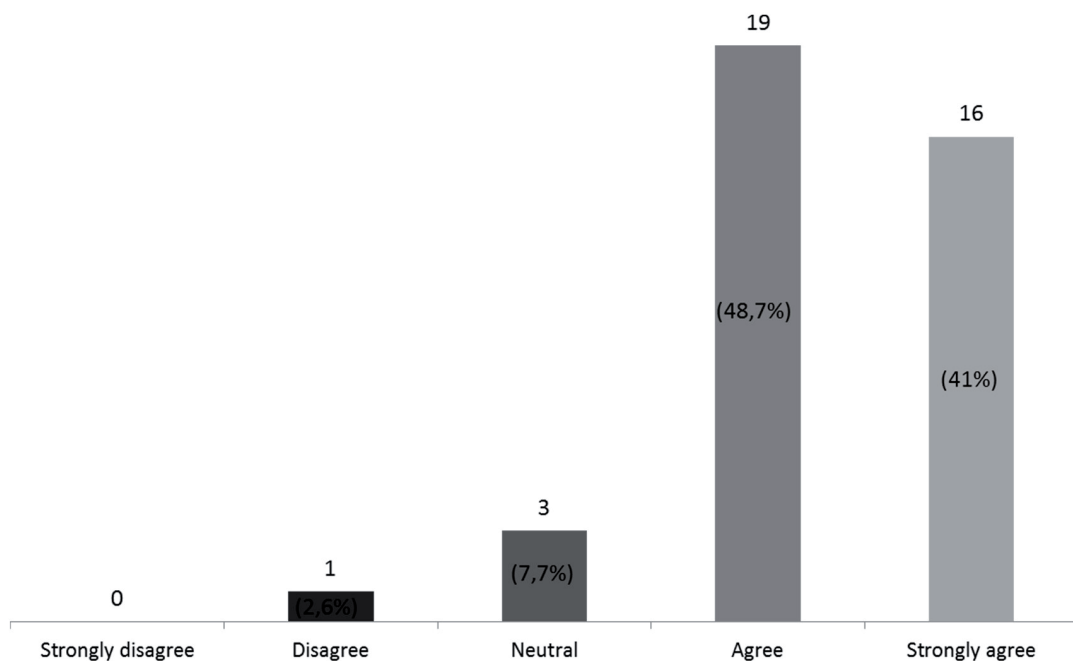
Seven Trainers, 9 critical friends and 44 trainees took part to the first edition of the TS. All the trainers, 8 critical friends and 36 trainees filled out the evaluation questionnaires. In what follows, first main results about the evaluation and assessment process are reported, specifically focusing on the achievement of the School objectives.

According to the 94% of the trainers and critical friends who filled the questionnaires, the TS achieved its main goals: spreading the LUDI perspective on play and children with disabilities; impacting the culture and the attitude of stakeholders; establishing a LUDI Model of Training (see Graph 1).



Graph 1: Achievement of the Training School objectives

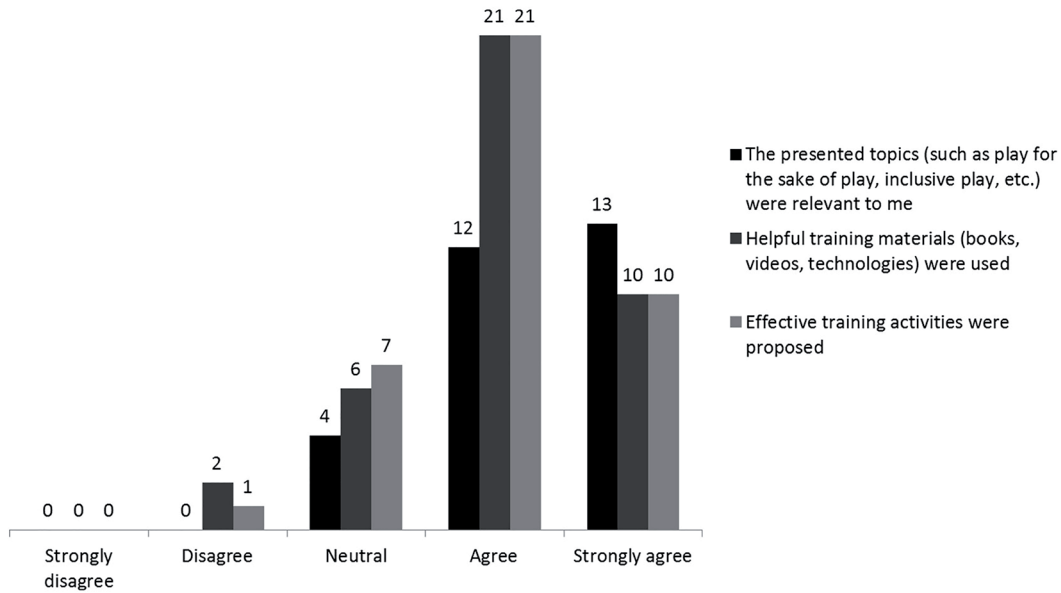
The 89,7% of the responding trainees agreed about play and children with disabilities (see that the School improved their knowledge Graph 2).



Graph 2: Trainees' answers to the question: "Did the overall training experience of LUDI Training School improve your knowledge about play and children with disabilities?"

Graph 3 reports the degree of agreement of the trainees with three statements that refer to elements possibly related to the effectiveness of the teaching/learning process: “The presented topics (such as play for the sake of play, inclusive play, etc.) were relevant to me”,

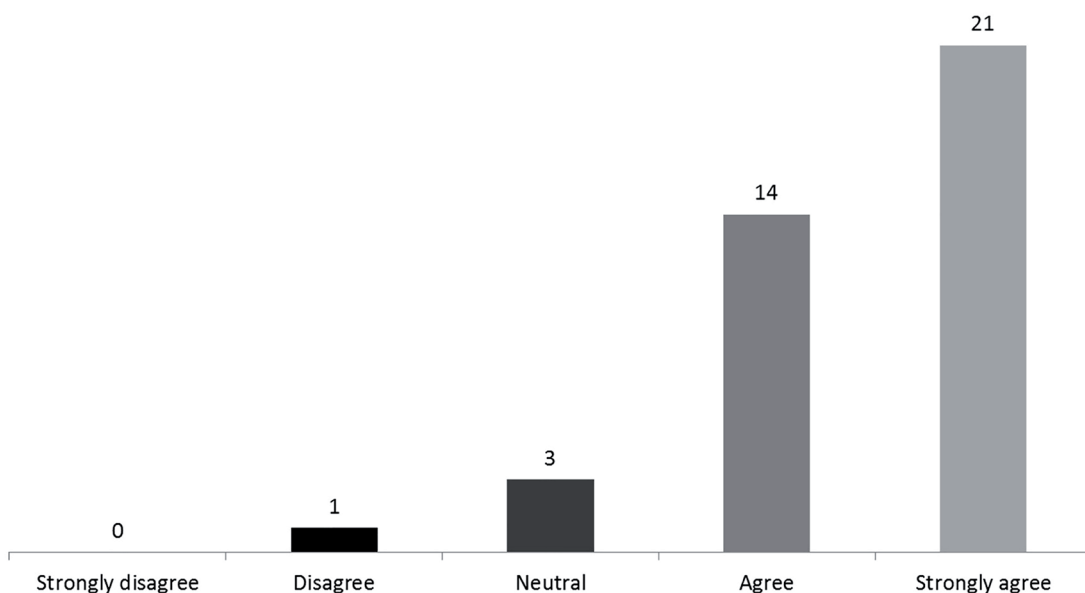
“Helpful training materials (books, videos, technologies) were used” and “Effective training activities were proposed” (see Graph 3). Training materials and activities could be improved according to few trainees.



Graph 3: Trainees’ answers to three questions about the contents of the School

Finally, the trainees agreed that the overall training experience will be useful in their

work and research activities (see Graph 4).



Graph 4: Trainees’ answers to the question: “The overall training experience will be useful in my work or research?”

6. Conclusion

This paper briefly presents the theoretical and methodological structure of the COST Action LUDI Training School, that plays several important roles within the Action: it is one of its main outcomes; it is a crucial event to disseminate the LUDI approach to play and disabilities; and it is an important tool to test and verify an innovative Training Model, that will be built, re-built and improved during its realization.

The first results of the evaluation and assessment process, that has involved the trainees, the trainers and the critical friends, proved that the TS was effective in reaching its goals: fostering in the trainees new knowledges and awareness about the topic of play and children with disabilities. Some criticism emerged as well: this will be presented and discussed in future publications. In the frame of a recursive process, the way to overcome the critical aspects of the School will end up in a new edition of the TS, that will re-test the LUDI Training Model thus supporting its final implementation.

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