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Introduction

Dear readers and contributors,

Journal of Exceptional People has already got into the fourth year of its existence. During that time we have become a peer-reviewed journal which publishes overview essays and scientific papers from Europe, Asia, America and Africa. Also in this issue we have prepared several interesting contributions and our editorial board believes that they will attract and inspire you maybe even to your own publishing. If you want to contribute to the next edition of JEP which will be released again on 1 November, 2015, then you can use the newly installed template for writing contributions which is available in electronic form on our Journal Website: <http://jep.upol.cz/>. This innovation should help you to meet the required standard in writing the paper.

Let us look at the list of articles that we are publishing in this sixth edition of JEP.

In the article of Slovak author B. Kovacova Puppert therapy in the group of preschool children we learn the methods of this little-known therapy that is partly a drama and play therapy. This area will be followed by the second Slovak writer, I. Lištiaková, whose contribution introduces us to three basic approaches in drama. The common article of Chinese and Czech authors allows us to get an idea about the care and advice aimed at students with special needs at Chinese universities (L. Yun, M. Ružička), while the contribution of G. Ismail deals with polylingual education in Kazakhstan.

Y. Odstrčilíková from the Czech Republic covers an area of disturbed communication and the importance of early diagnosis in her contribution Possibilities for early diagnosis of auditory discrimination in preschool children with impaired communication ability. Another Czech contribution is related to so-called museum education. I. Dömischová gets us acquainted with the issues of making a creative museum programs for pupils with mild mental disabilities.

The following overview study (L. Yue, P. Yuntong) is focused on describing the ways of the music therapy intervention in China. Slovak authors Ďordovičová J., B. Hlebová and V. Palková deal with analysis areas of reading methods (syllables reading and fluent reading) in children with mild intellectual disabilities.

The scientific paper of author J. Wu focuses on juvenile delinquency in the Chinese city of Chengdu. The author introduces us to the results of an extensive study and its interpretation, which highlights the main causes of crime in the region. Slovak author V. Regec in his contribution notices The Comparison of different models of accessibility evaluation of websites in the context of visual impairment.

This issue of Journal of Exceptional People is ended up by two more reviews of Czech and Nigerian authors (T. Treflíková, J. A. Ewa).

We hope you enjoy reading and also contemplation.

Pavel Svoboda, Jan Chrastina

Puppet therapy in the group of preschool children

(overview essay)

Barbora Kováčová

Abstract: *The article refers to puppet therapy and also to an increasing theoretical and scientific platform of dramatherapy and play therapy. The theoretical and research background becomes the base for creating the applicability concept of therapy with a puppet in our conditions. It is extended by the research findings that have been made by the author of the article.*

Key words: *therapeutic puppet, puppet therapy, research, theoretical foundations*

1 Introduction

In understanding of the scope it is necessary to specialise the activity with a puppet into puppet play according to the rules of the puppet theatre (artistic scope) and into therapeutic puppet play (therapeutic scope) according to the rules of the puppet therapy.

Puppet therapy systematically uses the style of role playing. “*It gives the child the chance to bring inner stories outside and onto a stage. Children often do not have words but only pictures or symbols for these stories*” (Gauda, 2001, p. 34). Furthermore – it gives the child an opportunity to make/create his or her own puppet(s). In this way they can give a “gestalt” to their inner pictures, externalise them and give them life. Children find it easier to play with their own puppets as opposed to commercial puppets or puppets made by other people (Repková, 2009). Regardless of who made the puppets, children have a chance to actively search for answers for their questions and problems.

With the developments in child psychology and psychotherapy, puppets are no longer just educational tools. They also become tools for healing and recovery (Kováčová, 2005, 2012).

In the groups of children with problems of speech, it is suitable to use expressive activity with puppets as the support of correct speech. It is play therapy with puppet or therapy with puppet. Mentioned concepts – play therapy with puppet and therapy with puppet are in our article used as synonyms (Kováčová, 2012). In the context of puppet therapy Petzolt (1991, p. 293) wrote that it is “*necessary to speak about psychodramatic technique which is massively integrated to group and also to individual activity with children*”. During conversational interview a child could speak instead of a puppet or with a puppet. Essentially, it is an alternative of how to conduct an interview between an adult and a child. Moreover, it is important to take into account individual needs and possibilities of communicating with children. As a part of puppet therapy with dyslalic children, it is necessary to respect actual strategies recommended by a speech therapist. In cooperation of a play therapist with a speech therapist, the play therapy with a puppet in an indicated group of children is considered as a support in the automation of speech production processes.

2 Purpose of puppet therapy

A child through using an active communication through a puppet achieves experiences in correct formulations, expressions, reversals and also an increase of vocabulary in concrete thematic units. Children use a non-directive form of how to get to prolong their own speech. Puppet play supports social communication with individuals, appropriate behaviour among children during which he/she gets acquainted with the values, attitudes and beliefs of others. In addition to dynamic abreaction, positive stimulation, development of speech and sensitivity, the mentioned activity brings possibility of a creative self-realisation in a point in which he/she does not feel discriminated in relation to healthy peers (Majzlanová, 1995, Valenta, 2009; Tichá, 2009; Kováčová, 2012).

Puppets act out situations that children fear: If a child fears coming to a doctor or a dentist, attending school, meeting other people, handling pets, or undergoing surgery, a puppet may be used to play out the expected events during the situation. This will help the child understand that there is no reason to fear such situations.

Children may use puppets to communicate their thoughts and traumas: When a psychotherapist would like to learn more about the child under his or her care, he or she may use puppets and ask the child to create a story using them. Such stories usually reflect the child's thoughts and fears.

Benefits of puppet therapy for children

Children are more receptive to puppet therapy than to more formal questioning. While guided questioning is used for adult patients, this method usually does not work with kids. Children are more comfortable if the therapy session is fun. Fábry Lucká (2014) described the importance of self-revelation through expressive therapeutic means (e.g. through puppets) as a base of creating communication competences. In addition, puppets are objects of sensorial play (Lištiaková, 2013) that precedes symbolic play and thus provide a safe base for all players.

Puppets allow children to become more open to their surroundings and to the underlying message of the therapist. Telling a child how to respond or how not to respond to a stimulus might not work as well as using a puppet to mimic the situation and to act out the ideal response.

Through therapeutic puppet children learn to act independently and actively adapt to environment. In this case, a puppet in a child's hand could be a direct participant of one's own performances (introducing, description of experiences) in the form of a monologue, or a dialogue (child speaks for the puppet), or a dialogue with a puppet (child communicating with the puppet).

3 Research design

The main goal of basic research was to find out concrete possibilities and limits of a therapeutic model (using therapeutic puppet) in the group of children with dyslalic speech.

As a part of our research we defined following research tasks:

- *To find out possibilities and limits in using puppet in counselling services focused on helping children with speech disorder.*
- *To create control and experimental groups for group play therapy with a puppet.*
- *To assess speech production in selected groups before and after play therapy with a puppet.*
- *To verify the therapeutic model using the evaluating diagnostic scale (Repková, 2004) and Prague Child Wechsler Test (PDW).*

Evaluating **Diagnostic scale tests** competences of preschool children in two parts:

1. part: testing communication and social skills (Fig. 1)

COMMUNICATION AND SOCIAL SKILLS	test (date of testing)			re-test (date of retesting)		
	2	1	0	2	1	0
1) contacting						
2) group cooperation						
3) compliance with the rules in a group						
4) activity during a play						
5) correct pronunciation						
6) manipulating with a puppet						
7) listening and reproducing of a fairy tale						
8) formulating of a question						
9) formulating of an answer						
10) asking for information						
11) expressing data						
12) understanding data						
13) repeating information						
14) describing an experience						
15) expressing an opinion or attitude						
16) communicating with other children						
17) mimicking scenes						

Figure 1: Diagnostic scale tests – 1. part

LEGEND

- 2 – child handles the task,
- 1 – child handles the task with help,
- 0 – child doesn't handle the task.

2. part: testing of dramatic skills during the work with puppet (Fig. 2)

DRAMATIC SKILLS DURING THE WORK WITH PUPPET	test (date of testing)			re-test (date of retesting)		
	2	1	0	2	1	0
1) puppet animation using motion						
2) verbal expression for puppet						
3) maintaining of a topic						
4) introducing yourself for puppet						
5) identifying with the character						
6) manipulating / playing with placeholder object						
7) styling on the role						
8) activity in sketches						
9) presenting of a monologue						
10) chatting in dialogues						
11) creating of a puppet						

Figure 2: Diagnostic scale tests – 2. part

LEGEND

- 1 child handles the task,
- 2 child handles the task with help,
- 0 child doesn't handle the task.

Using PDW (Prague Child Wechsler Test) we focused on the verbal part of the test. Individual respondents' answers during initial and final assessment were evaluated using a three-point scale. Children had the possibility to correct their own incorrect statements.

4 Analysis and findings of research tasks

Add 4.1)

Research tasks 1 – *To find out possibilities and limits in using puppet in counselling services focused on helping children with speech disorder.*

We asked Centres of pedagogical and psychological counselling and Centres of special advice, which register children with speech disorders and also are assigned to intensive speech therapy care.

From every mentioned centre we cooperated with a speech therapist (N = 54) and a play/special/curative therapist (N = 57).

A speech therapist considered in indicating group for possibilities of puppet therapy (Fig. 3):

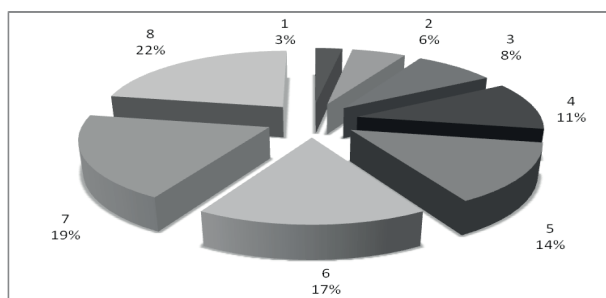


Figure 3: Possibilities of puppet therapy – speech therapist

LEGEND

- 1 Nonviolent form of expressing oneself
- 2 Activity with puppet
- 3 Possibility using mobility of puppet as part of replying
- 4 Possibility making mistakes without correcting and sanctions
- 5 Enough time for expressing oneself
- 6 Increasing level of social communication and interaction
- 7 Increasing communicative competences of child
- 8 Supporting pronunciation and articulation.

A play, special and curative therapist considered in indicating group for possibilities of puppet therapy (Fig. 4).

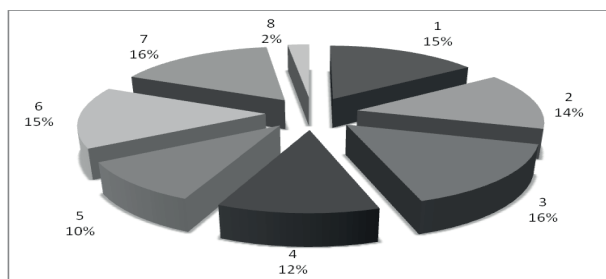


Figure 4: Possibilities of puppet therapy – play, special and curative therapist

LEGEND

1. *Nonviolent form of expressing oneself*
2. *Activity with puppet*
3. *Possibility using mobility of puppet as part of replying*
4. *Possibility making mistakes without correcting and sanctions*
5. *Enough time for expressing oneself*
6. *Increasing level of social communication and interaction*
7. *Increasing communicative competences of child*
8. *Supporting pronunciation and articulation.*

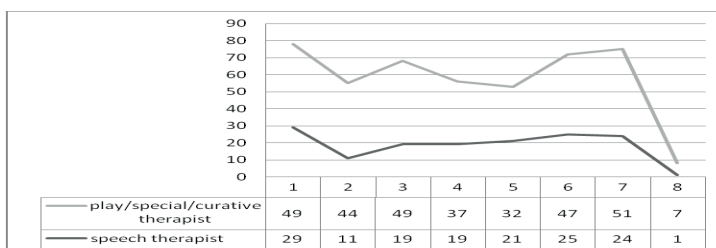


Figure 5: Comparison of statements of respondents

A speech therapist considered in indicating group for limits of puppet therapy (Fig. 6).

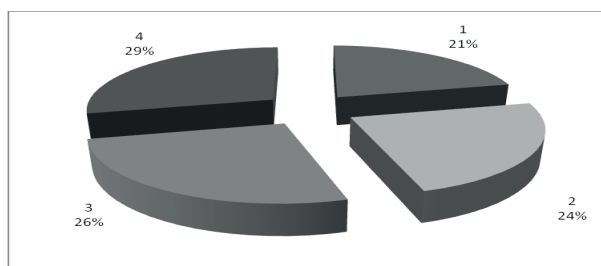


Figure 6: The limits of puppet therapy according to speech therapists

LEGEND

1. *Introversion of client*
2. *Unguided interruption of speaker*
3. *Heterogeneity of the groups considering kind of communication impairment*
4. *Group size, several leaders.*

A play, special and curative therapist considered in indicating group for limits of puppet therapy (Fig. 7).

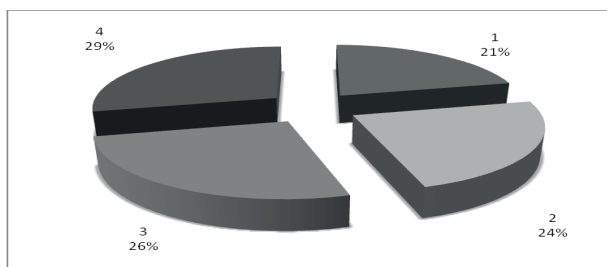


Figure 7: The limits of puppet therapy according to **play, special and curative therapist**

LEGEND

1. *Introversion of client*
2. *Unguided interruption of speaker*
3. *Heterogeneity of the groups considering kind of communication impairment*
4. *Group size, several leaders.*

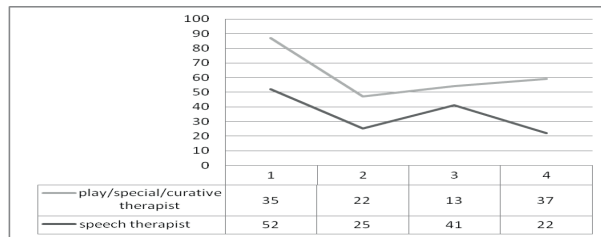


Figure 7: Comparison of statements of respondents

LEGEND

1. Introversion of client
2. Unguided interruption of speaker
3. Heterogeneity of the groups considering kind of communication impairment
4. Group size, several leaders.

Add 4.2)

Research tasks 2 – *To create control and experimental groups for a group play therapy with puppet.*

The intention of the researcher was to create control and experimental groups for puppet therapy. The target group were pre-school children who were in the final phase of intensive speech therapy care.

The intervention was carried out during 45 weeks (two times a week) during one preschool year in the mornings.

The therapeutic programme is divided in two parts:

- Part A: includes a process of the preparations, the first meeting between the child and the puppet.
- Part B: includes a tangible instruction for plays with the puppets in the kindergarten (B.1. manipulation and animation of the puppet; B.2. pursuit with the puppet; puppet represents a symbolic object; monologue; B.3. a dialogue with the puppet.) The content of part B goes in a continual sequence : movement > movement and sound > speech with the puppet. The programme is created for a group of children of pre-school age with speech impairments.

Therapeutic programme:

- 12 groups with 8 children in every group, 5-, 5.5- and 6-year olds attended our therapeutic program (Fig. 8a, 8b).
- Groups marked 1–6 were experimental and groups marked 7–12 were control groups (Fig. 9).

group	5 years	5,5 years	6 years
1	4	2	2
2	2	3	5
3	3	2	3
4	3	3	2
5	3	2	3
6	2	2	3
7	2	4	2
8	3	2	3
9	4	2	2
10	3	3	2
11	2	2	4
12	3	4	1
Σ	34	31	32

Figure 8a

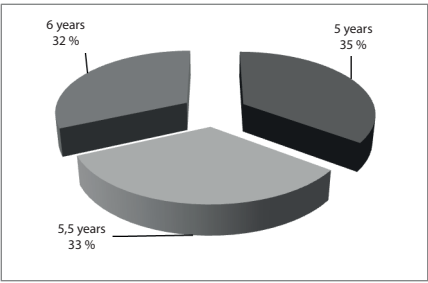


Figure 8b

LEGEND

Control group – group 7, 8, 9, 10, 11, 12

Experimental group – group 1, 2, 3, 4, 5, 6, 7

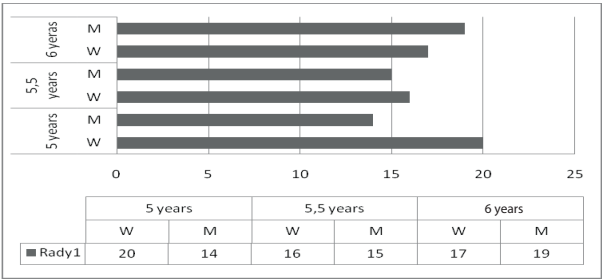


Figure 9a

LEGEND

W – women

M – men

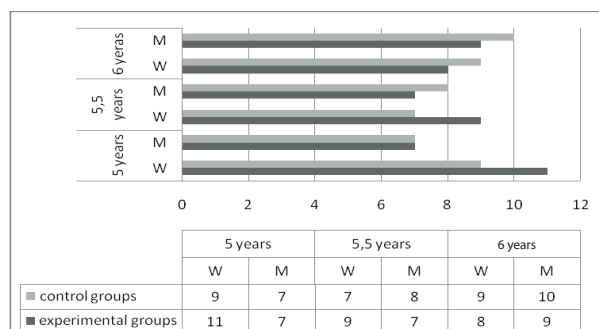


Figure 9b

LEGEND

W – women

M – men

Attendance of children with their parents to meetings was regular. The lowest attendance of children we observed in group 11 (69 %). On the other hand, the highest attendance was in group 1 and in group 3 (87 %).

Add 4.3)

Research tasks 3 – *To assess speech production in selected groups before and after play therapy with a puppet*

For testing differences between groups, researches used the statistic method Student t-test. During comparison of results we found out that from 4 numbers of degrees of freedom at probability level it is necessary to obtain a minimum value of x to the difference to be statistically significant. The result values show the critical value c_v , which is smaller than calculated χ^2 i.e. $9,49 < 14,63$. It demonstrated that results from testing in experimental groups compared to control groups are statistically significant. The mentioned finding is significant at a significance level $\alpha = 0,05$. We assume that therapeutic action using puppet to speech and social competences of children from experimental groups caused improvement in comparison with control groups. It cannot be held that every child achieved comparable improvement. In control groups there was a modest progress in speech but it was not statistically significant. Significant improvement in speech production in experimental group, we found in every group except one. Our program is not a specially standardized material, but it is suitable for improving a successful closure of speech therapy intervention.

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Analysis of three approaches in dramatherapy

(overview essay)

Ivana Lištiaková

Abstract: *The article presents an analysis of three approaches in dramatherapy: role theory, psychodrama and developmental transformations. Particular approaches were selected regarding their central position and long tradition among dramatherapeutic schools of thought in the North American and European context, especially at New York University. The analysis was based on comparing and contrasting theoretical background theories of these approaches, their methods and effective factors. Data was collected from literature, research videos of Three approaches in Drama Therapy, as well as personal experience of the author with these approaches as a participant and co-therapist in training. Common factors of change are found and analysed from the perspective of core principles of dramatherapy.*

Key words: *dramatherapy, role theory, psychodrama, developmental transformations, core processes of dramatherapy*

1 Introduction

Dramatherapy is according to Jennings (1988) understood as a group process, which explores relationships between group members through various levels of metaphor. According to Pitruzzella (2004), it is a form of dramatic art that is focused on strengthening of the health and wellbeing. Dramatherapy does so through directed exploration on stage, where people have opportunities to explore different ways of being in the world and of relating to other people. Dramatherapy creates space for a dramatic reality. Grainger (1997 as cited in Pitruzzella, 2004) described dramatherapy as a special and safe reality, in which people can experiment. Elements that construct this

reality are a play, a narrative and a role. Landy (1994, 2008) similarly talked about the role and the story as the main components of dramatherapeutic work.

Valenta (2006) analysed differences between dramatherapy and educational drama. Schematically, it is compared to art education, art-philetics and art therapy. Educational drama (drama education, creative drama) supports a dramatic talent and an aesthetic feeling. It leads people to perceive theatrical expression and to their own dramatic expression. This is analogical to art education. Moreover, it supports personal and social development of people, which is close to art-philetic approach. Dramatherapy is, according to Valenta (*ibidem*), alongside with art therapy, useful for people with difficulties in mental or social domains of life. This dramatherapeutic orientation is based on understanding of dramatherapy as a method used in special education with a formative and therapeutic aspects.

However, in international context, dramatherapy is often associated with active embodied approaches in psychotherapy and is used for a wide range of people. The philosophy of current approaches in expressive therapies is focused on self-development of clients and competencies supports. Clients are not defined by a categorized difficulty but rather by their need of support. A parallel could be drawn to Antonovsky (1996) and his concept of health as a continuum. His idea of salutogenesis deconstructs a dichotomous understanding of health and disease and establishes a frame of mind and health. Professionals focused on health promotion rather than disease prevention or symptom healing. According to salutogenesis, people are not separated into groups of sick and healthy, it is a fully inclusive approach. Expressive therapies function on a similar basis. Participants are invited to explore themselves, their inner world as well as interactions in a group.

Dramatherapy represents an approach focused on supporting mental and psychosomatic health and wellbeing through the means of dramatic art and action. The North American Drama Therapy Association (2015) defines dramatherapy as “intentional use of drama and/or theater processes to achieve therapeutic goals.” It is “an active, experiential approach to facilitating change.” The British Association of Dramatherapists (2011) described dramatherapy as “a form of psychological therapy in which all of the performance arts are utilised within the therapeutic relationship.” Dramatherapy represents an area of praxis that connects the knowledge of psychotherapy, special and therapeutic education. Dramatherapists use the therapeutic potential of aesthetically distanced action in the metaphor of drama. As a means of therapeutic change, they apply methods such as storytelling and imagination, role play, dramatic/symbolic/projective play, improvisation and embodied expressions through sound and movement. Clients in dramatherapy experience insight and catharsis in experiencing embodied metaphorical representations in events and characters.

Seymour (2009) wrote that “dramatherapy is a paradoxical practice that embraces the unknown as a potential dramatic space” (p. 31). Each dramatherapy approach is constituted by its own language and partially different methods. However the idea of understanding of the therapeutic process through art and acting, or performance is consistent across all approaches as a common concept. According to Johnson et al. (2009), the connection between dramatherapeutic approaches lies in the trust of dramatherapists in the therapeutic potential of theatre process, rather than in common theories or methods. Jones (2007) synthesized the knowledge of different schools of dramatherapy and identified their common principles, which he described as the core processes of dramatherapy. They include embodiment or dramatization of body, projection, empathy and distancing, role play and personification and the connection of drama and everyday life and its transformation.

2 Role theory

Theory and practice of dramatherapy constitutes of various approaches. They are defined by their own language and influenced by different philosophical, sociological and artistic paradigms.

Role theory and role method that was developed by Robert Landy (1994, 2009) explains personality as a complex of roles. Functioning of people in the world is perceived as playing various roles. It is based on postmodern sociological theories of Goffman (1990). Role theory states that one self as such does not exist, but identity is constructed of multiple modes of being. Everyday reality is full of contradictions and paradoxes, in which people try to find balance and harmony. Landy (2008) therefore understands health as the ability to bear the ambivalence and to live in the polarity of multiple roles at the same time.

The main concepts of role theory include role, counterrole and guide that are manifested and explored through a story (Landy, 1994, 2008, 2009). A counterrole represents a complement to a role; it is not necessarily its opposite, but rather ‘the other side of the same coin’. The idea of a role and counterrole is similar to Jung’s archetype of a shadow as a part of personality that people cannot get rid of and the only way is to accept it as a valuable part of personality. Similarly, in a role theory, the goal is acceptance of all roles that a person plays in life as an important part of being. In dramatherapy approach of role theory, it is worked towards broadening role repertoire and increasing the ability to play certain roles effectively. The more roles people are able to play, the better they can cope with surprising or changing life situations.

This concept of playing many different roles in a role theory is similar to the methods of social skills training through the means of role play; however its main idea reaches a deeper level. It is not only a behavioural training of action, but it allows

embodied understanding and insight into the meaning of certain roles in the context of being. Dramatherapist possess the role of a guide and a mediator of interaction between the roles and counterroles that are explored in the dramatherapeutic process.

Dramatherapist observes clients' roles and may analyse their role systems for the purposes of assessment and treatment planning. Assessment happens in a dialogical manner with clients and uses a metaphorical list of roles, Role Profiles or Role Checklist instruments (Landy & Butler, 2012) coming from the role taxonomy (Landy, 1996). Analyses of the role system may help to identify the roles that are accessible to clients in their everyday lives (Landy, 2008).

Dramatherapy according to role theory creates space for aesthetic distance, which on one hand serves as a tool of safe distance through the metaphor of a story and role. On the other hand, it allows the connection and proximity to a sensitive topic.

3 Psychodrama

Psychodrama belongs to the main resources and underlying theories of dramatherapy. Some authors (Majzlanová, 2004) see psychodrama and applied psychodrama as methods of dramatherapy. However, other authors understand psychodrama as a related psychotherapeutic approach to utilizing drama and its elements (Johnson & Emunah, 2009; Valenta, 2011). Psychodramatic tools include creating a safe space of a stage that is held by a lucid presence of group members. The protagonist plays out a situation from his or her life and the other actors that were chosen by the protagonist to play auxiliary egos act out other characters. Time and space collapse in psychodrama, which allows reconstruction of past and present events in a new manner. Psychodrama utilizes techniques such as role reversal or the double that support understanding and empathy. The therapist stays in the role of a director, fully present in supporting the client's process (Garcia & Buchanan, 2009).

Similarly to the role theory, the goals of psychodrama include role training and trying out new roles. Moreover, goals of psychodrama consist of achieving catharsis, insight and transpersonal spiritual connection. Psychodrama differentiates between catharsis of abreaction and catharsis of integration. Catharsis of abreaction means a full emotional release, being flooded with emotions and letting them go. It can happen during an emotionally strong situation that is re-enacted in the therapeutic setting. Catharsis of integration often happens later after the enactment. It represents a deeper understanding on emotional and rational level. The goals of psychodrama as described by J. L. Moreno (as cited in Garcia & Buchanan, 2009) therefore cover affective, behavioural, cognitive and spiritual levels.

Such complex understanding of health can be observed across dramatherapeutic approaches. It is especially tangible in the body and mind connection expressed in

the core dramatherapeutic principle of embodiment described by Jones (2007). Body work in dramatherapy means an embodied expression and action. Making use of feeling through the body, movement, action and acting allows understanding that comes in the form of an emotional reaction. On one hand, embodied play cherishes and preserves safety and on the other hand, it serves to break the barriers of intellectual defences that are present in the form of rationalizations. Farmer and Geller (2003) wrote that understanding often comes only after acting and it may be different from the original rational planning or assumption. The ability to understand the language of the body, according to Lutz (2013), requires people to recall the phylogenetically lower forms of life that were not dominated by rational behaviour control. Popova (2014) recognized a high value of the knowledge of the body. She claimed that body needs to be a partner and not only a tool. The contact with the body and a deep respect towards the body is connected with awareness of one's own humanity and dignity as described by Hicks (2011).

Important aspects in psychodrama are creativity and spontaneity. Moreno (as cited in Garcia & Buchanan, 2009) wrote that creativity allows new solutions to appear. It represents the knowledge of what to do. Spontaneity is the ability to respond intuitively to inner or outer stimuli. It does not, however, equal impulsivity. It stands for the competence of acting, actually conducting the action that was thought and based on the creativity. Reaching insight in the therapeutic process, oriented on body work, supports creativity. It helps a person to understand the situation and to find new ways of solutions. However, sometimes a person knows what to do, but does not have the courage to do it. Therefore, a support in spontaneity is helpful. It is the training of action in a role play that is connected with spontaneity enhancement.

Embodiment as a therapeutic principle can be found also in dramatherapeutic approach of Sue Jennings (1998) that carries the title Embodiment – Projection – Role (EPR). In this approach, observing the dramatic development of children and their present needs is the key focus. The EPR theory is similar to Piaget's (1977) theory of child's play development, especially on the level of sensorimotor play. Jennings (2011) developed the first stage oriented on body work in her concept of neuro-dramatic play (NDP). A developmentally oriented approach in dramatherapy was also elaborated by Kováčová (2011) who based her theory on the developmental stages described by Erikson.

Embodiment is not the only core principle that is found across dramatherapy approaches. Another important effective factor is also a play. Its use is utilised in its full potential in the approach of developmental transformations.

4 Developmental transformations

Another dramatherapeutic approach is represented by Developmental Transformations (DvT) created by D. R. Johnson (1982; 2009). This approach values embodied play as a means of supplying information in the form of thoughts and feelings. Activation of the body as a source for a therapeutic change is helpful, because it provides an opportunity to overcome stereotypical behaviour that might often be connected with verbal language (Johnson et al., 2003). A concise definition of DvT explains it as a “transformation of embodied encounters in the playspace” (Johnson, 2009, p. 89). The concept stems from the understanding of the process of free play (*ibidem*).

The role of the therapist is defined differently from a traditional position of a director or an outside observer of a play. The dramatherapist practicing this approach serves as an actor and as a playmate for the client. The common playspace is entered through a ritual that clearly determines that the players are entering the space of “as if”, that is defined by a mutual agreement of no harm, but that allows anything to be played out. Everything that happens is a part of play (Johnson et al., 2003; Johnson, 2009). The goal of therapy is to proceed further from the surface level of a play, through persona play towards intimate play and finally into deep play. Deep play reveals the human essence, desires and needs of people. It is possible to work through towards deep play gradually by embodied work and by so called encounters – meetings, moments of connection of player in the play. In the common play, a constant transformation happens. Dramatherapists are interested in the emerging elements whose emanation is facilitated through faithful and divergent rendering or interpretation (Johnson, 2009). This means that the therapist reflects either by mirroring or provocation. The therapist is available to the client as a play object and allows encounter.

All interactions are happening in the play, through movement and sound, or in developing the action of a story. Players constantly switch between fantasy and reality, which Johnson (2009) called the discrepant communication.

In the role method, the concept of discrepant communication could be linked to aesthetic distance. Landy (1994) described aesthetic distance as the balance between emotional involvement that is too strong and a rational behaviour that is too distant. Affective action and cognitive observation are in balance in a state of aesthetic distance. At the same time, aesthetic distance means awareness of oneself as an actor or player playing a certain role as well as being aware of reality – the actor becomes the character and at the same time stays him- or herself.

Also in developmental transformations, a key concept is the role. In DvT, the role arises from a dynamic flow of emerging images, thoughts and feelings (Johnson et al., 2003). Developmental transformations provide a means to achieve a connection with multiple roles. Johnson (2009) points to the ways in which people can explore

new roles, get access to them, expand their role repertoire and learn letting go of the dysfunctional roles, undeveloped, or hurtful roles.

Mentioned approaches in dramatherapy share similar principles, although they describe them by a different language. Landy (2008) pointed out the overlap of role theory, developmental transformations and psychodrama in therapeutic goals that are defined as a connection of particular parts of personality between each other and towards other people.

5 Analyses of three approaches in dramatherapy from the perspective of core processes

A common ground of dramatherapeutic approaches can be defined through key processes described by Jones (2007). In varying degrees, they are contained in all of the approaches, including the aforementioned.

Factors of change in dramatherapy are based on general principles of effectiveness in psychotherapy (Hanušová, 2004). However, they also involve means specific for creative art therapy, drama and theatre. Efficiency is not caused by a pure overlap of useful strategies of arts and psychotherapy, but their combined presence creates a qualitatively different and full experience. For example, aesthetic distance of a theatrical performance is determined by the nature of the play and the director or cast do not manipulate it during the play according to the reactions of the audience.

On the other hand, a dramatherapist adjusts the range of distance in relation to current client needs. This process of distance changes resembles a reflecting commentary in the person-centred psychotherapeutic approach (Rogers, 2003), in which the course of therapy varies according to the needs of clients. However, traditional psychotherapy maintains its focus on talking about client's issues in a direct form. Dramatherapy combines aesthetic distance of the theatre with the reflective nature of verbal therapy. Reflection in dramatherapy may keep an embodied form, which repeatedly connects it with dramatic art and its qualities. Dramatherapeutic approach to reflection varies according to a particular approach.

In psychodrama, the process of reflection is quite verbal, however, emotional experiences and therapeutic effect is not discussed with the client immediately after the session. The significance of changes becomes realized gradually. There is no need to identify the effect and individual meaning of the therapeutic session straightaway. Sometimes, it cannot be immediately recognized. It takes time to integrate the unconscious knowledge into everyday life.

On the contrary, in role theory and method, the process of work is embodied and progresses on a metaphorical level. Therefore, the closure of each session is dedicated

to verbal processing of embodied experiences and to their integration into the rational structure of consensual reality.

From the perspective of developmental transformations, expression and integration are included in the play, and therefore their further processing is unnecessary.

After creating the life-drama connection through processing in various ways, dramatic projection is another important core process in dramatherapy.

In role method, **dramatic projection** is present in projecting into the role of hero, obstacle, destination, and a guide. In psychodrama, dramatic projection appears in the characterization of the tasks of auxiliary egos, as well as in the exchange of roles. In developmental transformations, it is present in allowing thoughts, emotions and ideas to come out of the play.

Dramatherapeutic empathy and distancing are achieved by working with aesthetic distance, by the technique of a double and by role reversal. These techniques are used in psychodrama. Role theory also employs role exchange and adjusts the distance by using materials such as masks or puppets. Techniques that are the closest to the body such as using make-up or masks, allow less distance compared to techniques relying on objects such as costumes, puppets or sandplay figures. In developmental transformations, distancing happens in the metaphor provided by playful reflection.

Role play and personification are the basis of all three approaches mentioned, especially in the use of roles from stories in fiction or real life, or from the currently discovered incentives.

Interactive audience and the presence of a witness are implemented through the person of dramatherapist and the group members. In the form of individual therapy, the dramatherapist is in the role of a director, guide or a playmate and offers the necessary presence of a witness. This factor is crucial in dramatherapy. Unless there is an audience, performance of change cannot happen. In the group dramatherapy, members of the group serve as spectators and witnesses for each other. Therapeutic process is stirred up also in the audience that actively participates by following the story on the stage.

In the previous part of the article, embodiment was already described. **Embodiment** differentiates dramatherapy from verbal forms of psychotherapy, because of its trust in accessing knowledge, interpersonal awareness and transpersonal context through the body. In role method, insight is provided through a conduct of the hero's journey in a symbolic physical – embodied form. In psychodrama, therapeutic goals are pursued based on embodied role reversals and in observations of bodily reactions of the protagonist. Developmental transformations actually use only a fully embodied form in a mutual communication of clients and therapists.

Play, in the sense of playing, is a part of dramatic presentation or performance in the role theory. In psychodrama, the play creates a playful moment of a collapse

of time and space. In developmental transformations, the play represents the main method and working tool.

The core principle of **connection of drama and life** highlights the transferability of emotional and intellectual insight gained in play that drama provided to its creators, actors and spectators. In the role theory, integration happens in the processing at the end of a dramatherapeutic session. Psychodrama established this link of play and reality already in the contract with the client at the beginning of the session and enters it with this awareness. Developmental transformations approach leaves the integration of concepts in the play because it is considered unnecessary to talk about deep experiences from the play.

Table 1 presents a comparison of selected aspects of the three approaches in dramatherapy that were described and analyzed in the article.

Table 1: Comparison of selected aspects of three approaches in dramatherapy

Approach	ROLE THEORY (Landy, 1994, 2008, 2009)	PSYCHODRAMA (Garcia, Buchanan, 2009)	DEVELOPMENTAL TRANSFORMATIONS (Johnson, 2009)
Roles	hero, obstacle, destination, guide; role and counterrole	protagonist auxiliary egos	players; emerging roles
	set and described in the be- ginning, in a fictional story	described by the protago- nist, from real life	no predefined roles
	metaphorical	from contextual reality, directly from lived expe- rience	fluid, emerging in play
	taking a journey through a role	role reversal	emergence of roles
	role taking role playing	role taking role playing role creating	emergence of roles role playing
	exploring the development of roles broadening the role repertoire		
Surreality	aesthetic distance	surplus reality	playspace
Linearity of the process	story unfolds in a linear manner	linearity of the story with a possibility to go back and change scenarios	no linearity in the process

Time	fictional	collapse of time – past happening in present, people from past appearing	pieces of reality, present
Insight	through taking the hero's journey and verbal processing	through doubles and role reversal catharsis of integration	through emergence of new roles (being pushed to let new roles emerge)
Role of therapist	guide	director & double	actor, playmate
	indirect	with the client, beside the client	follower and leader
	offers to the client	doubles for the client	is available to play, serves as a play object
Closure	verbal processing	no sharing by protagonist, only the other group members	embodied

6 Summary

The three selected approaches in dramatherapy represent the main schools of thought in the context of dramatherapy in North America and therefore they are transferred to other countries where dramatherapy is practiced and taught. The choice of these particular approaches was based on Robert Landy's video (2006) of the three approaches demonstrated in individual dramatherapeutic sessions. The theories and methods of psychodrama, role theory and method, and developmental transformations are based on different philosophical backgrounds, employ their own terminology and utilize unique methods of achieving therapeutic change. Nevertheless, they find a common space in the shared core processes of dramatherapy that were generally described by Jones (2007). The analysis of the selected approaches was therefore based on these core processes as well as other important concepts and principles found in dramatherapy.

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University's care and counseling for students with special needs in special physical education of China

(overview essay)

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Abstract: *This paper explored the current situation of lacking of the care and counseling in China's universities for students with special needs by using the method of literature investigation, and based on the definition of "university", "care and counseling", "students with special needs" and "special physical education". It argues that with the China's economic and social development, there is a growing demand to accept higher education for students with special needs. The problem of lacking attention in university's special physical education will be more serious if it does not receive due attention. It proposes that the key to solve the problem ought to make the value orientation as people-to-people's care and counseling in university special physical education, and then trigger thinking about what kind of concept of individuals with special needs should be set up. It is necessary to explore ways for college students with special needs to find their own places in university campus and society, be better involved into community, gain the respect of people around and live a life with dignity.*

Keywords: *care and counseling, students with special needs, special physical education, higher education, China*

1 Introduction

In the past of China, several studies pointed that people regard the individuals with disabilities as "Can Fei" in Chinese language, which means "nothing he can do and have no value to live in the world" (Ge, 1997; Liu, 2007; Liu, 2013; Liu & He, 2010; Sun & Deng, 2011; Yang, 2006). Although there are some policies issued by China's government departments to protect the rights of higher education for individuals with special needs, the old concept of people with disabilities still has its influence on

the present. However, with the rapid development of social civilization, science and technology, the level of development of special education has become an important symbol to measure the overall strength of the civilization degree of countries and regions, and to some extent reflects the people-oriented spirit of the era.

Physical education carried on a more open field will provide more communication opportunities. According to Tindall B. Allan (1975), one function of participation in physical activities was to display information about one's social identity. The participants in physical education were displaying information to attending members that they belong to the same group. In China, the higher physical education for the students with special needs is mainly carried in regular universities. Therefore, many physical activities for students with special needs happen together with the intact students (Research Group on higher education of disabled in Binzhou Medical University of Shandong province, 2000). Sports provide people with equal chances to involvement, and this kind of 'presence' can help the students with special needs communicate with their companions more easily and find their own places in university campus, especially strengthen the meaning of self-existence and identification in psychological aspect. Recently, the Special Education Enhancement Program (2014–2016) was formulated by the Ministry of Education (MOE) along with China Disabled Persons' Federation (CDPF) and several other departments. Based on this, in addition to the proposal of expanding the size of ordinary schools in regular classes and the gradual recognition on the concept of 'equality, participation and sharing', it will be an inevitable trend that increasing number of students with special needs will enroll in colleges or universities.

However, the equality of starting point does not mean the equality of process (Wu, 2006). Do they receive the education appropriate to their physical and mental characteristics and needs after they get the university admission? Do they get the due care and counseling in university? Physical education is an important part of higher education. The essence of physical education is caring and cultivating the person's life. College students with special needs will be a spectacular contrast when attending physical exercises for their special request.

2 Terminology

Education is necessary for the survival and development of all human beings because it is a process of human life. During the process, the most important thing for people is to learn how to care and counsel each other. Everyone has the equal right to learn – male or female, disabled or abled, old or young, black or white, wealthy or poor. But the phenomenon of educational inequality stays always with us because of the limit of social condition and the shortage of human nature. Special education is

developed just for people with special needs who have not got the equal educational opportunities. The level of special education embodies the degree of awareness of human being for themselves. As a part of education, sports or physical activities have special functions of keeping people's physique, health in body and mind, social relationships and so on. Everyone has the needs and the rights on these aspects. Of course, college students with special needs have the needs and the rights to receive physical education during their campus life. Special physical education in university is specialized to college students with special needs. The purpose of special physical education in Chinese university is to allow almost every individual with special needs to take part in sports equality and thus achieve their values and living with dignity.

In this paper, the "university" refers to the regular university, which includes universities with and without special classes. At present, there are three main university enrollments for students with special needs in China: regular university with regular classes or with special classes, special vocational education, and higher education for adults (Feng & Wang, 2014; Chen & Lu, 2006).

The "students with special needs" involved in this paper mainly along with *the National College of Physical Education Teaching Guidelines (NCPETG)* issued by MOE in 2002, refers to college students with physical abnormalities, such as disease, weakness, elderly, disability (the visually impaired, hearing impaired, mild mental disabilities not including intellectual disabilities, and physically disabled students), and other special groups (the Ministry of Education, 2002).

The term of "special physical education" in China is not a clear unified definition. The research on college students with special needs is relatively weak mentioning on some vague wording in the field of physical education in colleges and universities (Wu, 2006). In this paper, the special physical education is university physical education for students with special needs, with and without the intact students.

The term of "care and counseling" is a key word in this paper. It means understanding, esteem, confidence between people, and practicing wisdom, which is based on equality of all people. With regards to a person, the person-centered perspective is embodied in orientation on care and counseling. Taking part in sports is a benefit for people's health as it was well known earlier in the general population (Committee of Ministers, 1995; Department of Health, Physical Activity, Health Improvement and Prevention, 2004; US Department of Health and Human Services, 1996). It is disproportionate about higher education for individuals with disabilities between existing legal norms and the development of society and the current and future trend in China (Wu, et al., 2009). In this paper, it materialized in the policies of recruitment and of university issues related to students with special needs, special physical education curriculum setting, barrier-free accessible venues and sports facilities and psychological counseling for students with special needs and attitude and care about students with special needs.

3 Care and counseling in Policies related issued by government after Cultural Revolution

The equal rights of persons with special needs to be accepted for higher education has been confirmed in law increasingly after 1978 in China, however, there are still many limits in higher education for students with special needs, mostly because of the related law or policies in advocacy and to some extent because of a lack of maneuverability.

The ratio of college-educated individuals with disabilities of all disabled population in China is only 0.3 percent in 1987 reported by national sample survey on the disabled. The ratio is 1.47 percent on the second survey in 2006, while at the same time the proportion of people with university degree in China's population is 5.18 percent (Li, 2009). From the year of 1987, the nationwide college entrance examination in China began to enroll students with disabilities, which intent to contribute to empower their rights to receive equal higher education. Educational revitalization was a key objective of the Chinese government following the Cultural Revolution. The "...massive reorientation of the educational system" as exemplary on the re-ordering that occurred after the Cultural Revolution. Along with other sweeping educational reforms, renewed emphasis was placed on expanding both the scope and number of special education programs" (Zhao, 1992). Generally, the ratio of individuals with disabilities to enter university is low, which is influenced by the family economic status, physical reasons or cultural environment, besides the fact that regular high schools are not willing to accept students with disabilities for the higher graduation rates.

3.1 Care and counseling in policies of college enrollment

To allow or not allow people with disabilities to enter colleges or universities directly related to this group's educational level. There are three types of university enrolling students with disabilities. One is independently established university for the disabled. Up to now, there's only one university like this: Nanjing Technical College of Special Education. The second is regular university with special classes. Such as Changchun University, Zhongzhou University, Beijing Union University, Tianjin University of Technology, Binzhou Medical College, Changsha Vocational and Technical College. The third is regular university with regular classes. But the latter develops strongly (Du, 2010).

China has issued a series of laws and regulations directly addressing or including special higher education since 1985. In this year, the MOE has issued a direction about *the Enrollment and Assignment after Graduation of Individuals with Disabilities in Universities*. There is a clear provision that persons with disabilities have equal rights to higher education. Colleges and universities must not refuse to enroll any

students if the disabled person complied with the national standards. In 1988, it was promoted to develop higher education for the individuals with disabilities in the first meeting of special education. China promulgated *the Protection of Disabled People's Republic of China* in 1991 and the *Individuals with Disabilities Education Rules* in 1994, which is the first special administrative regulation about education for the disabled (Pang & Yu, 2011). However, there is no specific legislation about China's higher education for students with special needs, less specific operational rules to regulate and guide the implementation of the relevant law (Zhuang & Zhou, 2014). In the Rules in 1994, article 29 states: "universities, adult education institutions must recruit the candidates with disabilities if they conform to the provisions of the state, shall not refuse to recruit because of their disability." In 2006, the United Nations through *the convention on the rights of persons with disabilities*, emphasized the disabled are a component part of human diversity, also have dignity and autonomy of the individual, should have equal opportunity to actually participate in and be integrated into the society and contribute to the progress of the society. Fifteen years later, in the 2009 National Working Conference on Special Education, it still emphasized that colleges and universities shall not refuse to recruit the students with disabilities when they comply with admission criteria. According to *the Law of Compulsory Education of China, the Law of Protection of Disabled of China, the Regulations of Education of the Disabled, the Opinion of Further Accelerate the Development of Special Education* are jointly proposed by the MOE, CDPF and other related ministries, which is also issued by the State Counsel of China in 2009. It mentioned that the students with disabilities mainly attend high schools based on vocational education, which linked up with the compulsory education phases of the special education. The opinion also required the general high school recruitment of the students with disabilities who have the ability to accept general education. But there are many questions to be solved, such as who evaluates the ability of students with disabilities and how to evaluate it; in addition, there is no uniform evaluation criterion. In China, the regular high schools do not want to receive students with disabilities. On the other hand, the rights to accept higher education for individuals with special needs in the aspect of policy have gained some improvement step by step. Such as the MOE, CDPF and other related ministries jointly canceled the Hepatitis-B checking in physical examination of candidates for regular colleges and universities enrollment through issuing the notice in 2010. This item has been carried out since 2003 the former *Notice of the Physical Examination for Universities Enrollment* issued by the MOE and other related ministries.

From 2007 to 2012, the number of students with disabilities enrolled in higher education is almost increasing step by step although not by a high rate. The following table shows the detail information about the enrollment of students with disabilities and the total students in China's regular university.

Table 1: The enrollment of students with disabilities and the total students in university

year	2007	2008	2009	2010	2011	2012
disabled	0.6320	0.7305	0.7782	0.8731	0.8027	0.8363
total	282.0971	297.0601	326.1081	351.2563	356.6411	374.0574

Note. Unit is ten thousand people; the data collected from <http://data.stats.gov.cn/workspace/index?m=hgnd>

3.2 Care and counseling in policies of university

With the improving of social civilization and the material abundance, the university's care and counseling for students with special needs is increasing. But it is still not sufficient enough, regarding physical aspect, psychological aspect or mental aspect.

The government began to pay attention to the rights of sport of the students with special needs in 80s of 20th century. Even until 1985, MOE required definitely that university could not refuse disabled students for the reason of their body disability, although the college entrance examination was resumed in 1977 after the Culture Revolution. After that, some universities began to recruit disabled students. MOE carried out NCPETG and pointed out, "the course of health care is a kind of required or elective course that is set up for the students with abnormal body, disease, or weakness; university should relevantly develop the teaching of physical education about health recovery and care." Then, the curriculum of special physical education had a place in higher education of China. And this was emphasized by new NCPETG carried out in 2002, which is the basic requirement of the state of college students in the physical education curriculum, "university should set up health recovery or health care oriented physical education course for the students with special needs, such as abnormal body, disease, weakness, physical disability, and advanced age." So, the old and new Guidance defined the educational object for current special physical education in universities. The educational object became more inclusive and included more students with special needs by comparing the old and new guidance.

To strengthen the status of physical education in higher education and improve the physical health of college students, the MOE issued a *Notice of the Basic Standards of physical education in Higher Education* on June 11 in 2014. The college students are required to learn at least two sports for lifelong participation. But at the same time the monitoring and evaluation result of college students' physical constitution as an important basis for student was rated excellent. How to evaluate students with special needs? It is not mentioned in the basic standard of physical education in higher edu-

cation except for “due to illness or disability, the student will graduate with the proof of the hospital apply to the school” (the Ministry of Education of P. R. China, 2014).

3.3 Care and counseling in careers guidance

In recent years, the government has formulated a series of measures to promote the employment of college graduates with special needs. Although social stereotypes of people with special needs will not reverse in a short time, to some extent, the implementation of these measures can promote social acceptance of people with special needs.

CDPF (2013) mentioned that the current national annual average is that approximately 8000 college students with disabilities graduate. The *Notice of 2015 National College graduates employment* suggested that universities should further intensify assistance to help graduates with employment difficulties, according to the specific situation of graduates with special needs, designate a person responsible for providing more targeted support (the Ministry of Education, 2014) for unemployed graduates, continue to provide employment information and services. In addition, some regions also opened a special recruitment for college students with disabilities. CDPF required that local disabled persons’ federations must strengthen cooperation with education departments to give college graduates with special needs better services. For example, Jilin province disabled persons’ federation (2013) registers the employed college graduates with special needs and gives them track service. For those who did not find a job, the disabled persons’ federation will provide special one-to-one services. On the other hand, CDPF (2011) regards university graduates with disabilities as elites and required in *the notice on the employment of university graduates with disabilities* that the college graduates with disabilities among new hiring staff shall not be less than 20 percent of the disabled persons’ federation and directly affiliated institutions at or above the county level.

4 Care and counseling in the curriculum and assessment of physical education

Historically, China is a traditional agricultural country, and comes out the Confucian culture representative of Chinese farming civilization. “It is generally felt that the problem of special education is much more acute in industrialized countries than it is in agricultural ones, this is primarily because in agricultural societies the exceptional child can usually more easily adapt” (Stephan, 1977). There is a gradual process for government to realize the higher education needs of individuals with disabilities. In fact, there are many difficulties for individuals with disabilities to receive higher

education. China's higher education still has the characteristics of the elite education model (Lu, 2004). All of these have some negative influences for college students with special needs participating in physical education in China.

4.1 Care and counseling in the form of participation in physical education

The course of physical education is a type of a two-year's required course in college and universities of China. Currently, this is a very normal phenomenon that universities made some subtractions on the physical education of students with disabilities, such as giving the exemption of PE class, physical fitness test, or reducing learning hours. About 43.7 percent universities with more than fifty students cannot participate in physical education classes normally in China based on an investigation of physical education in thirty universities among ten provinces and cities. Du Yingying (2010) also pointed that all universities in Shanghai with recruiting disabled students decreased lessons of physical education of disabled students. He argued that it looked that the learning burden of disabled student was alleviated but actually the distance of them from intact students was widened artificially, and this really was a "lower expectation" for students with disabilities and had put them into a disadvantaged situation before they entered the society. In addition, most special physical education in universities is in the state of free from school field. Although some universities provide special physical education for those students, it almost became a mere formality (Ma, 2004).

4.2 Care and counseling in the contents of physical education

Currently, there are a few colleges and universities that carried on the special physical education. This exposed the slow development of higher special education in China. Firstly, there is still no teaching guideline, specific course objectives, and targeted teaching content for special physical education course in higher education. So, the course design of it is not serious. Otherwise, the current teaching contents of special physical education course have not met all of the needs of college students with special needs. Secondly, there are no detailed criteria for the classification of special physical education course to meet the classification of special college students. The large difference of different special college students increased the difficulty of special physical education class. We should establish the specific fitness evaluation criteria for different college students with special needs in order to help them clearly understand the development situation of themselves and the next target to pursuit.

4.3 Care and counseling in the assessment of performance

Han Ye (2008) through investigation study regards that guiding college students to take part in physical exercise with purpose to improve their mental health. The current *basic standards of universities' physical education* issued by the MOE (2014) strengthen the requests of college students' health status. It is a remarkable fact that in *the college students physical health standards* issued by the MOE (2007), the students with special needs are exempted from the physical health tests. But is the exemption a real sense of care? Or just send a potential message the students with special needs that they will not be paid the due attention to? For the discipline of physical education, it is a course to help students improve their fitness. Students with special needs should be included in the process of higher education and be given the right of participation in physical education although there is some difference in their body. Because this relates to the principle of education called "teach students in accordance with their aptitude", and the principle of education fairness. Universities should not limit students with disabilities in learning more knowledge for the excuse of disability. This kind of "assistance" in the name of humanitarian not only undermines the confidence of students with disabilities but also reduces their enthusiasm of learning. In fact, students with disabilities are eager to learn more knowledge and skills in order to make up for the defects of their own and adapt to the society (Du, 2010).

The demand of physical education of college students with disabilities has attracted the attention of scholars in China. Jin Mei et al. (2012) argued that physical exercise was placed a lot of importance in campus life by deaf college students. They found that the strongest motivation to participate in physical exercise was to improve their health, the second one was to pass the physical education examination and to make friends. Qi Libin (2007) found that some college students with disabilities had strong awareness of physical exercise, and most of their physical exercise time spent on the physical education class.

5 Care and counseling in the supports system about physical education

The physical educational participation of students with special needs is supported by teachers, classmates, and society. For example, peer tutoring had been proven to be an effective method to facilitate inclusive physical education (e.g., Klavina & Block, 2008; Ward & Ayvazo, 2006).

5.1 Care and counseling in the physical education teachers' qualities aspect

The opinion of strengthening the construction of special education teachers (2012) is supported by teachers colleges and teacher majors in regular universities. They offer special education courses and cultivate teacher-students to have the ability to guide the students with special needs. According to the investigation of MOE (2014), there are 66 universities that have opened the special education major nationwide. The universities that are setting up the major of special physical education, as the table 2 shown, are quite few, and their training objectives are not including the cultivation of the special physical education teachers for institutes of higher education. Therefore, the university physical education teachers' concepts of students with special needs play a vital role. Pan Feng (2013) investigated the attitudes of physical education teachers for the students with disabilities participating in physical education classes in universities of Tai'an city. He found that 50 % of physical education teachers let students with disabilities just look, 20.83 % of physical education teachers gave them the exemption of the course, 29.17 % of teachers let them make choices by themselves, and no physical education teachers arranged recovery activities for students with disabilities in the class of physical education.

Table 2: Special physical education training objectives at universities in China

University	Year since	Specialty	Training objectives
Tianjin Institute of Physical Education	2001	Special education	With general physical education and special physical education knowledge and ability, engaged in the practice, research and management in special education or related institutions.
Shandong Institute of Physical Education	2004	Special physical education	Sports education and training for disabled, special education and rehabilitation for children with special needs; Physical education and sports training in special education institutions, rehabilitation agencies, child welfare, disabled persons' federations; special education and rehabilitation for children with special needs.
Xi'an Institute of Physical Education	2006	Sports rehabilitation	Acquire the professional ability of rehabilitation and to serve; engaged in rehabilitation and health guidance, service and management in rehabilitation departments and hospitals affiliated to health departments, disabled persons' federation, civil affairs departments and sports departments.

Liaoning Normal University	2006	Special physical education	Physical education teachers in special education institutions, Special Olympics coaches, researchers on special sports, disabled sports social workers and management staff.
Guangzhou Institute of Physical Education	2008	Special education	Physical education, sports training and competition related work for disabled; guide rehabilitation and physical exercise for disabled in school, rehabilitation institutions for disabled persons and social welfare organizations.

Note. It is collected by the relevant universities' admission brochures for the national regular university entrance examination.

5.2 Care and counseling in the people's opinion about students with special needs

The problems of college students with special needs are not dealt with the class of physical education. Many students with disabilities are unwilling to admit the problem of their body in most situations. But they have to directly face it in physical exercise and physical education class. This kind of experience is painful. So, many students with disabilities have a passive attitude to physical exercise. But they have to worry about the examination and evaluation of their physical education class because it connects with their graduation and employment in the future. So, the situation that disabled students attend the normal physical education class by concealing their disability information is common. But they still do not have active sport participation. In fact, the fundamental reason is that the care and counseling for college students with special needs in physical exercise and physical education situation is deficient. Based on the group counseling for 8 weeks carried out for 11 college students with special needs who have interpersonal relationship disturbance, the author finds that group counseling can effectively improve their interpersonal skills (Wang, et al., 2013).

5.3 Care and counseling in sports facilities and financial support

For college students with special needs, the condition of physical education facilities and equipment plays a very important role in taking part in sports. In order for college students with and without disabilities to participate in the recommended levels of physical activity, universities and colleges should provide opportunities, appropriate environments, and carefully designed instruction for students to participate in various physical activities (Ishonté, Jun-Hyung, & Andrea, 2014). In China, the accessibility to sports facilities is far more lacking not only in universities but also

all over the country. While funds are generally provided for those college students already identified as having special needs, it is readily apparent that, if the needs such as the establishment of accessibility sports facilities of all students with special needs in university are to be met, a major increase in special education funding will be needed. It is well-known that more funds are needed for supporting the higher education for students with special needs than the ordinary. For example, the Beijing municipal finance for higher education of students with disabilities reaches to 30 thousand RMB per year per college students with disabilities, which is 2.5 times of ordinary college students (Ma, et al, 2012).

6 Conclusions and Suggestions

Values are the source of individual words and deeds. College students are in different situations of need, motivation and others reflect their value orientations (Liang, 2002). What kind of concept of individuals with special needs should be set up? It is necessary to explore ways for college students with special needs to find their own places in university campus and society, better involved into community, gain the respect of people around and live a life with dignity.

6.1 Legislation of the University for Special physical education

The continued improvement of special education legislation is needed. Various levels of educational administration should be encouraged to consider the most appropriate curriculum for students with various special needs in university. Receiving education is a kind of basic human right. Equal education opportunity is the guarantee of the basic right. We should pay attention not only to the right of receiving physical education in legal sense but also for every person to be able to experience the right in reality. Among them, an important thing is that every individual should get the equal opportunity for development. But the current problem is that the physical education of college students with special needs was neglected by institutions of education and government, even educators. Professional evaluation has lacked to match it and many kinds of work reports and development plan about college physical education rarely mentioned it, although the “*Guidance*” and other policies have carried out. The solution of this problem does not only depend on the hard work of educators but also on the need to support policies and regulations, the supervision of society, and the evaluation of college physical education.

6.2 Recognition on the needs for special physical education

The progress of the disabled concept highlights the understanding of human beings for themselves and it is a symbol of the progress of human civilization. Disability was defined as an individual problem and people with disabilities were considered to be deviating from the standard in traditional society (Ma, 2012). Actually, disability was imposed totally on the disabled by society, and the constraint including individual prejudice, institutional discrimination, transportation restrict, isolated education, and exclusive job. All these are still hindering the development of special physical education in colleges and universities. Because of the lack of understanding of the needs and rights of college students with special needs, many universities have not paid more attention to the care and counseling to students with special needs from people's central value orientation. As a result, special physical education often becomes a low priority at the university level.

The supportive attitudes of university teachers play a key role for students with special needs cultivating positive self-esteem (Liang, 2012). At the same time, it also conveys a positive opinion about individuals with special needs in society, so that the peers of students with special needs acquire the right view of the people with special needs in the process of socialization. Special physical education at universities has shown a remarkable growth in recent years, and has in the last century faced some great challenges. China is showing a strong desire to accelerate the development of special education. Further work must be done in improving the recognition of sports needs of college students with special needs by all levels of higher education. The early detection of serious psychological problems should be encouraged, along with a comprehensive system of inspecting and upgrading special education services and service providers.

6.3 The value orientation of special physical education

Understanding, respecting, caring, and assisting citizens with disabilities are traditional virtues of China's society (Xu, et al., 1995). While thinking of people with disabilities as of absolutely disabled, the offered help may not fit the real need of people with special needs. Although we understand the phenomenon is from humanism, is it fully understood that the people with special needs are also real persons? In my opinion, the ideal of taking care of each other should establish a rational value orientation of person including the persons with special needs. "Since the traditional cultural emphasis has been on the family and not on cooperative groups, the development of social agencies to provide supplementary services to persons at risk has been quite slow. In a family that has a handicapped member, the parents assume

lifetime responsibility for him. If no longer in a position to support him, siblings or other close relatives are committed to his care” (Stephan, 1977).

Currently, the higher special education of China pays excessive attention to the superficialities of handicap of college students with disabilities, while neglects their hobby and proficiency and lacks the overall acknowledgement for the development of their life (Liu, 2013). Special physical education is in the same situation. This kind of “care” denies the right, value, and proficiency of college students with special needs in essence, and attributes to the cultural isolation and participation restriction in the circumstance of sport. The fact that many people with disabilities can face their defect and pursue the value and significance of life by sport is really positive for the whole human society. All human beings including the disabled have the potential to change the situation. Society should give a chance to people with disabilities for releasing their potential ability. So the care for life should be the value orientation of higher special education including physical education.

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Polylingual education is the most important strategy of development of Kazakhstan

(overview essay)

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Abstract: *this article is about the trinity of languages that is considered as one of important conditions of training of the highly qualified specialists demanded in modern labor market, capable not only effectively to carry out the professional and information retrieval activity, but also to carry out successful business and cross-cultural communication.*

Keywords: *multicultural education, multilingual training, Kazakhstan's education system, ethno pedagogical education, the unity of three languages, inter-ethnic and inter-cultural communication, trilingual's*

1 Introduction

“Kazakhstan should be perceived worldwide as a highly educated country – has repeatedly affirmed the President, – the population can use three languages. These are: the Kazakh language – the official language, the Russian language – the language of international communication and English – the language of successful integration into the global economy” [1]. Master of several languages always expanded communication and integration capabilities of countries and nations. Languages were valued in the days of ancient Egypt, where interpreters occupied in the hierarchy privileged position and often exempt from taxes. And now, in the modern world, multilingualism is an accepted norm.

One of the most important aspects occurring in the Kazakh society of economic and social modernization advocates policy language. In 2007, the head of state in the Message to the Nation “New Kazakhstan in the new world” offered to begin a phased implementation of the cultural project “Trinity of languages”. From this mo-

ment begins the countdown of the new language policy of independent Kazakhstan, which today can be an example for other countries in the degree of popularity in society and the level of its effectiveness [2].

Trinity of languages – this is compulsory, the massive knowledge of three languages by the same person or community. This is not the variety of languages that can be understood as knowledge of several languages, or the coexistence of several languages in a particular society. It arises from the expansion of the cultural aspect of the language of human experience from the language used in the family, to the language used in the community, to mastering the languages of other nations, and communicative competence is based on all the knowledge and experience, where all languages are interrelated and interact.

In many countries, governments favor multilingual population for the development of society. For example, there are four official languages in Singapore: English, Chinese, Malay and Hindi. As a result – the majority of its population speaks several languages, so they are more educated and competitive as compared with other countries at the regional labor market. That is why foreign investors prefer Singapore when they are considering development of South Asian regional offices. In combination with a number of other factors such robust and pragmatic language policy quickly led to Singapore's economic miracle. Also, it is worth remembering the German proverb, "Person lives as many lives as many languages he knows" Isolationism, closing in one language and one culture come to nothing. [3]

2 Project Trinity of languages

The main goals of the project "Trinity of languages" can be generalized as follows. In the field of the Kazakh language: expanding the applied range of the state language, providing unification of modern literary language, improvement and systematization of lexical fund, the introduction of a full-fledged system terminology, issues of language computerization, improved methods of teaching. In relation to the Russian language: good common cultural features of the Russian language, operate in the field of science and education, the creation of new distance learning programs, educational materials, interactive electronic devices. Activities in the field of English language include: expansion of international cooperation in order to communicate with foreign language culture, provide available instructional literature for collective and independent learning, revision of training programs, increased requirements for the system and the process of training of future foreign language teachers, teacher training for teaching science and mathematics in English.

The adoption of the "Trinity of languages" funding for the study and development of languages has increased by 20 times, but the lion's share goes to learning English.

Instead of opening the Institute of the Kazakh language or social linguistics, Kazakh elite schools in the country began to open elite English schools with the provision of cottages for teachers whose salaries are from 1000 (for assistants) to \$ 3,000 (for foreign experts). Cost of training at such schools is 20 000 dollars a year. Also there are many institutions of higher education in English.

Start English from the first class!

If we are to develop from an early age, children develop the correct pronunciation, the idea of the variety of objects, phenomena and things, rules and norms of behavior that may have different names, depending on the language of communication. Since 2012, an experiment was conducted by the government; English was included as one of the curricula for the second grade primary school students in 165 Kazakh schools. It is noted that the work will start gradually and introduces some subjects in English in pilot mode of study. These activities are conducted by the Ministry of Education and Science under the orders of the President on introduction the trinity of languages. Already in 33 schools from the first grade students learn the English language [4].

Today we can see concrete steps in the implementation of the idea of the state program of development education in the training of highly qualified, multilingual and competitive professionals in the global labor market:

- Every year increasing number of students under the state order for doctoral programs and a magistracy;
- Highly qualified specialists, mostly English-speaking teaches at leading universities in Kazakhstan;
- Since 2011 training of teaching staff with the multilingual education at Universities across the country carried out through the expansion of the volume of credits in a foreign language in a series of basic disciplines;
- Makes changes to standard curricula for preparation of pedagogical shots on teaching in three languages.

Nowadays the leading Kazakh universities are doing a great job by:

- introduction of 6 new specializations with instruction in English (et al. in foreign languages) within the existing linguistic and non-linguistic specialties as a new stage of development that meets the modern demands of the educational market;
- Opening new linguistic and non-linguistic specialties of doctoral Ph.D. which profiles with a complete training in English and other foreign languages in order to meet international quality standards of education;
- Development of master and doctoral programs at framework of the «Double Degree» (double diploma);

- The further development of internal and external academic mobility and scientific training for students, masters and doctoral training at leading universities in Kazakhstan and foreign countries;
- Attracting qualified foreign carriers (particularly English) in the educational process of the university;
- Improvement of teaching methods using the latest achievements of science and technology. Active cooperation with other universities allows us to learn a wealth experience in this field [5].

However, in recent years there has been a gradual change of language priorities in Kazakhstan. On the face of language policy, the training and teaching English at school is at a high level. In the near future some subjects at schools will be storied in English, such a practice in the state language at Russian (National) schools has not yet been used, i.e. in this regard the English language has an advantage over the state language.

Unavailability of the education system to the trilingual education was acknowledged by the Ministry of Education and Science: not enough teachers of English in Kazakh schools, educational materials, etc. After all, since Soviet times, foreign languages and literature in the Kazakh audience has been studied in Russian. There is still no well-adapted literature in English at the Kazakh schools, English-Kazakh dictionaries, and Kazakh literary texts in English, etc.

Deep study of the English language makes pupils of Kazakh schools intensively study the Russian language – high-quality dictionaries, books for learning English are in Russian. In the study of foreign languages most Kazakh language is “moved aside” – it is not claimed in their study. Deep study of two world languages – Russian and English – is fraught with displacement of the Kazakh language in education.

This situation will continue until we overcome the dependence on Russian language in the learning English in the Kazakh audience. It is necessary to advocate children and adolescents to learn Kazakh so as to pick up the national language. It is necessary to create exciting children’s channels and TV shows that can increase the interest of the younger generation of all nationalities in the Kazakh language.

For trilingual education we need to create educational base of the state language for learning foreign languages: to prepare high-quality dictionaries, textbooks, translated literature, foreign language teachers to Kazakh school. Foreign language must be studied in the Kazakh language, rather than Russian; develop and implement a methodology of teaching English in the Kazakh audience.

Trilingual education – the study of two foreign languages based on the state language that exists in some European countries. This approach is more suitable for trilingual education in Kazakhstan. For example, in England they started to study two foreign languages based on the English language in schools.

To see the real language situation among the youth, we have developed a questionnaire from 10 Points in the Kazakh and Russian languages, and conducted a survey in two universities and schools. Total informants – 200 people, whose native language – Kazakh. Informants who have graduated from the school in Kazakh – 70, in Russian – 60, still studying at Kazakh schools – 70.

3 Analysis of the questionnaires

Analysis of the questionnaires shows that the Kazakhs who have graduated from school with Russian language learning, often use two languages (conventionally denoted “Group A”):

- Communicating at home (60 % of students)
- With friends (70 % of students)
- watching movies and TV shows (70 % of students)
- Reading newspapers (40 % of students).

Almost half of those whose native language is Kazakh, but left school with Russian language learning (group A) are bilingual, because they communicate in their native Kazakh and Russian languages.

Other ratio was observed in the group B and C.

Students who have graduated from the school in Kazakh, use two languages (conventionally denoted “Group B”):

- Communicating at home (40 % of students)
- With friends (33.3 % of students)
- Watching movies and TV shows (50 % of students)
- Reading newspapers (60 % of students).

The social status, lifestyle and environment affected the form of bilingual students and schoolchildren: students equally often use two languages in productive speech – to communicate with family and friends, as well as the perception of movies, TV shows, a newspaper article, while the schoolchildren are not actively speaking in two languages, but rather most of them speak Russian as a source of information for watching movies, TV shows, reading newspapers.

Choosing as informants the 1st year students and 11th grade schoolchildren, i.e. generation of 1992 and 1993., we wanted to identify a real possession of a particular language (state Kazakh, Russian and foreign), and language preference of 17–18 years old Kazakhs. For example, conducted survey showed that today all 1st year students and schoolchildren are required to study these languages, the only difference is that

students learn Russian language (if were taught at school in Kazakh), or the Kazakh language (if were taught in Russian), schoolchildren also study them simultaneously.

The situation with the foreign language is as follows:

The main motive of learning English was devoted to identifying the motivation of learning English and the underlying causes of the need for proficiency in English at the modern stage of development of Kazakhstan.

According to the principles of the Likert scale, the informants were asked to some statements about their attitude to the English language, for which they should express their agreement or disagreement (1 – strongly agree, 2 – agree, 3 – rather agree, 4 – rather disagree, 5 – disagree, 6 – strongly disagree). Tests internal homogeneity showed that these issues are the result of high Cronbach's alpha – 0.7, which is a measure of the reliability and validity issues. The obtained data are presented in Table 3: The importance of English for Kazakhstan

	Mean	SD
Knowledge of the English language gives the opportunity to the international community	1,55	0,737
Learning English is beneficial in economic terms	1,58	0,697
English is becoming increasingly popular in Kazakhstan	1,61	0,814
English proficiency is prestigious	1,67	0,824
English proficiency provides getting a good job	1,67	0,691
Every citizen of Kazakhstan should know three languages(Kazakh, Russian, English)	2,25	1,001
English language does not matter to me	5,26	0,737

According to the majority of informants, if the Russian language is necessary for Kazakhstan to integrate and maintain relations in the post-Soviet space, the English language is important for the initiation to the world economy. More than 50 %: the respondents fully support the policy of the trinity of languages, it is not to the detriment of other languages functioning. Informants associated English with their future in economic terms, career development, and with the acquisition of the more prestigious and high-paid jobs.

It's very important for Kazakh universities to cooperate with leaders in education research not only across the country but also around the world. In a competitive market, those education centers specialize in language teaching turn to the most advanced technology training. A unique foreign language education center must be based on perspectives of strict scientific education. Therefore, the importance of this here are scientific and practical communication of specialists, creative exchange of

results of scientific research undoubtedly the development of more effective ways, such as learning and teaching of foreign languages and, in particular, the English language .

Therefore, since the 2012–2013 academic year universities have started to take specific and effective measures to prepare teachers of multilingual staff. Along with this, 20 universities of the country, including national and regional leading, will be opening special sections for preparation of multilingual staff, priority specialties of engineering and science fields.

4 Conclusion

I wish to point out; the students of Zhetysu State University named after I.Zhansugurov also study some special and professional courses in a foreign language. So in the process of learning they implement the principles of continuity and succession of foreign language education, as well as the principle of professionalization, assuming using a foreign language for professional purposes. For example, in “Pedagogy and Psychology” has developed and conducted in English such special subjects as “General psychology”, “Pedagogy”, “Ethno pedagogy”, “Theory and methods of education work”, “Law basics”, “Informatics” etc.

Of course, a successful learning professionally in a foreign language requires more preparation. It concerns both teachers and students. Teachers put all educational-methodical complexes disciplines at university portal, so students are encouraged to pre-acquaint the theses of lectures and the main sources of related subjects. In this case, in the classroom lectures are held in the form of presentations, discussions, problem lectures, video lectures and others that allow students to demonstrate their professional and linguistic competence.

At the heart of achieving this task is tiered, stepped instruction in foreign languages, professional translation and, without fail, the basics of intercultural communication. It is based on a tiered approach to European language education. The unifying document for all of Europe is a single standard, known as the “Common European Framework levels of proficiency in a foreign language.” Kazakhstan concept of foreign language education is also focused on the requirements of the European standard and tiered training.

To summarize we can say that the cultural project “Trinity of languages”, proposed by the President of the Republic of Kazakhstan Nursultan Nazarbayev, fully can be considered as one of the long-term strategies for the development of Kazakhstan. And also serves to integrate into the global system of education to expand educational opportunities abroad and gain new quality training, prepared in accordance with the new international standards, and future citizens who will be the color of the people of Kazakhstan.

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Possibilities for early diagnosis of auditory discrimination in preschool children with impaired communication ability

(scientific paper)

Yveta Odstrčilíková

Abstract: *This paper is a brief insight into research focused on auditory distinction in preschool aged children utilizing words with high and low spoken vowels and consonants, by whispered and loud speech, screening with an orientational hearing test and subsequent comparison with the results of auditory perception of high and low pitched tones using a portable audiological device.*

The issue of examining the weakening of auditory perception as a separate component in the development of children's speech is addressed through multidisciplinary cooperation between the Ministries of Health and Education. The examination of auditory perception in children with impaired communication abilities in Czech and foreign practices is an important part of the initial examination and in counseling centers.

The ability to hear, listen and understand listening is associated with the development of children's speech, and later with thinking, reading and writing. Currently, much attention is devoted to the development of children's language, especially vocabulary, its passive and active form of nonverbal, and verbal levels of speech. Studies by different authors, such as [Průcha, 2011], [Matson, 2005], [Mikulajová, 2003], [Katz, 2007] that point out the problems of listening to understand in preschool aged children, and the ability to capture the main idea of what they hear.

Keywords: *auditory perception; impaired communication abilities; impaired of the auditory perception; phonetic and phonological awareness; auditory distinction; a diagnostic tests; the orientation hearing test; screening of hearing*

1 Auditory perception

The term *auditory perception* is defined in several ways. For instance, Zelinková [2001] states that auditory perception is the ability to receive, interpret, and differentiate between the verbal and nonverbal quality of sounds of speech. Průcha [1995] indicates that auditory perception is the process of receiving and processing stimuli. The psychologist [Vágnerová, 2005] defines auditory perception as the ability of children to hear human speech based on experience.

O'Callaghan [2013] describes auditory perception as the perception of objects of sound — including the surrounding factors such as tone, tone of voice — and the perception of speech, which includes the perception of speech sounds-phonemes, words, or other syntactic categories. Listening comprehension is understood as grasping meaning. Watson and Miller [1993] estimate that auditory perception is dependant on three variables: *short and long term memory, and auditory phoneme segmentation*. Bradley and Bryant [1983]; Lechta [2002]; Mikulajová [2003], and Gillon [2004] estimate that phonological variables also subsequently influence reading and writing.

1.1 Phonetic awareness

Phonetic awareness is the process of distinguishing between phonemes and their ranks, or words. If this ability does not develop in a child, it is identified as impaired phonemic awareness [Lechta, 2005; Klenková et al., 2006]. Clark [2003] in [Průcha, 2011, p. 7] describes languages as complicated systems of sound apparatus, their structural elements and functions, which children have to learn in order to use the language.

Lechta [2005, p. 176] mentions two functions regarding the problem of phonemic awareness:

1. *Phonetic awareness* is a process of distinguishing phonemes and their series (words).
The differentiation of the words is formed by the perception of distinctions between phonemes (*kosa* — *koza*) and phoneme series (*lípa* — *píla*). In this process, if the word is not segmented into the pieces from which it is formed, the child doesn't understand the sound structure of the word. Phonemic awareness forms in early childhood.
2. *Phonemic analysis* is a function, which is formed later in the development of a child's speech, and according to Styczeková [Antušeková, 1989] in [Lechta, 2005], it is estimated that children recognize a word on the basis of differentiated phonemes and on the analysis of the sound structure of words.

Phonemic analysis assumes these mechanisms:

- the determination of the presence or absence of vowels in the word,
- the identification of the first or last syllable of a word,
- the determination of the number of sounds, and their order in a word and in relation to other to the sounds [Lechta, 2005, p. 177].

Byrney and Fieldind-Barnsley, in [Dvořák, 2001], state that:

“Phonemic awareness is the knowledge of phonemic identities, i.e., and the recognition of individual phonemes in spoken words in context.”

Adams [1990], in [Dvořák, 2003, p. 102], proposes five degrees of phonemic awareness with the following capabilities in the areas:

- the ability to hear rhyme and alliteration (determined by children’s rhymes),
- the performance of special operations (comparing and differentiating sounds in words),
- the compilation and decompilation of syllables,
- the performance of phonemic segmentation (for example, counting the phonemes in words)
- the performance of phoneme manipulation tasks (such as adding or omitting phonemes to create words from the parts).

Salomonová states [in Škodová, Jedlička, 2003] a basic and a short overview of the development of the articulation of Czech sounds for children

Table 1: The age range of the development of the articulation of sounds [Salomonová in Škodová, Jedlička et al., 2003].

Age	The development of the articulation of sounds
1–2,5 years	B, P, M, A, O, U, I, E J, D, T, N, L
2,5–3,5 years	AU, OU, V, F, H, CH, K, G
3,5–4,5 years	Č, Š, Ž
4,5–5,5 years	C, S, Z, R, Ř, differentiation: Č, Š, Ž a C, S, Z

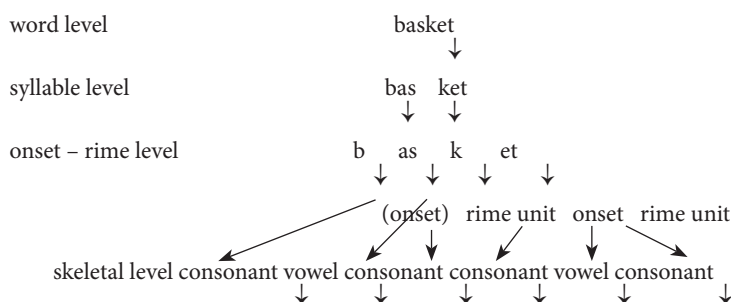
1.2 Phonological awareness

Phonological awareness is the ability to play with the language, the skill to rhyme, isolate the first or last sound in the word, to omit or add part of a word, and the ability to divide words into syllables [Zelinková, 2003, 2008].

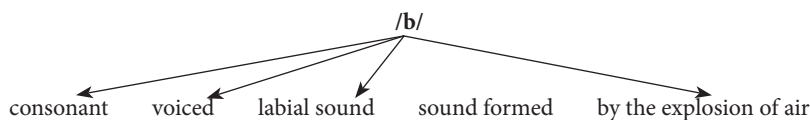
Gillon [2004] states that the term phonologic awareness is associated with the terms “metalinguistic skills, phonological and phonetic processes”, and that they have the following categories:

- syllable awareness,
- onset – rime awareness.

The author [Gillon, 2004, s. 4] illustrates of phonologic awareness on the word “basket” as such:



The segmental level is characteristic of each sound, for instance the sound:



Holopainen, Ahonen, and Lyytinen [2001] estimate that the information of phonologic awareness depends on visual backing if the child encounters it during phonological awareness.

They discuss the supporting role of visually analogous thinking in connection with the ability of phonological discrimination. Both processes have an effect on the ease of learning to read. The authors singled out categories of children who met the two processes in different time spans, and the groups are labeled with acronyms:

- Precocious decoders (PD); the group classified children who could read at school entry,
- Early decoders (ED); the children who learned to read in the first fourth months in school,

- Ordinary decoders (OD); children who have learned to read in nine months,
- Late decoders (LD); include children who have failed to adequately fulfill criteria in reading even after 18 months of reading training.

Lonigan [1998] talks about phonological sensitivity in children from the ages of two to five years. This ability can be strengthened by exercises in this area.

The author Gúthová [2009] refers to Yavas [1998], who divides phonological processes into the following sections:

- The process of changing the structure of syllables and words, weak syllable deletion,
- Epenthesis: the situation when a child does not omit, but adds sounds to words, because of a perceived word assimilates to a known word from her/his vocabulary Dvořák [2003] in [Gúthová, 2009].
- Metathesis: this phonological process is characterized by a change in the place of sounds in a word [Kráľ, Sabol, 1989 in [Gúthová, 2009].
- Inversion: [Kráľ and Sabol, 1998] in [Gúthová, 2009] regarded inversion as the changing of the sounds, which are in contact.
- Coalescence, Reduplication, Consonant Cluster Reduction.
- Substitution processes: Gúthová [2009] includes stopping, fronting, velar fronting, palatal fronting, backing, affricating, deaffricating, liquid gliding, and vocalization.
- Assimilation process: the sound is amended so that it assimilates to other contiguous sound [Kráľ, 2005] in [Gúthová [2009].

From a developmental perspective, these processes can diverge in early development into those which disappear into the third year of life or later, and those which persist even after the third year of life [Gúthová, 2009, p 69].

[Gúthová, 2009, p 26] further indicates that most words gradually arrive at various changes that are affected by phonological processes, and the development of articulation usually ends with their elimination. In development we see the opposite case, when a phonetic (rare, but physiologically) development precedes phonological development. An example of this asynchrony, which Smith labeled [1973] in [Dvořák, 2003] with the term the “puzzle phenomenon”, the children’s pronunciation of the English consonants (s) and (z) as (θ), and sounds like words with (θ) are pronounced with (f) instead the resonance sound (θ) [Gúthová – [2009].

Gúthová [2009] further cites [Marwa, Rash, Mona and Pakinam, 2007], who characterize phonological development as a dynamic process, which works on three levels: universal development, specific development of a specific language and specific development of a particular child.

Crystal [1986], in [Průcha, 2011], found that at one year some children understand about 20 words, others up to 60 words. Children can understand the meanings of words a few months before they say their first words. Speech comprehension precedes the production of speech [Průcha, 2011].

The age limit of phonological distinction of language when the child learns to differentiate between all the sounds of the mother tongue, or the standard age to reach this benchmark, is 6.5 years to 7–8 years at the outer limit, according to [Lechta, 1990]. Other authors shifted this benchmark to 7–8 year of life. They argue that by this time there is the possibility of spontaneous reeducation, and the possibility of self – correction of impaired pronunciation.

1.3 Results of research

Research which has focused on phonetic – phonological language levels can contribute to the analysis of the developmental level of phonetic – phonological awareness, which is one aspect of the development of language skills in preschool aged children.

The following information will familiarize the reader with the surveys and their first results using the orientation hearing tests by loud and whispered speech to measure the auditory differentiation of low and high spoken vowels and consonants in words. During field research, two groups of children were examined. The first group consisted of children with speech impairments, and the second group was made up of intact children. Both groups were children of preschool age (3.0 to 6.0 years) in preschool institutions. To investigate auditory distinction, two tests were used: the orientation hearing test and hearing screening by using a portable audiological device. The research investigations were conducted from November 2011 to March 2012, and a second round continuing from January to the end of June 2014. The following information is an account of the first phase of research results comparing auditory distinction in terms of selected diagnoses among the first group of children with speech impairment.

1.3.1 The orientation hearing test

The battery of words used during testing was based on practical experience, and was created along the design of the orientation hearing test for examination under the auspices of the Special Education Centre. The battery includes 40 words for each ear and contains low and high spoken vowels and consonants words administered by whispered and loud speech. The battery does not omit of the consonants R and Ř – specific sounds in the Czech language – because children do not have these consonants fixed and automated in speech. The aim is to evaluate the status of the

auditory distinction for low and high spoken vowels and consonants in the words by whispered and loud speech in preschool aged children (ages 3.0 to 6.0). The battery is also used as an evaluation key.

1.3.2 The portable audiometer

The portable audiometry device produces a quick and clinically valid audiogram for children over three years old. The child interacts with the device by touching images — a symbol of animals on the screen that starts an acoustic stimulus. This symbol serves as a visual amplifier, and this further strengthens the child's cooperation during the investigation of his or her hearing. If a child hears a sound, she touches a smiling animal, which appears as a symbol on the screen. The test time is short. The test for one ear is, on average, less than two minutes. After a short demonstration, the child continues to self-implement the test, while feedback is controlled by the device. After selecting the last of the animal symbols, the device immediately determines the measurements and generates an audiogram. The advantage here is that the hearing examination is not dependent on the level of communication skills of the child [Odstrčilíková, 2011].

1.3.3 The MAGIC Test

The method of the *MAGIC test* ("The Multiple-Choice Auditory Graphical Interactive Check") has an easy approach.

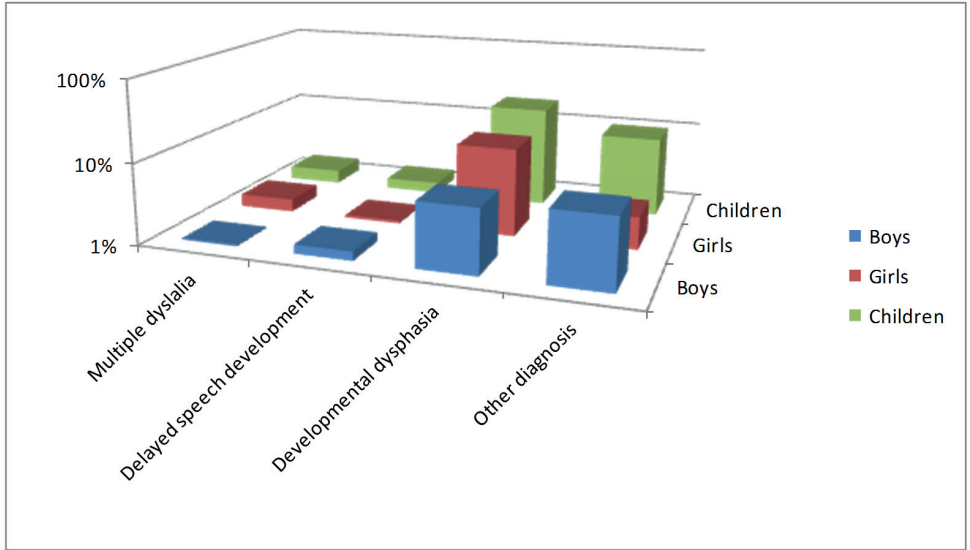
The goal of screening and testing for the auditory distinction of high and low pitched tones in preschool aged children is the possibility to detect hearing loss in preschool aged children (aged three to six years old), to enable the identification of children who may have minor hearing loss which could influence their communication, speech development and, subsequently, auditory perception at a school. This portable audiological device was selected for comparison with the orientation hearing test. The results of the hearing screening will also be the subject of statistical evaluation of the research results.

1.4 Auditory distinction in terms of selected diagnoses

Preschool age children with speech impairments are referred to speech therapy classes in nursery schools based on the recommendations of the Special Education Centre (SPC), which base their recommendations on expert reports about the child. All documents are saved in the SPC regarding this particular field. In the first stage of research, an orientation hearing test was conducted. In total 216 children were

examined, of whom 132 were diagnosed with dyslalia multiplex, 45 children had a diagnosis of delayed speech development, 22 subjects were diagnosed with developmental dysphasia and the remaining 17 composed a group of “other diagnosis”. Subsequently, these children were examined with the hearing screening – portable audiological device with a test of the Magic – on the auditory distinctions of high and low pitched tones, and then the results were compared.

On the basis of the results, as measured by the orientation hearing test, the results are evaluated in the following graphs:



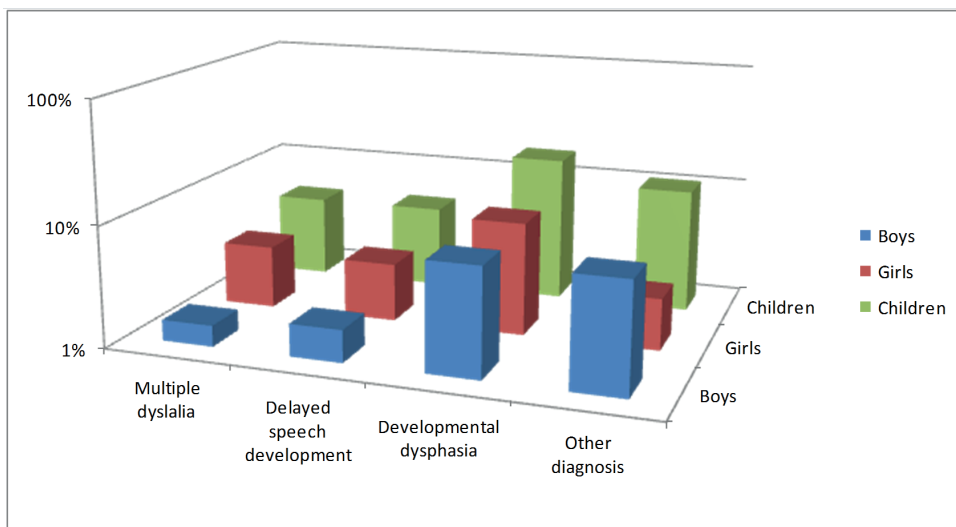
Graph 1: Comparison of diagnosis – HSVC/Vm

Table 2: Resultates: Comparison of diagnosis – HSVC/Vm

HSCV/Vm	Boys	Girls	Children
Multiple dyslalia	1,04 %	1,44 %	1,48 %
Delayed speech development	1,29 %	1,07 %	1,36 %
Developmental dysphasia	6,16 %	12,14 %	18,3 %
Other diagnosis	7,22 %	2,5 %	9,72 %

Auditory distinction between the groups depends on the diagnosis of words with HSVC/Vm, which achieves the following results:

The predominant diagnostic group is held in the first position by a group of girls with **Developmental dysphasia** (12, 14 %), meaning that the children had more mistakes in this area. That group is followed a group of boys with **Other diagnosis** (7, 22 %). Children with **Delayed speech development** and **Multiple dyslalia** had relatively good results.



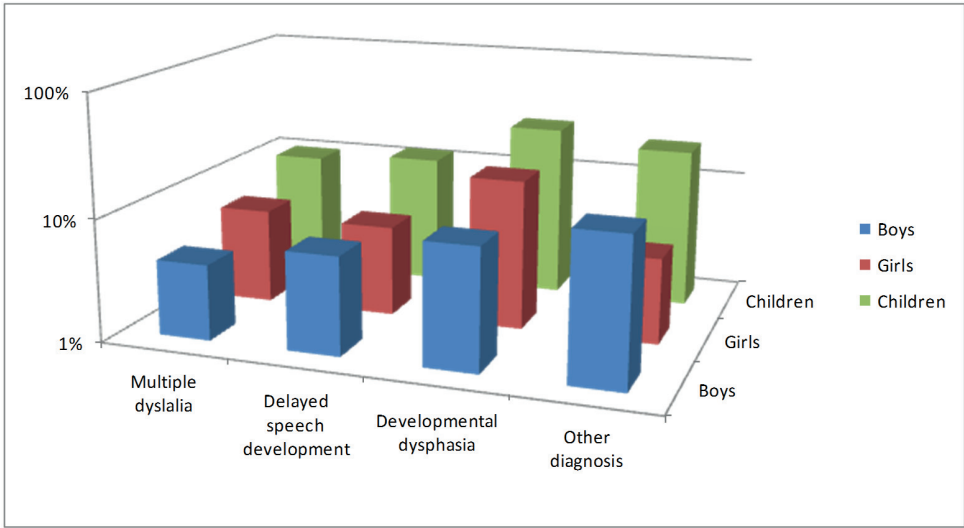
Graph 2: Comparison of diagnosis – LSCV/Vm

Table 3: Resultates: Comparison of diagnosis – LSCV/Vm

LSCV/Vm	Boys	Girls	Children
Multiple dyslalia	1,49 %	3,33 %	4,82 %
Delayed speech development	1,85 %	3,03 %	4,88 %
Developmental dysphasia	7,83 %	8,57 %	16,4 %
Other diagnosis	8,05 %	2,66 %	10,71 %

Auditory distinction among the groups depended on the diagnosis in the area of the words with LSVC/Vm achieves the following results:

The first position is again held by a group of girls with **Developmental dysphasia** (8, 57 %) – meaning that the children had more mistakes in this area. That group is followed a group of boys with **Other diagnosis** (8, 05%). Children with **Delayed speech development** and **Multiple dyslalia** had relatively good results.



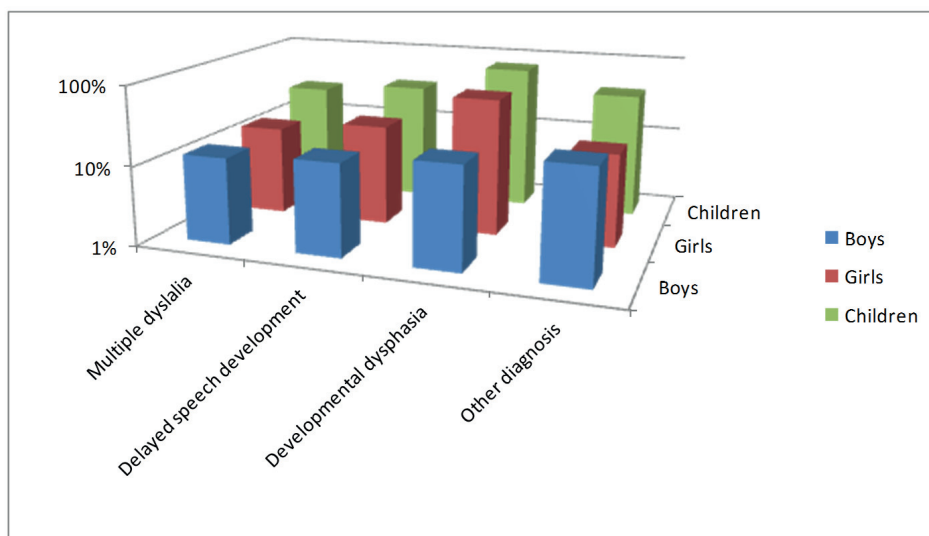
Graph 3: Comparison of diagnosis – HSCV/Vs

Table 4: Resultates: Comparison of diagnosis – HSCV/Vs

HSCV/Vs	Boys	Girls	Children
Multiple dyslalia	4,17 %	6,06 %	10,23 %
Delayed speech development	6,37 %	5,53 %	11,9 %
Developmental dysphasia	9,83 %	16,79 %	26,62 %
Other diagnosis	15,55 %	5,0 %	20,55 %

Auditory distinction between groups depends on diagnosis in the area of the words with HSVc/Vs achieves the following results:

The first position is still held by a group of girls with **Developmental dysphasia** (16, 79 %) — meaning that the children had more mistakes in this area. That group is followed a group of boys with **Other diagnosis** (15, 55 %). Children with **Delayed speech development** and **Multiple dyslalia** had better results.



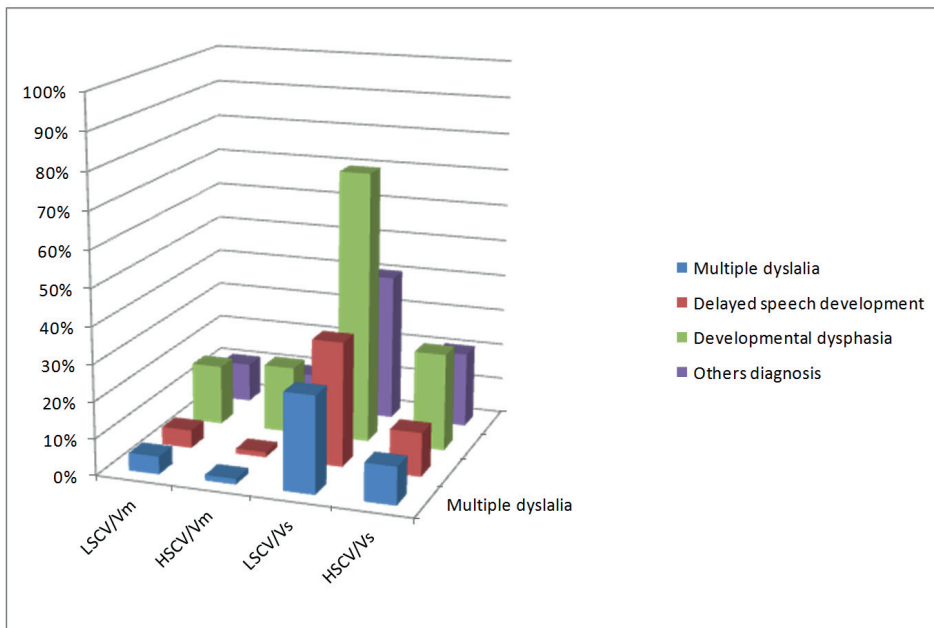
Graph 4: Comparison of diagnosis – LSCV/Vs

Table 5: Resultates: Comparison of diagnosis – LSCV/Vs

LSCV/Vs	Boys	Girls	Children
Multiple dyslalia	12,5 %	13,79 %	26,29 %
Delayed speech development	14,76 %	19,11 %	33,87 %
Developmental dysphasia	19,33 %	54,64 %	73,97 %
Other diagnosis	25,28 %	15 %	40,28 %

Auditory distinction between groups depends on diagnosis in the area of the words with LSCV/Vs achieves the following results:

The first position is occupied by a group of girls with **Developmental dysphasia** (54, 64 %) – meaning that the children had more mistakes in this area. That group is followed a group of boys with **Other diagnosis** (25, 28 %). Children with **Delayed speech development** and **Multiple dyslalia** had better results also in this area.



Graph 5: Comparison LSCV and HSCV in the words by whispered and loud speech by children depending on the selected diagnoses

Table 6: Resultates: Comparison LSCV and HSCV in the words by whispered and loud speech by children depending on the selected diagnoses

	Multiple dyslalia	Delayed speech development	Developmental dysphasia	Other diagnosis
LSCV/Vm	4,82 %	4,88 %	16,40 %	10,71 %
HSCV/Vm	1,48 %	1,36 %	18,30 %	9,72 %
LSCV/Vs	26,29 %	33,87 %	73,97 %	40,28 %
HSCV/Vs	10,23 %	11,90 %	26,62 %	20,55 %

Of all the children tested for the aforementioned diagnoses, the most problematic was the auditory distinction of words with low spoken vowels and consonants by whispered speech (**LSCV/Vs**), followed by words with high spoken vowels and consonants by whispered speech (**HSCV/Vs**). The areas of the words with low and high spoken vowels and consonants by loud speech (**LSCV/Vm**, **HSCV/Vm**) demonstrated significantly better results.

In an analysis of the criteria of negative responses, errors in the auditory distinction of preschool aged children with impaired communicative ability are the main indicator of work and research. The preliminary results, which served as the basis of the above information and charts, reflect the most frequently occurring errors, mistakes in the auditory distinction between low and high sounds in words — the orientation hearing test of words with low and high spoken vowels and consonants by loud and whispered speech was evaluated according to the following criteria:

- 1) When children did not hear the word at all:
 - For reasons indistinguishable speech codes,
 - Due to poor concentration,
 - Due to the weakening of auditory discrimination in the low and high spoken vowels and consonants by whispering and loud speech.
- 2) Children auditory pattern switched to a different or similar sounding (for example pattern: **vem** – ven – fén, pattern: **mistička** – písnička – hvězdička, etc):
 - Along this criterion the issue of phonological density (the density of phonological area) can be considered [Goswami, 2010], which is determined by the number of words in a given language reminiscent of another word (or rhyming with another word).
- 3) The child repeated the word incorrectly or incompletely, or used the phoneme, the syllable in the word:
 - This can be considered on the level of phonetic – phonological awareness of every individual in the selected target research group, as the phonological structure of words in a particular language influences the development of technical awareness, and syllabic structure affects the construction of syllables in a particular language. Syllabic structure means the plurality of sound elements that shape in the each language a syllable [Volín, 2010; Seidlová – Malková, 2012].

Conclusion

The goal of screening for hearing loss in preschoolers (ages three to six) is to identify children who suffer possible hearing loss which may affect communication, development, health or future school performance [1].

Recent epidemiological studies confirm a significant increase of hearing impairment in school-aged children. Late identification may compound problems in communication, language acquisition and affect other areas of development. Contrary to newborn hearing screening, preschool hearing screening tests should provide more frequency-specific and quantitative information about the hearing loss.

The specification of the conclusions from this research can be helpful and beneficial for the practice of special education in the field of auditory distinction of high and low spoken vowels and consonants in words. Testing with both of the examinations — the orientation hearing test and then using auditory screening test, via the portable audiological device — also contributed to the detection of five children with significant hearing problems.

Auditory perception is the ability to perceive and understand sounds. Phonetic and phonological awareness are an important part of the process of speech development. The proper development of these processes is becoming a cornerstone for the successful development of the child in the areas of reading and writing in school.

Research focused on the phonetic and phonological awareness in every language in children of various age groups is necessary and an important part of pedagogical practice.

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Possibilities of using museum educational environment for creating projects for pupils with mild mental disabilities

(overview essay)

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Annotation: *The paper focuses in theoretical level on the museum environment that can be used for education of students with mild mental disabilities. Ethnographic Museum in Olomouc is a place that can be used in the context of education for project teaching. We will present a draft of a specific project, which can be used by teachers in primary and special schools.*

Keywords: *museum, education, pupil with special educational needs, mild mental retardation, Regional Museum in Olomouc, project based learning, special school, project*

1 Introduction

Strategic documents, in which the state guarantees the care of basic education, ie. Framework educational programs (FEP) incurred in connection with the National Education Development Programme called White Paper (2001), along with school curricula. They allow teachers more flexibly meet the specific needs of students, encourage their creative and independent thinking, lead them to active and creative activities. This arises the space for the selection of appropriate teaching methods, forms and teaching strategies to promote and develop skills above, in order to achieve the target competencies as well as respect and take into account the individual characteristics and needs of individual pupils. *In the education of pupils with mild mental disabilities it is possible and desirable to fulfill the same objectives, which are listed in the FEP, but under the conditions of application of approaches, methods and forms corresponding with specificities and personal development of pupils. Necessary for education is to create optimal conditions that require particularly friendly atmosphere*

and work climate to pupils love school attendance, not fear any failures and within its capabilities, to achieve universal primary education. (FEP – LMP, 2005, p. 9)

Modern education should be motivating and effective. It should be built on the reality of modern life, to create conditions for the individual development of each pupil and independent, creative and critical thinking. These criteria correspond to the principles of project-based learning, which become part of innovative efforts not only in the Czech education system, but also in foreign education.

2 Project teaching

The project teaching is discussed in the White Paper (2001) in connection with the development of interdisciplinary relations, teaching in integrated units, new forms of teaching to facilitate internal differentiation and strengthen individualisation in education.

Potměšil (2007, p. 92) considers the project teaching in the long term for a specific kind of transition phase in the learning process when this transition occurs in formally and methodically clearly defined ambience of a traditional teaching in the classroom, into an environment similar to real life situations that occur outside the school building. This aspect reflects the possibility of realization of these projects in the area of the museum. Project indicates activity focused on solving one or more problems or problem areas. *“To fulfill this task, you need to find a lot of new information, process and use existing knowledge from different disciplines, establish cooperation with experts, be able to organize their work in time and space, find a different solution in the event of an error, formulate their own opinion, discuss, collaborate etc. So instead of borrowing ready findings from other fields (often in addition without a deeper understanding of the meaning and purpose), pupils discover these findings in the project teaching by themselves, and because of the need.”* (Kašová 1995, p. 73). If there is an activity at school as a project, it can be assessed at the moment when it is quite clear what is the access of pupil to this activity. If they assume the responsibility for it, it is their own project. The pupil is one who seeks to achieve defined goals. (Cisar et al., 1938)

Project instruction respects individual characteristics and needs of students, especially in the way which mediates new knowledge. These findings are presented to the students not as complete facts, but as problematic tasks / issues that foster creative thinking, logical reasoning and the subsequent searching for a solution. The students with teacher's help solve a complex task (a project), which is partly or entirely of practical needs. It is expected that the task will be for students interesting that its solutions take as a personal problem. (Kalhous, Obst, 2001, p. 121).

Projects intended for the target group of students with disabilities should be focused on one clearly formulated problem which is specified, for example, by the correct formulation of the question. The content should relate to specific topics from everyday life situations in which the student is well oriented. This process develops thinking associated with concrete reality. Projects integrate knowledge from all areas of everyday life. When solving individual problems or difficult situations, for example in the context of group cooperation, it leads to the fulfillment of predetermined educational goals.

3 Educational environment OF museum

The term education is used in general pedagogy and didactics as synonymous with the term “learning”. (Průcha, Waltrova, Mares, 2003, p. 53). Thoughts are mainly related to the school environment, where there is a directed learning. Education may act on an individual outside the school, eg. in a museum environment.

Code of Ethics for Museums ICOM (2006, p. 17) defines a museum as follows: *We are a non-profit permanent institution in the service of society and its development, open to the public, which acquire, preserve, communicates and exhibits the tangible and intangible evidence of people and their environment in order to study, education, training and pleasure.* Increasingly, these institutions among the activities that they grab, classify an educational area too. The museum’s education is a means not only of perception but also of an understanding of phenomena, relationships and regularities in the world today. World history is linked with the world of the future.

The museum has a strong potential in the field of education. These programs allow you to work with all age groups of pupils, regardless of the type of educational institution attended. Educators mainly use them in the field of motivation. Through these factors, increasing interest for new and innovative things is achieved. The aim is to develop natural curiosity and effort to teach students perceive things and phenomena comprehensively. This non-violent manner deepens the value orientation. Museum environment takes into account the individual needs of students and a teaching situation, which take into account individual learning opportunities and demands of students with mild mental disabilities.

In the process of education, the museum becomes an active entity that creates or helps to create so-called animation programs. They develop educational programs that complement school education, enrich, and if they are prepared to sufficient professional level, become an inspiration to teachers themselves. The museum is hereby made available to schools and becomes an educational environment that opens up mutual cooperation between museums as cultural institutions and schools. If the mentioned institution does not have educational programs for schools or un-

cooperate with special educators, the teacher himself can create a project that will come out or follow collections, exhibitions or permanent exhibitions in this particular museum.

Education of students in the museum environment can be in three basic levels. For greater clarity these models in Figures 1, 2 and 3 are shown.

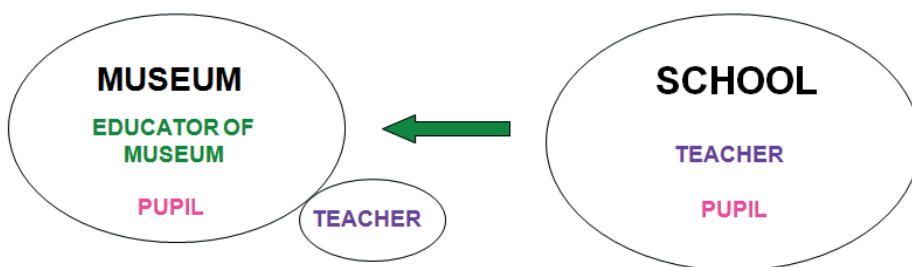


Figure 1: Transmission of education in museum environment (without the intervention of a teacher)

The illustration above shows that, the educational process takes place at the level of teacher – pupil and a museum. Here is the role of teachers taken by a museum educator. The teacher remains as an impartial observer outside of this activity (Figure 1).

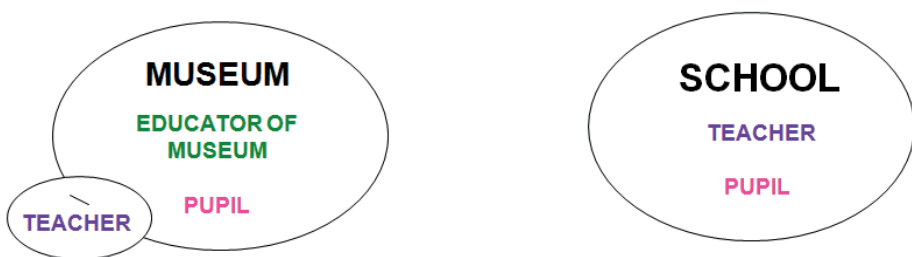


Figure 2: Transmission of education to a museum (with partial intervention of a teacher)

The second option is a situation where the educational activity mainly deals with a museum educator, the teacher remains outside it. They intervene only at disciplinary or other offenses, ensures compliance with rules etc. Into an educational activity they enter only minimally. Their activity is higher, although it is only limited to directing discipline.



Figure 3: Transfer of education in a museum (cooperation with the teacher)

The third option is the museum educator collaboration with the teacher of a relevant certificated subject. The teacher actively participates in the creation of an educational program, is working with museum educator at the creation of jobs or methodological papers.

Special educators play an important role in the potential that museums offer alongside with museum educators. For students with mild intellectual disabilities this presence is an essential part of the museum educator training. Only special education teacher can recognize the specifics of education for pupils with learning difficulties and is able to design and create measures that arise from current health condition or diagnosis of a pupil. Along with the museum educator they can customize the learning process implemented in the museum to the psychological level (clarity, concreteness, logic, plenty of external stimuli, repetition) and physical development of the pupil (wheelchair access, plenty of space for activities etc.).

For the fulfillment of these conditions, the museum environment actually offers educational facilities for all pupils, including those integrated. The museum becomes a single integration space that connects students, teachers, lecturers, museum educators, special educators, professionals and general public.

Šobán (2007, p. 33) speaks of the existence of the animation for so-called “a special visitor”, who refers to persons with mental retardation or physical disabilities. “*We do not have to prepare for them the special program, sometimes it is enough just to adapt existing animation. I approve a consultation with a special teacher or a group leader, by which I determine whether the program participants manage different tasks and how the form of an entire animation would be intelligible to them.*”

3.1 Ethnographic Museum in Olomouc

Ethnographic Museum in Olomouc is one of the museums, which can be used for creating its own projects. It currently offers already created educational programs for schools. It manages exposure, exhibits objects and collections mainly from the natural and social sciences.

Permanent exhibits relate to the following areas: Nature of Olomouc Region, Olomouc – Fifteen century city, Endangered Plant Species, The story stone, The Gallery of Celebrities in Olomouc Region, Olomouc University).

These exposures can be assigned to the individual educational areas FEP LMP (2007, p. 14) and use them as suggestions for creation of projects.

Table 1: Exposure and their connection with the FEP LMP (2007)

PERMANENT EXHIBITION	EDUCATION AREA
Nature Olomouc Region	Man and Nature
Olomouc – Fifteen Century City	People and society Arts and Culture Language and Communication
Endangered Plant Species	Man and Nature
The story stone	Man and Nature
The Gallery of Celebrities in Olomouc Region	People and society Arts and Culture Language and Communication
Palacky University in Olomouc	People and society Arts and Culture Language and Communication

4 Forms of integration of pupils with mild mental retardation

Mild mental retardation: IQ is between 50–69 (in adult mental age equivalent to a 9–12 year old). This leads to difficulties in school learning. But many adults are able to operate successfully and maintain social relationships (Vítková, 2003, p. 135).

Possible forms of special education of students with disabilities are defined § 3 of the Decree 73/2005 Coll. about the education of children, pupils and students with special educational needs and children, pupils and students extraordinarily talented (amended by Decree no. 147/2011 Coll.). This is a form of *individual integration* in

elementary school classrooms or schools for pupils with a disability according to their individual education plan. Furthermore, it is a form of *group integration* in the classroom, department or study group established for students with disabilities in regular or special school, and subsequently for pupils with different kinds of disabilities in elementary school for pupils with disabilities.

There is no public effort to address the integration as a process that in our school began to assert in the first half of the nineties. There is only the fact that the sub-element integration of pupils with mild mental disabilities into regular educational activities may be their full involvement in the project work and animation programs implemented in the museum environment, so called Museum Education.

5 Project “Nature at the museum”

One of the newly created projects is the project with the working title “Nature in the museum.” The content refers to the permanent exhibition of the Regional Museum in Olomouc titled: *Nature of Olomouc Region*. Thematically, it ranks according to the FEP LMP (2007) to the educational area *Man and Nature* (educational field: natural history) and *Man and his World* (topic: diversity of nature).

Target group: pupils with LMP (age between 12–13 years)

Timing of the project: a total of 4 lessons: 1 hour (preparatory phase in the classroom, handing out of worksheets), 2 hours of fieldwork (visit the Natural History Museum in Olomouc), 1 hour at school (evaluation)

Place of project implementation: school (class), Regional Museum in Olomouc

Material: Project Worksheets

Project objective: Introduction of the museum as an institution that presents the natural wealth of the Olomouc region. The project will develop communicative, social and personal competencies.

Progress of the project:

Preparation of the project (organizational and technical support for museums, preparing theoretical basis for content issues of the project, preparing a worksheet for students, preparing methodology with sub-steps)

Implementation of the project

1st lesson: *introduction to the issues of the project, its theme, inducing motivation*

2nd lesson: *fieldwork: visit to the Natural History Museum in Olomouc* Students will receive worksheets and record information they look for in the museum into them. There is even an opportunity to get themed pictures. Found answers to questions are

recorded in the worksheets. These sheets are a set of questions for which students look for answers.

Example of a partial task:

An error has occurred in the printer. Only parts of photos are printed. Determine which animals are in the pictures? You find the answer on the trunk covered with bird feathers.



3. lesson: group work at school

Students work with worksheets.

4. lesson: evaluation

In terms of internal and external evaluation of students together discuss the project and define possible solutions for further work.

Conclusion and recommendations

Preparing own projects using the museum, its collections and exhibitions and actual participation in the animation programs of a specific museum is a time-consuming process. The practice shows that it is possible to apply here an inclusive approach to pupils with disabilities. Education of children with any type of disability, not only with mild intellectual disabilities should take place in socialization outside the designated educational institution, eg. in a museum environment.

We recommend intensifying cooperation between museums as institutions with the educational potential and subjects which educate students with any disability.

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Music therapy in China

(overview essay)

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Abstract: *This paper proposes to state the research and clinical practice of music therapy in China in the last decade. Two kinds of particular Chinese music therapy methods, five-element and five-note music therapy and music elector-therapy, will be introduced, and the current research situation will also be discussed in this paper.*

Keyword: *music therapy; China; research; clinical practice*

1 Introduction

Music therapy has started to develop as an independent discipline in China since 1989, although the idea of music therapy existed in ancient China before more than 2,000 years. CMTA (Chinese Music Therapy Association) has around 600 individual members and 150 collective members, and holds an academic conference every two years. During these 25 years, there are a large number of achievements which have been made by researchers and clinical practitioners. The topics, which were mainly focused on the history and theories of music therapy, have been shifted to practical and clinical areas.

2 Traditional Chinese music therapy method

2.1 Five-element and five-note therapeutic method

In ancient times, Chinese people had profound knowledge of the relationship among music, emotion and viscera, which is known as the theory of the five notes, five elements and five internal organs. The five notes are Gong (do), Shang (re), Jiao (mi), Zhi (sol), and Yu (la) of the pentatonic mode. The universe consists of five elements which are gold, wood, water, fire and soil in Chinese ancient philosophy theory. In the earliest Chinese medical book *Huangdi Neijing*, the relationship among of the five elements, the five notes and five kind of viscera was described as “the nature of Jiao (mi) is wood which was related to the liver, the nature of Zhi (sol) is fire which was related to the heart, the nature of Gong (do) is soil which was related to the spleen, the nature of Yu (la) is water which was related to the kidney”. These theories which contain the relationship among music, physiology and pathology constituted the basis of Chinese music therapy method.

2.2 Musical Electro-therapy

Musical electro-therapy is a kind of Chinese original music therapy method which combines music, electro-therapy, acupuncture and moxibustion. Its principle is to convert the music signal into electrical signal acting on the body to enhance the treatment effect. This method is widely used in the treatment of muscle torsion injuries, facial paralysis, sciatica, neurasthenia and other diseases (Ma etc., 2006).

3 Clinical research

In ancient Chinese books, there are a few successful clinical practices recorded. In the last 20 years, clinical research of the five-element and five-note therapeutic method and musical electro-therapy mainly includes: Xiang verified that the combination of five elements and five notes therapeutic method and musical electro-therapy has good effect on patients with malignant tumor depression (Xiang etc., 2006). In Zhang's case, the effect of dialectical therapy combined with the five-element music therapy and electro-therapy on acupuncture point was significant for patients with type II diabetes mellitus (Zhang, 2006). Through observation of the variation of the electric current value, Zhou found the listening of the music of Gong mode and Yu mode effectively slow down the stress (Zhou, 2001). In his 10 years of clinical trials and research, Yang found that the application of five-element musical therapy can significantly alleviate the depression and clinical symptoms in patients with malignant tumor (Yang, 2008).

3.1 Chinese Practical study with western music therapy method

Clinical Research of Physiology and Psychology

In China, western music therapy methods were mainly applied to healing, health care and pressure reduction.

Chen compared the effects of music and subliminal information on 207 termers' anxiety, depression, and cognition, and concludes that "music effectively reduces the anxiety of termers" (Chen, 2010). Xie and others' study was on the autonomic nerve physiology reaction under the influence of different music. This research provides the scientific basis of the therapeutic functions of music (Xie, 2009). Lu confirmed the application of music therapy in the stressful environment of ICU can alleviate the excessive tension of sympathetic nerve, calm down mood and feelings, relieve the stress response, as well as reduce and prevent the ICU syndrome. She also suggests that compared with short-term intervention, long-term intervention of music therapy has more significant effect (Lu, 2008).

It was found that with the increased time of listening to music, the level of relaxation of patients was increased (Wang, etc., 2002). In addition, there are others clinical studies about applying music therapy to treat negative emotions such as depression, anxiety, and nervousness that emerge during patients' treatment process (Huang, Chen, Deng, 2008).

For pregnant women, Fan confirmed that music played a role in reducing maternal anxiety (Fan, 2007). Basically same with the result of Zhou's research, it's evident that moderate anxiety of pregnant women would decline after music therapy (Zhou, etc., 2008).

Music therapy for children with special needs

Jin and others constructed the visible music therapy system for children with special needs. The theoretical basis of the system, material treatment, site settings, treatment process, principles and effect are discussed in their study. They conclude through the application of their system that the visible music therapy is an important method of mental and behavior intervention for special children, which is of theoretical significance as well as practical value for the rehabilitation of special children (Jin, 2008).

For children with intellectual disabilities, Ning did a study which confirmed that Orff music therapy could improve the work memory and attention of children with Down's syndrome, and the improvement is possibly due to the reasonable design of Orff music activities (Ning, 2010). The result of Zhang's study stated that music therapy is an effective method to improve the intellectual level and social adaptability of children with intellectual disabilities (Zhang, 2004). Yao concluded that therapeutic music experience could be organized to help children with intellectual disabilities increase correct behavior, concentrate, follow instructions and keep eye contact.

She also mentioned that music activity could help the development of motor skills, learning ability, as well as language capabilities (Yao, 2007).

For children with autism, Chen discussed the effect of intervention of music therapy for them. In her study, 30 children with autism were randomly divided into experiment group and control group. Both groups received comprehensive treatment combined with medicine and education. Experiment group received music therapy. Both groups received ABC and PEP assessment before and after therapy. Compared with the scores of control group, the scores of experiment group was significantly different in emotion and behavior, especially extremely different in emotion. But the difference between two groups in feeling response and inter action was not significant. Among comprehensive intervention on children with autism, the clinical effect of music therapy for emotion and behavior improvement is significant (Chen, 2010).

Zhang suggested that the re-creative experience should be the core in music therapy for children with autism (Zhang, 2006). In Shi's study on five children with autism with recreation music therapy method, after 18 times of individual therapy and 18 times of group therapy, the experimental results show that the subjects' perception, communication, language and motor ability were improved significantly (Shi & Huang, 2011).

In Chen's study, he used clinical improvisation technology as target, referring to existing English documentation, and worked out the concept, theory basis, technical key point, and evaluation method of clinical improvisation technology. Based on the video of real Nordoff-Robbins music therapy, he analyzed and explained the usage of clinical improvisation. In addition to 3-year clinical therapy practice, he stated the clinical improvisation technology further, and raised some questions and corresponding solutions (Chen, 2008).

4 Prospects

Until today, quantitative research is dominant compared with qualitative research. In the future research, it is very important to reveal special phenomenon and find solutions through new points of view. The methodology should be diverse with the approach of combining quantity and quality research (Du, 2011). The theoretical and clinical research, as well as the research and practice of the five-element music therapy method, still need to be improved (Ma, 2010; Du, 2011).

On the other hand, it was stated the lack of professionals was a crucial problem impeding the development of music therapy in China. In-service clinicians and educators still need to improve their professional skills (Ma, 2010).

In addition, the resources of music therapy for children with special needs are still very limited and lack influential theoretical outcome. The quantitative and qualita-

tive studies are staying at low level. It was realized and suggested that music therapy should be applied to the rehabilitation of children with special needs in the future.

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Partial cognitive functions affecting reading method of pupils with mild intellectual disabilities

(scientific paper)

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Abstract: *This paper deals with the analysis of reading method (syllables reading and fluent reading) and the level of partial cognitive functions of pupils with mild intellectual disabilities educated in terms of school integration in elementary school. To identify pupils' performance in reading competence (reading method) we used pedagogical diagnostics of reading of younger students as a research tool (Čižmarovič, Kalná 1991). For detecting the level of partial cognitive functions we applied a research tool called T-254 deficits of partial functions (Sindelarová, adapted Černý 2008). Moreover, 46 four-grade students (20 girls, 26 boys) aged 10–12 years attending the elementary school in the Prešov region, were involved in testing. Monitored dependent variables were: partial cognitive functions and independent variables included: methods of reading – reading syllables, fluent reading. Through the analysis of the collected data, we found out that pupils, who read syllables, made significantly more mistakes in individual cognitive functions – auditory classification, auditory differentiation, auditory memory, visual classification, two-dimensional spatial orientation, visual and auditory perception of chronology and time, according to statistics. As noted above, one can assume that targeted stimulation of a reading method requires developing purposely the introduced areas of partial functions in the cognitive processes in the educational process.*

Keywords: *pupil with a mild intellectual disability, reading method, partial cognitive function, school integration, primary education*

1 Introductions

The intention of the study arises from the current problem, which is the centre of discussion of experts at various scientific conferences and seminars. It is the issue of a full-valued and functional school integration of pupils with mild intellectual disabilities in elementary schools. We focus our attention on the issue of a reading competence development – a way of reading (reading method) and partial cognitive functions, which is a part of the teaching subject Slovak language and literature in elementary schools (ISCED 1, 2009).

It is essential in this discourse that in the process of school integration a teacher should develop a key reading competence of the pupils with mild intellectual disabilities in school integration. It must be the most targeted and also considering the pupils' current state of cognitive-developmental processes. This is important for a teacher to be able to assume their strengths in education on which he/she can build (he/she should know the rules of the pupil's mental development; interdependencies and correlation relationships between cognition functions; and should respect the individual pace of the pupil's development).

A teacher cannot expect that the development of cognitive functions will be equal for each pupil, or more precisely, that all partial cognitive functions will be equally developed. They predetermine the level of pupils' educational skills, i.e. the reading skill (Blachman, 1991; Siegel 2003; Lebeer 2006; Sindelarová 2007; Hlebová 2009; Pokorná 2010; Zezulková 2011; Doidge 2012; Liptáková 2012; Krejčová 2013; Žovinec 2014) to a great extent.

Therefore, our aim is to analyse the relationship between detected level of reading competence – a way of reading and a level of partial cognitive functions of pupils with mild intellectual disabilities, what is also a partial aim of a project APVV-0851-12 called *Personal and social factors of school success of pupils with special educational needs in terms of inclusion* (OSFA).

2 Theoretical background

The end of the 20th and the beginning of the 21st Century brings a multidisciplinary approach to special education which results in the discourse of an inclusive approach to persons with special educational needs. Worldwide, professionals profile a new discipline called inclusive education, they innovate international disease classification systems (ICD-10 2013, DSM-V 2013) and accept new commitments, but mainly, they try to implement these new approaches into practice. These efforts have even appeared in our environment. In the context of international documents (particularly the Convention on the Rights of Persons with Disabilities, article 24, published in Coll. No. 317/2010, member of the European Agency for Special Needs and Inclusive

Education since 2012) Slovakia committed to meet the model of a fully or partially integrated and inclusive education of persons with less severe degrees of disabilities. This idea was also conceived in the document called the National Program for the Development of living conditions of persons with disabilities for the period 2014–2020 (2014). It suggests that the commitment of creating inclusive terms also applies to pupils with mild intellectual disabilities, who are in the centre of our attention.

Currently, the Institute of Information and Prognoses of Education in Slovakia records (to date 19 September 2013) 1,139 pupils with mild intellectual disabilities educated in the Prešov Region in the 4th grade in primary schools and special schools, while only 13.6 % of pupils (155 pupils) are educated in the form of school integration, 32.3 % of pupils (368 pupils) are educated in special classes in primary schools and up to 54.1 % of pupils (616 pupils) continue to be educated in special schools. It can be deduced from the above that the current situation is far different from the state that we pledged as a Member State of the European Union. From the information above it can be concluded that a current state of education of pupils with mild intellectual disabilities in the mainstream of education has the character of the school integration with the aim of a gradual transition to the models of inclusion.

The act No. 245/2008 Coll. on Upbringing and Education (Act on Education) (p. 1915), however, defines only the term of school integration as “the education of children and pupils with special educational needs in the classrooms of schools and school facilities for children or pupils without special educational needs.” Tekelová (2012) states that this concept was legislatively embedded in the mainstream of school and learning settings with the rights and obligations of participants by the act No. 29/1984 Coll. on the system of primary and secondary education (Act on Education) as amended by Act No. 365/2004 Coll. in 2004. Lechta (2010) adds that the integration, in the right sense, should be understood as an individual integration of a pupil into the regular classroom in elementary school. It usually takes place in the form of integration of a pupil with a disability in a regular classroom in the elementary school, closest to his/her home address and it is essential to provide professional educational support for these pupils (and their parents).

According to § 94 Chapter 2 of Act No. 245/2008 Coll., on Upbringing and Education (Act on Education), it is necessary to adapt content and form of education in teaching subjects, in which pupils with mild intellectual disabilities are educated by educational program for pupils with intellectual disabilities ISCED 1 – primary education (2009) and the resulting **Educational program for students with mild degree of mental disabilities ISCED 1 – primary education (2009)**, following an **A version for pupils with mild intellectual disabilities**.

This educational program (2009) considers the teaching subject Slovak language and literature as a crucial subject in the educational process for pupils with mild intel-

lectual disabilities. The importance of the teaching subject is emphasised in legislative documents, in which it is considered as a basis for entire upbringing and education.

Mastering educational tasks of the teaching subject is a prerequisite for fulfilling tasks of other teaching subjects, and for developing the (large) majority of core competencies, such as Social Communication; Information and Communication Technology (ICT) Competencies; Learning to Learn; Problem-solving Competency; Perception and Understanding of the Culture as well as Communication Tools for Understanding Cultural Differences, as stated by Pavlis (In: Vančová et al. 2010). One of the teaching goals of the teaching subject Slovak language and literature is “to form a habit of reading aloud correctly for all pupils, to teach them to understand the reading text and to educate as many readers and listeners as possible with a positive attitude to literature” (Educational program for pupils with mild intellectual disabilities ISCED 1 – primary education 2009:19). It is the skill to read that becomes a prerequisite for learning in other subjects.

International research studies organized by PIRLS (The Progress in International Reading Literacy Study) and PISA (Programme for International Student Assessment) work with a term **reading literacy**, which they rank among the main components of **functional literacy**. For a research study of PIRLS is **reading literacy** defined as “understanding, using and reflecting on written texts, in order to achieve individual’s goals, to develop individual’s knowledge and potential on the purpose of an active participation in society” (In: Metelková Svobodová, Švrčková 2010:8). The PISA research describes reading literacy as the ability to process information in the text and to use the gathered data for solving a practical problem (Kašiarová 2011).

Jarmarová (In: Valenta, Michalík, Lečbych et al. 2012:295) defines the concept of reading competence as «a gradual acquisition of letters, syllables, words and sentences leading to the development of reading skills, perception of the content of a reading text, its reproduction and reading comprehension.» According to Obert (2009:23) reading competence expresses «the knowledge base, habits and value relations existing in an individual’s memory and age defined group», which is, in addition to the individual peculiarity of a mentally disabled pupil, also bounded by the degree of literary education, repertoire of reading models asserted by literary education, as well as school education in its broadest sense. In school education, is the concept of **reading** used in several basic meanings, such as 1. an activity applied when communicating with a text; 2. a name of one component of the teaching subject of Slovak language and literature; 3. a text, literature (e.g. home reading). Gavora (2008:27) defines the first meaning of reading as “an intellectual skill that is applied in all teaching subjects for the 1st and the 2nd grade in elementary and secondary schools. It becomes an important tool for self-development of language expression, speech culture and aesthetic feelings.” Thus, reading represents an extracurricular skill to be primarily developed in the mother-tongue teaching and adequately in the

educational process within each teaching subject of cognitive orientation in a school environment (Metelková Svobodová, Švrčková 2010). It is, undoubtedly, the most important skill which a pupil acquires at school.

A pupil has to be able to notice different structures of a text to be able to learn to read, he/she must learn to concentrate and remember what he/she has read, to organise it in spatial and temporal sequences including verbal statements of read graphemes/words. That is why it is necessary, in relation to the reading competence, to develop targeted cognitive functions. Dispositions to the development of cognitive functions are genetically determined, but as Vágnerová (2002) states, only assumptions are inherited but further development of these functions depends on the way the child or the pupil is stimulated, that is on quality, frequency and adequacy of incentives.

A pupil with a mild intellectual disability learns, thinks and explores the world by means of **cognitive processes** (used for learning, thinking and exploring the world) which develop unevenly, but mainly with limits due to functional weakness of the central nervous system (CNS). However, Krejčová states (2013) that current neuro-scientific research shows that particular characteristics of the CNS can affect the way of learning of pupils with mild intellectual disabilities, as well as educational processes form the activity of the CNS. Feuerstein (2002; 2008) emphasises that cognitive functions, such as the structure of the brain are affected by the intervention, i.e. they are able to modify and change. Therefore, teacher's duty is to believe in a possibility of development of a pupil with a mild intellectual disability and to think about specific performance of individual cognitive processes, which are trained, fostered and developed by the pupil.

Individual cognitive processes do not support process isolation but they are strongly linked. Moreover, they can be apparently seen as **partial functions** (basal, basic functions) **in the cognitive area**. Sindelarová (2007:8) defines them as "basic skills that enable differentiation and development of higher mental functions, such as speech and thinking. In further development they become requirements for skills of reading, writing and also appropriate behaviour." If their development runs unevenly – i.e. they are immature and less developed than others, so **deficits in sub-functions** (in German Teilleistungsschwächen) come into existence. Graichen (1973, In: Pokorná 2010:95) defines them as "reduced performance of individual factors or elements within a larger functional system, which is essential in mastering a certain complex of adaptation processes." Sindelarová (2007:8) describes them as "weakening of basic skills which can lead to problems in learning and behaviour."

These demonstrations of an uneven development of pupils with mild intellectual disabilities can be observed in early and pre-school age in the sphere of late talking, graphomotoric clumsiness, sociability (Zezulková 2011) and later as problems in school skills (Bednářová, Šmardová 2007; Sindelarová 2008) which arise as a conse-

quence of different variants of deficits in partial cognitive functions of these pupils. Moreover, they can be reflected in the following areas:

1. visual and auditory classification (figure-ground differentiation),
2. visual and auditory differentiation,
3. intermodal relations,
4. visual and auditory memory,
5. perception of chronology and time (seriality),
6. tactile-kinaesthetic perception, body scheme and orientation in space.

Referring to the authors Siegel (2003); Roloff (1989, In: Sindelarová 2008); Stanovich (1986), Perfetti, Lesgold (1977, In: Blachman 1991), Zezulková (2011), who investigated the effect of partial cognitive functions on school skills, we define a **research question** in this context and we want to find *the correlation between the observed level of reading competence (way of reading), and the level (or deficits) in partial cognitive functions of pupils with mild intellectual disabilities educated in individual integration in the 4th grade in elementary schools.*

3 Research methodology

The aim of the research was to analyse the relationship between the determined levels of reading competence (way of reading) and the levels (or more precisely deficits) in partial cognitive functions of pupils with mild intellectual disabilities.

Due to the above mentioned issue of concern and the objective of the research with respect to the analysis of the relationship of the selected variables (reading competence and partial cognitive functions) we assume:

Hypothesis: *The level of reading competence in the section – the way of reading of pupils with mild intellectual disabilities educated in terms of individual school integration in the 4th grade in elementary schools is significantly influenced by the level of sub-cognitive functions, according to statistics.*

When evaluating the **independent variable**, which is the way of reading, we observed indicant categories, namely *reading syllables and fluent reading*. When evaluating the **dependent variable**, we monitored the number of mistakes in sub-cognitive functions, i.e. visual classification (figure-ground differentiation), visual classification of shapes, visual memory, auditory classification (figure-ground differentiation), auditory differentiation of speech, auditory memory, intermodal relationship, perception of chronology and time, tactile-kinaesthetic perception and spatial orientation.

The research sample comprised forth-grade pupils at the age of 10–12 with mild intellectual disabilities educated in terms of individual school integration in the elementary school in the Prešov Self-Governing Region. The average age of pupils was 10,739 years. Regarding to the nature of data we used the median, which was 11 years

of age, in statistical processing of the age of pupils. The largest group – modus was formed by pupils who reached the age of 10. All pupils (100 %) were fourth graders in the elementary school, 26 of them (78.26 %) were currently in the 4th year of their compulsory school attendance and 10 pupils (21.74 %) were in the 5th year of their compulsory school attendance.

To obtain representative data, we used *pedagogical reading diagnostic assessment of young students* (Čižmarovič, Kalná 1991) as a research tool. It is a testing tool for evaluating the quality of reading performance and analysis of the pupil's mistakes in reading. For the needs of this paper, we focus only on one observed area, namely the way of reading where we analyse recorded fields – reading syllables and fluent reading. For our assessment we used the text no. 8* with a title *Hare and Doe* (*Zajac a srnka*) (by Kopáňová) (In: Čižmarovič, Kalná 1991:2) with a total number of 81 words. The choice was based on comparison of its level with the curriculum defined in the International Standard Classification of Education for pupils with mild intellectual disabilities – ISCED 1 – primary education (2009).

To obtain data about the level of sub-cognitive functions, we used a research tool *T-254 Deficits of partial functions* (Sindelarová, adapted by Černý 2008). This test includes not only testing in the form of an oral or written response, but also practical testing. It consists of individual subtests designed to assess the level of isolated sub-cognitive functions.

4 Findings

According to International Standard Classification of Education for pupils with mild intellectual disabilities – ISCED 1 – primary education (2009) the pupils in 4th grade in elementary schools should be able to read a short text with accuracy and understanding, even to practice the correct verb accent and natural intonation in terms of *reading techniques*. However, we found out that only 54.35 % of pupils read with fluency and up to 41.30 % of pupils read syllables.

Based on data from the Table 1 and the calculated p-values, we can conclude that pupils who **read syllables** (41.3 % of pupils) made significantly more mistakes in the areas of tactile-kinaesthetic perception ($p < 0.001$), auditory classification (figure-ground differentiation) ($p < 0.000$), acoustic differentiation of speech ($p < 0.038$), auditory memory ($p < 0.001$), visual classification (figure-ground differentiation) ($p < 0.032$), visual differentiation of shapes ($p < 0.008$), two-dimensional spatial orientation ($p < 0.007$), visual perception of chronology and time ($p < 0.013$), auditory perception of chronology and time ($p < 0.000$) than the pupils who did not read syllables (58.7 % of pupils).

Based on the results it can be concluded that this area does not have a direct relationship with the visual memory ($p < 0.631$), but it depends more on its previous

levels in visual perception (visual classification, visual differentiation). At the same time, significant difference between spatial orientation, namely the body scheme ($p < 0.188$) and the area of auditory visual intermodal relationship ($p < 0.174$), as well as the field of visual auditory intermodal relationship ($p < 0.070$), was not confirmed, according to statistics.

Table 1: The analysis of relationships between the way of reading – reading syllables and the partial cognitive function

Independent variable	Read syllables – number of pupils – 19						Do not read syllables – number of pupils – 27							
	Mean	Standard deviation	Minimum	Median	Maximum	Normality test	Mean	Standard deviation	Minimum	Median	Maximum	Normality test	Used test*	P-value
I. Tactile-kinaesthetic perception	5,368	1,892	0	6	6	<0,005	2,37	2,871	0	0	6	<0,005	1	0,001
II.A Auditory classification	7,89	6,07	0	7	18	0,171	0,926	2,586	0	0	13	<0,005	1	0,000
V. Visual differentiation of shapes	8,368	1,95	4	9	10	<0,005	6,111	2,979	2	7	10	0,010	1	0,008
VII. Visual perception of chronology and time	12,74	5,61	5	10	25	0,204	7,78	6,88	0	7	25	0,080	2	0,013
VIII.A Auditory memory	1,789	0,976	0	2	3	<0,005	0,815	0,786	0	1	2	<0,005	1	0,001
IX.B Visual differentiation	12,89	5,36	5	12	21	0,467	9,22	5,65	1	9	22	0,788	2	0,032
IX.C Two-dimensional spatial orientation	17,89	5,17	5	18	25	0,703	13,37	5,51	2	15	21	0,100	2	0,007
X.A Acoustic differentiation of speech	4	4,23	0	3	15	0,023	1,63	2,306	0	0	8	<0,005	1	0,038
XII. Auditory perception of chronology and time	13,63	5,67	2	13	25	0,010	8,222	3,309	0	10	15	<0,005	1	0,000

Notes: *Used Test: 1 – Mann-Whitney U-test, 2 – T-test.

It is obvious from the Table 1 that if a pupil read syllables, he/she makes significantly more mistakes at the basic levels, namely in visual classification (figure-ground differentiation) as well as in auditory classification (figure-ground differentiation), including tactile-kinaesthetic perception. Based on literature it can be concluded that if a pupil has weakened basic levels of sub-cognitive functions; subsequently, they affect other functions which are built on them.

This was also confirmed in our research study, while a significant difference was afterwards recorded in the levels of visual differentiation of shapes, acoustic differentiation of speech, auditory memory, spatial orientation, including two-dimensional time perception and intermodal relations, according to statistics. **The hypothesis was confirmed** in the variables with p-values marked in red (Table 1). In each of these marked cases, pupils who read syllables also made significantly more mistakes than pupils, who did not read syllables in the assessment test, according to statistics.

The above facts were confirmed in the recorded dependent variable – **fluent reading** and, therefore, pupils who read fluently (45.65 % of pupils) also made, according to statistics, significantly fewer mistakes in the areas of auditory classification ($p < 0.000$), acoustic differentiation of speech ($p < 0.005$), auditory memory ($p < 0.005$), visual classification ($p < 0.011$), spatial orientation ($p < 0.001$), auditory perception of chronology and time ($p < 0.001$) and visual auditory intermodal relationship ($p < 0.008$) than the pupils, who did not read fluently (54.35 % of pupils) (Table 2).

Table 2: The analysis of relationships between the way of reading – fluent reading and the partial cognitive functions

Independent variable	Read fluently – number of pupils – 25						Do not read fluently – number of pupils – 21							
Dependent variable	Mean	Standard deviation	Minimum	Median	Maximum	Test normality	Mean	Standard deviation	Minimum	Median	Maximum	Normality test	Used test*	P-value
I. Tactile- kinaesthetic perception	0,576	2,88	0	0	6	<0,005	0,445	2,04	0	6	6	<0,005	1	0,000
II.A Auditory classification	0,611	3,054	0	0	15	<0,005	1,34	6,12	0	7	18	0,082	1	0,000
VIII.A Auditory memory	0,16	0,8	0	1	2	<0,005	0,222	1,017	0	2	3	<0,005	1	0,005

IX.B Visual classification	1,16	5,78	1	8	22	0,454	1,08	4,95	5	12	21	0,450	2	0,011
IX.C Spatial orientation	1,09	5,44	2	12	21	0,338	1,05	4,81	5	18	25	0,377	2	0,001
X.A Acoustic differentiation of speech	0,411	2,056	0	0	8	<0,005	0,887	4,066	0	3	15	0,047	1	0,005
XII. Auditory perception of chronology and time	0,734	3,671	0	10	15	<0,005	1,21	5,55	2	10	25	<0,005	1	0,001
XIV.A Visual auditory intermodal relationship	0,584	2,922	0	2	11	0,028	1,28	5,86	0	7	20	0,016	1	0,008

Notes: *Used test: 1 – Mann-Whitney U-test, 2 – T-test.

It is obvious from the Table 2 that pupils who read fluently also made significantly fewer mistakes at basic levels, namely in visual classification (figure-ground differentiation), auditory classification (figure-ground differentiation) as well as at the second level of auditory perception – acoustic differentiation of speech, including auditory memory, according to statistics. At the same time, significantly fewer mistakes were made in the tactile-kinaesthetic perception followed by two-dimensional spatial orientation, including auditory perception of chronology and time, and auditory-visual intermodal relationship, according to statistics. **The hypothesis was confirmed** in the variables with p-values marked in red (Table 2). In each of the marked cases it was shown that pupils who read fluently made significantly fewer mistakes in comparison to the pupils who did not read fluently, according to statistics.

Conclusions

Data and findings, which we have obtained, are the basis for creating a stimulating program as a complement of the curriculum of the teaching subject Slovak language and literature for pupils with mild intellectual disabilities in 4th grade educated in terms of school integration in elementary schools. We did not expect that the sample would contain pupils who read syllables in the number of 41.3 % pupils, based on the content of education in the educational program for pupils with mild intellectual disabilities (2009). Based on the obtained data, it is obvious that especially these pupils necessarily need special education and care (intervention) aimed at the basic sub-cognitive functions in which pupils make significantly more errors than pupils who did not read syllables, according to statistics. That included the area of visual classification (figure-ground differentiation) ($p < 0.032$) as well as auditory classification (figure-ground differentiation) ($p < 0.000$) including tactile-kinaesthetic perception ($p < 0.001$). These areas also affect the observed weakened levels, such as acoustic differentiation of speech ($p < 0.038$), auditory memory ($p < 0.001$), visual

differentiation of shapes ($p < 0.008$), two-dimensional spatial orientation ($p < 0.007$), visual perception of chronology and time ($p < 0.013$) as well as auditory perception of chronology and time ($p < 0.000$).

We need to emphasise that these findings relate to the research sample in the Prešov Self-Governing Region, thus our conclusion refers to the research sample of 155 pupils. Based on these findings, we can assume that if we intentionally stimulate primarily detected deficit areas of sub-cognitive functions, the function of these areas will be improved. Moreover, we suppose that it could make the process of reading (reading technique and reading comprehension) more effective. This intention will become the aim of our research in the next phase of the planned research. Finally, these findings can help the effective education of pupils with mild intellectual disabilities in terms of school integration in elementary schools.

It is also necessary to consider other variables that affect the level of reading competence of these pupils, especially social factors (family, school, educational approach, methods of teachers, etc.), whereby we must not forget the spontaneous development of these pupils, though it is delayed and partially limited. Therefore, not only pupils need to make more effort, but also teachers in order to support the pupils' optimal development.

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A survey of juvenile delinquency in Chengdu, PRC

(overview essay)

Jiaojiao Wu

Abstract: *To survey the situation and reasons of juvenile delinquency within Chengdu city, further to provide underpinnings of preventing juvenile delinquency for the government. In August 2011, Chengdu City Women's Federation, Chengdu City Intermediate People's Court and Faculty of Education of Sichuan Normal University jointly launched a three-year "A Survey of Juvenile Delinquency in Chengdu" research project by conducting archival analysis of trial data, in-depth interview, questionnaire survey. 410 cases randomly selected from 7 courts within Chengdu city involving 519 juvenile delinquents have been surveyed. Finding of this survey research found typical characteristics of juvenile delinquents including low level of education, obvious gender gap, increasing number of student offenders and main characteristics of juvenile delinquency. Property violation and personal injury are major criminal types, gang crime is the main crime modality, and plenty of problem behaviors have been shown before crime.*

Keywords: *juvenile delinquency; juvenile delinquents; crime*

1 Introduction

Juvenile delinquency in China refers to people of over 14 years old and under the age of 18 who have committed a crime, violated criminal law and its relevant provisions. According to article 17th in criminal law, criminal responsibility age is over 14 years old; for the people are below 14 years old, they are not criminally responsible age is not completely; between the age of 14 and 16, it is relative to fulfill criminal responsibility. In short, according to law, for 14 to 18-year-old juvenile delinquents who commit a crime such as murder, intentional homicide or injury, rape, robbery,

drug trafficking, arson, explosion, poisoning and other serious damage to the society, they must fulfill corresponding criminal responsibility.

Juvenile delinquency is a major social problem and is becoming more serious the worldwide, which has been listed as the third public nuisance after taking drugs or drug trafficking and environmental pollution. The number of juvenile delinquents is increasing year by year, and there is a series of tendency characteristics such as younger juvenile delinquency, more complicated subject of crime, more criminal types, more violence, and more gang crimes.

So many juveniles' growth dreams are broken by committing a crime, and so many families' better future is destroyed, too. In recent years in China, the vicious crime, especially cases of violent crime and organized crime are rising, which prompts criminologists, sociologists and educators to conduct researches for investigation and analysis reasons of juvenile delinquency, to radically reduce and prevent juvenile delinquency, and promote their healthy growth.

This survey maps the situation and reasons of juvenile delinquency within Chengdu city, further provides basis of preventing juvenile delinquency for the government. In August 2011, Chengdu City Women's Federation, Chengdu City Intermediate People's Court and Faculty of Education of Sichuan Normal University jointly launched a three-year "A Survey of Juvenile Delinquency in Chengdu" research project.

Chengdu is the provincial capital city of Sichuan province, with a population of 14,047,625 (2010), which is located in the southwest of China. It is a representative medium developed city comparing with highly developed urban regions like Beijing, Shanghai, or underdeveloped cities in mid-west region of China.

The team conducted archival analysis of trial data, in-depth interview, questionnaire survey to discover reasons of juvenile delinquency and further investigated their family education. So far, 410 cases of juvenile delinquency from 2007 to 2011 involving 519 juvenile delinquents have been surveyed. Those cases were randomly selected from 7 courts within Chengdu city including Chendu Intermediate People's Court, Shuangliu People's Court, Jintang People's Court, Dujiangyan People's Court, Pengzhou People's Court, Wuhou District Court, and Qingyang District Court. Meanwhile, 150 juvenile delinquents were also randomly selected to complete questionnaire of parent raising behavior and 12 of them and their parents were interviewed one by one. Because time is short, research has not yet been finally completed, only part of the study results shown as follows.

2 Characteristics of juvenile delinquents

2.1 Demographic characteristic

Age distribution and criminal type

Due to the reasons of earlier development, negative culture influence etc., since 1990s the initial age of juvenile delinquency was 2 to 3 years ahead of the 1970s. In recent years, the number of people below the age of 14 who commit intentional homicide, rape, robbery, drug-related crime which cause serious damage to the society is increasing. According to the analysis of subject of crime, age distribution is as follows:

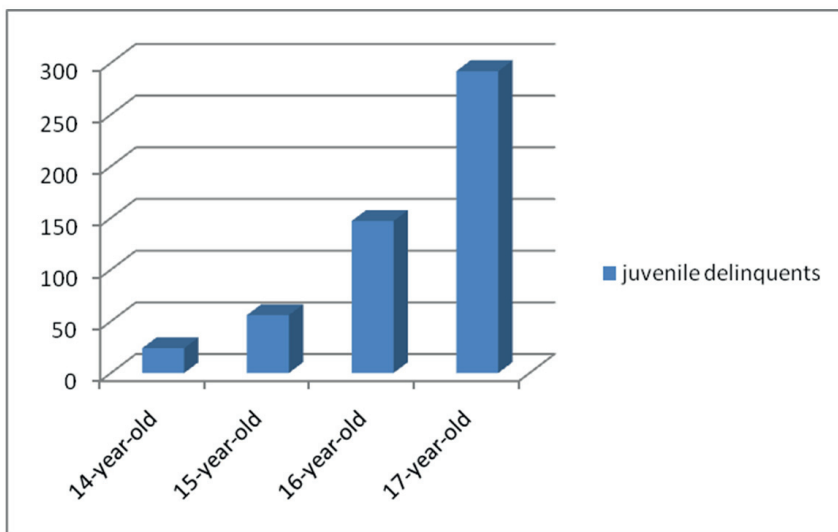


Figure 1: Age distribution of juvenile delinquents

As Figure 1, 24 juveniles committed crime at age of 14, 56 juveniles committed crime at age of 15, 147 juveniles committed crime at age of 16, 292 juveniles committed crime at age of 17. Criminal types are illustrated in Table 1 and numbers of juvenile delinquents were embedded in parentheses.

Table 1: Criminal types and numbers of juvenile delinquents

14-year-old	property violation	robbery(14)
	personal injury	intentional homicide (7), intentional injury (2), rape (1)
	other types	0
15-year-old	property violation	robbery (36)
	personal injury	intentional homicide (8), intentional injury (10), rape (2)
	other types	0
16-year-old	property violation	robbery (59), stealing (33), snatching (4), extortion (3)
	personal injury	intentional homicide (11), intentional injury (26), rape (2), gang fighting (2), picking quarrels and making troubles (3)
	other types	manufacturing drugs and drug trafficking (2)
17-year-old	property violation	robbery (102), stealing (64), extortion (2), financial fraud (1), cheating and bluffing (1)
	personal injury	intentional homicide (30), intentional injury (52), kidnapping (1), rape (4), forced prostitution (1), gang fighting (5), picking quarrels and making troubles (12)
	other types	manufacturing drugs, concealing drugs and drug trafficking (9), involving criminal syndicate group (2), traffic offences (1)

As the growth of the age, juvenile's scope of life experience is in development, which makes the increasingly diverse criminal types involving artificial intelligence by using computer technology or science.

Obvious gender gap

Comparing with females, males are the main subject of crime, the statistic analysis of 4 years (2007–2011) juvenile delinquency in 7 courts including Chendu intermediate people's court, Shuangliu people's court, Jintang people's court, Dujiangyan people's court, Pengzhou people's court, Wuhou district court, and Qingyang district court demonstrated criminal numbers of males and females as shown in the figure below.

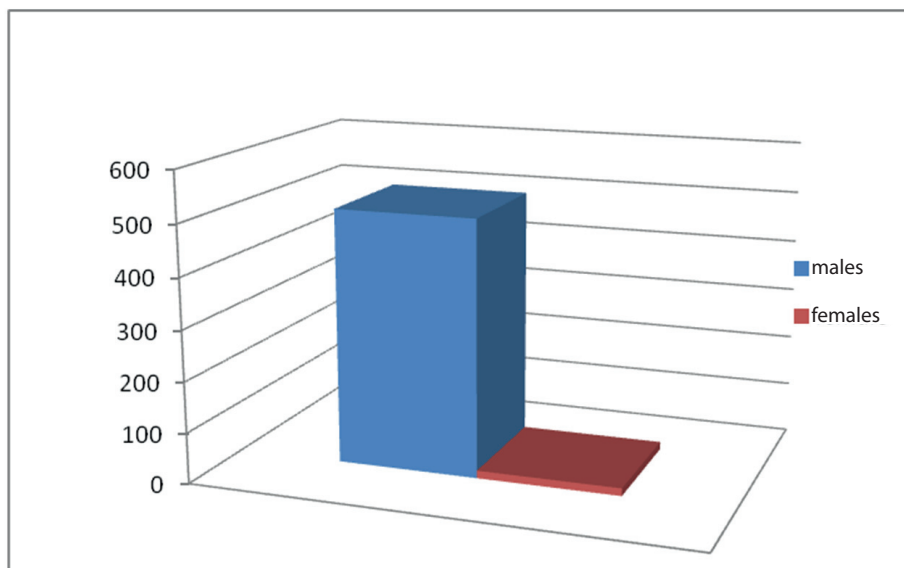


Figure 2: Gender gap of juvenile delinquents

Among 410 criminal cases, contrast with 504 males, accounting for 97.11 % of the total number of 519 people, 15 females account for only 2.89 %.

Low level of education

This study found that educational level of juvenile is strikingly low, even most of them did not finish 9-year compulsory education. A large number of 285 juveniles own junior high school level of education, accounting for 56.55 %; 141 juveniles own primary school education, accounting for 27.98 %; 30 junior high school drop-outs, accounting for 5.95 %; 19 high school drop-outs, accounting for 3.77 %; 18 technical secondary school drop-outs, accounting for 3.57 %; 5 primary school drop-outs, accounting for 0.99 %; 3 college drop-outs, accounting for 0.60 %; 3 illiteracy, accounting for 0.60 %.

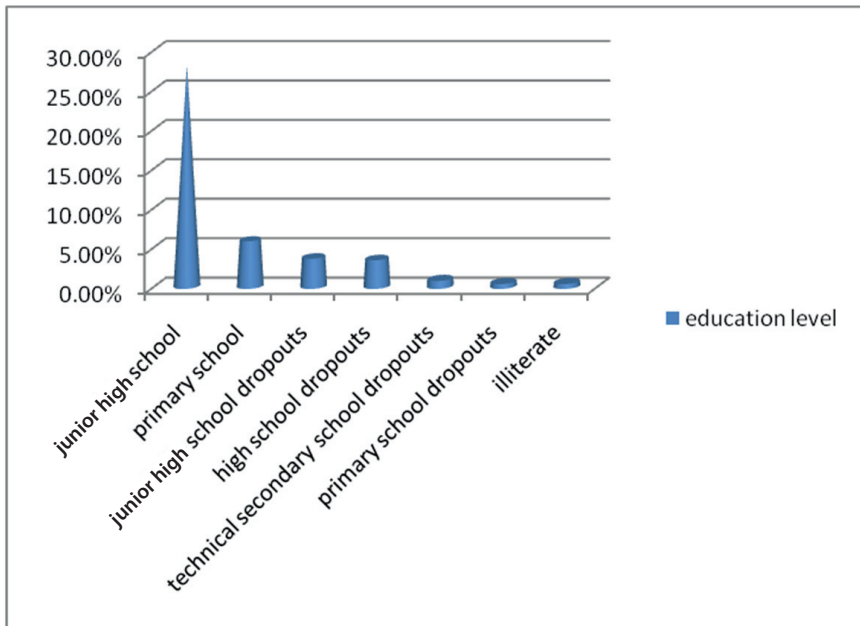


Figure 3: Educational level of juvenile delinquents

The level of education is limited by the age of juvenile, however, drop-outs committed crimes with a relatively high rate and most juvenile delinquency involves unemployed youth. According to data from 2007 to 2011, the public security organ in China transferred juvenile offenders for examination before prosecution, 56.55 % of them accept junior high school educational level, 29.57 % of them accept lower level of education (primary school, primary school drop-outs, illiterate). In another word, a total of 86.12 % of them did not complete compulsory education.

Most subjects of juvenile delinquency are jobless

From age of 14 to 18, teenagers develop rapidly and become much stronger than before, they engage in daily activities to consume energy. Otherwise, they are easy to deviate from normal growth orbit.

When most children are enjoying study life at school, most juvenile offenders are struggling at school and then leave school early. Labor law in China forbid employers to recruit under the age of 16, in addition to the fierce competition in the job market, many juveniles who left school are jobless.

To examine occupation of the juvenile, when we firstly divided them into two categories, students and non-students, the study found that the ratio of the number between them is 7.95 : 1. When we further divided non-students into the unemployed, working, farmer, it was found that 229 juveniles, accounting for 44.12 % of the total number of crime are unemployed.

Going back to the roots, on one hand, these non-students lack of school regulation; on the other hand, usually they are unskilled, pleasure-seeking but expect something for nothing, the juvenile eventually commit an offence.

Second only to the type of unemployed juvenile, a large number of the working juvenile come from countryside, engaged in security, house decoration, shoe factory, water works, haircut, construction site and other unstably temporary works.

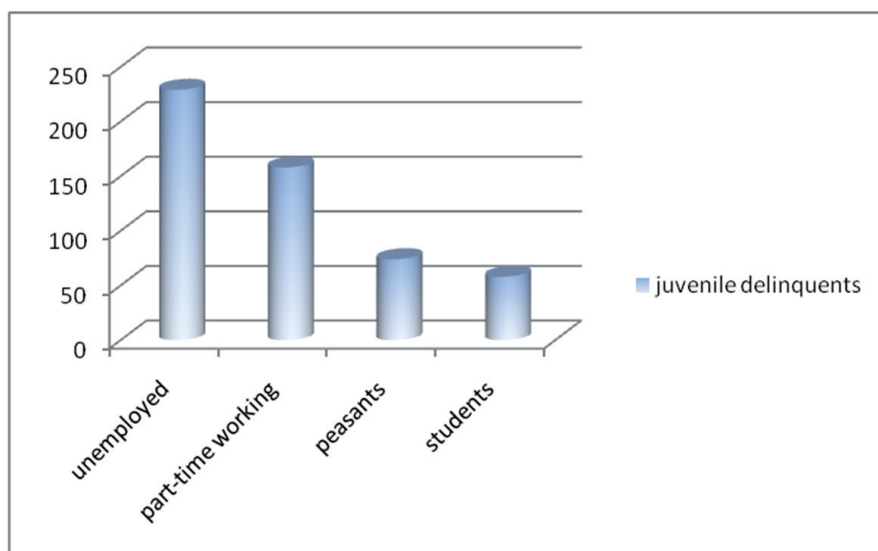


Figure 4: Identity of juvenile delinquents when committing a crime

A growing number of student juvenile delinquents

In the sample of 519 juvenile delinquents, 58 of them are students. As shown in Figure 5, generally the number is rising, with 7 students committed in 2007, 6 in 2008, 11 in 2009, 18 in 2010, and 16 in 2011.

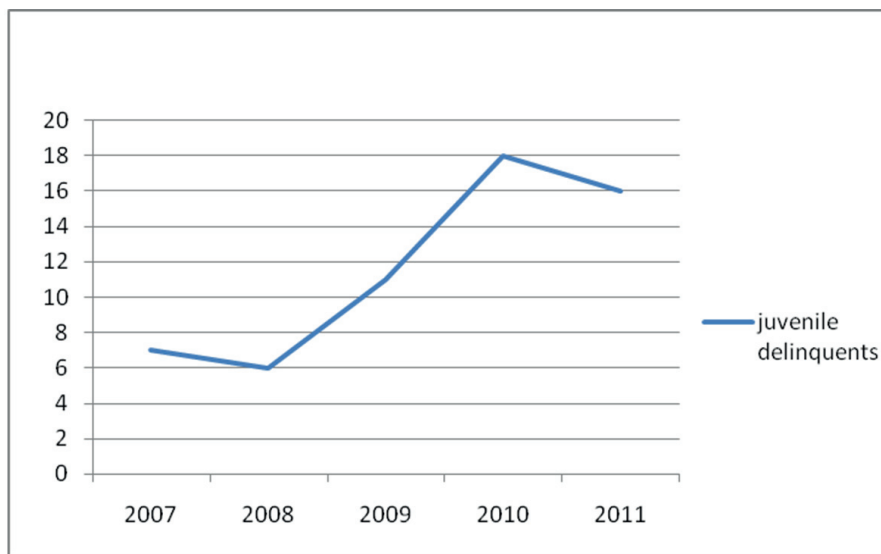


Figure 5: Student juvenile delinquents in 2007–2011

Further review of the distribution of students, junior high school is the main stage of juvenile delinquency. As shown in Figure 6, 2 college students, accounting for 3.45 % of the total of students; 3 primary school students, accounting for 5.17 %; 6 high school students, accounting for 10.34 %; 11 vocational high school students, accounting for 18.97 %. In a total of 29.31 % of them are high school students, however, junior high school students are more than that, accounting for 62.07 %.

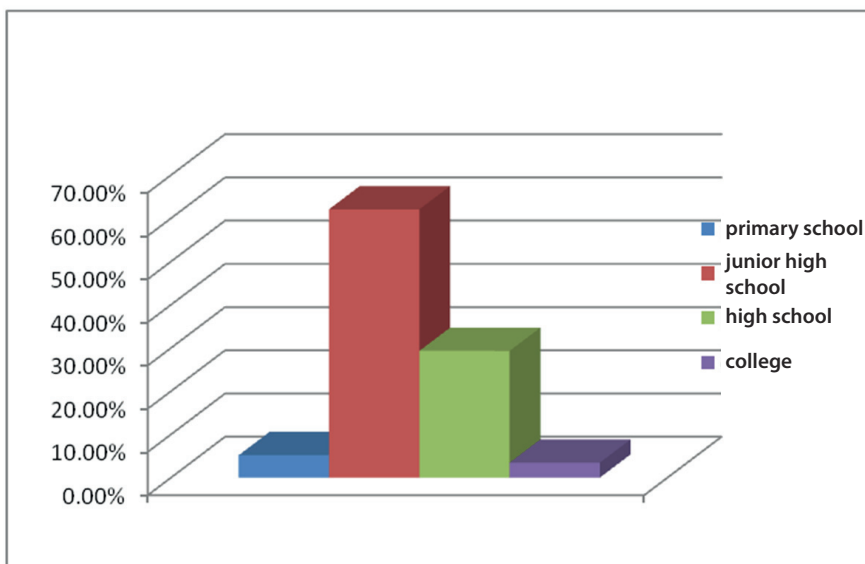


Figure 6: Distribution of student juvenile delinquents

3 Characteristics of juvenile delinquency

3.1 Property violation and personal injury are two major criminal types

Analyzing the selected 410 cases of juvenile delinquency, the result showed that the criminal types are varied, including property violation, personal injury, drug-related crimes, crimes of gangsterdom-related, illegal holding gun and ammunition etc. The two major criminal types committed by juvenile are property violation and personal injury. From the Table 2 below, it can be found that 324 juvenile delinquents committed stealing, snatching, and robbery, which are the three kinds of main crimes involved with property violation; 116 committed crime of personal injury including two main criminal types of intentional homicide and intentional injury.

Table 2: Different criminal types

criminal types		cases	% (N = 410)	criminal population	% (N = 519)
property violation	robbery	130	31.7	207	49.88
	stealing	105	25.61	117	22.54
	extortion	5	1.22	8	1.54
	financial fraud	3	0.73	4	0.77
	snatching	2	0.49	4	0.77
	cheating and bluffing	1	0.24	1	0.19
	kidnapping	1	0.24	1	0.19
	total	247	60.24	342	65.9
personal injury	intentional injury	69	16.83	77	14.84
	intentional homicide	34	8.29	39	7.51
	gang fighting	12	2.93	12	2.31
	picking quarrels and making troubles	11	2.68	11	2.12
	rape	7	1.71	7	1.35
	concealing	2	0.49	3	0.58
	injury	2	0.49	2	0.39
	kidnapping	1	0.24	1	0.19
	forced prostitution	1	0.24	1	0.19
	illegal detention	1	0.24	1	0.39
	total	140	31.46	154	30.44
Others	drug trafficking	6	1.46	6	1.16
	illegal holding gun	4	0.98	4	0.77
	involving criminal syndicate group	2	0.49	2	0.39
	transport of drugs	2	0.49	2	0.39
	illegal possession of drugs	2	0.49	2	0.39
	manufacturing drugs	2	0.49	2	0.39
	concealing drugs	1	0.24	1	0.19
	covering up or concealing	1	0.24	1	0.19
	traffic offences	1	0.24	1	0.19
	shelter others taking drugs	1	0.24	1	0.19
	illegally holding ammunition	1	0.24	1	0.19
	total	23	5.61	23	4.43

3.2 Gang crime is the main crime modality

Similar results with previous researches were obtained in this study, 266 of 410 cases involved with 375 juvenile delinquents (72.25 %), accounting for 64.88 % of the total number of cases, gang crime is the main crime modality according to both analysis of number of cases and that of juvenile delinquents.

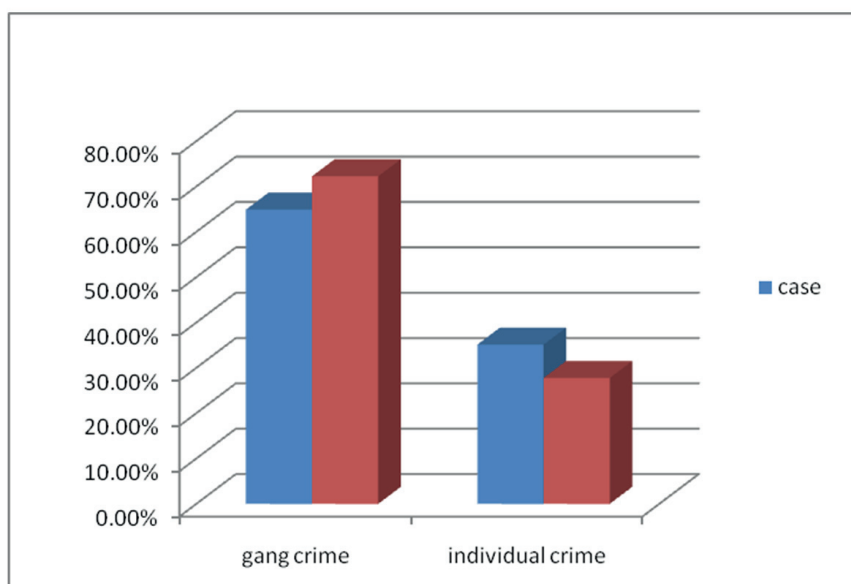


Figure 7: Distribution of crime modality and its juvenile delinquents

It is often very difficult for a juvenile to commit a crime, because both of the strength of the individual and independent ability is poor. Because of the lack of adequate physical strength, intelligence, courage and experience, juveniles gather together to achieve common purpose by encouraging and getting psychological support from each other. From the analysis of some specific cases, juvenile delinquency usually involves at least 3 or even more persons jointly commit crime, the largest number up to nine people in this study, but without fixed organization.

Some typical criminal types are tend to be committed in gang crime such as robbery, stealing, intentional injury, intentional homicide, affray, concealing stolen goods, snatching, financial fraud, involving criminal syndicate group, illegal detention and crime of cheating and bluffing. Crimes of manufacturing drug, drug trafficking, rape, illegal holding gun or ammunition etc. are only committed by individuals in the survey.

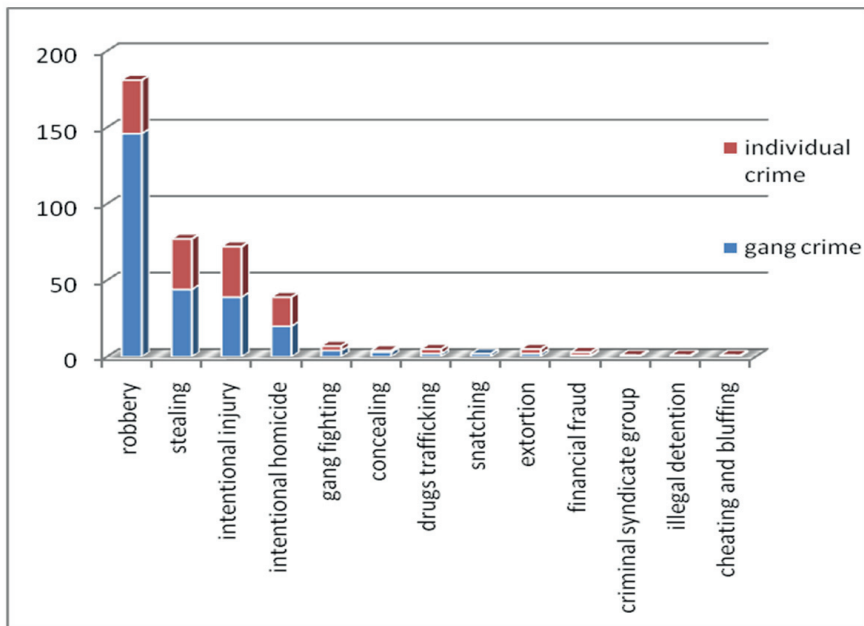


Figure 8: Comparison of juvenile delinquents with different crime modalities

As shown in Figure 8, robbery, stealing, intentional injury, intentional homicide, and gang-related cases are the top four, followed by affray. Both student juveniles and unemployed juveniles in society get involve in these gang crimes, especially in recent years, students and unemployed juveniles in society jointly commit property violation such as blackmail is becoming a new trend of juvenile delinquency.

3.3 Criminal motive is varied, but the sake of enjoyment is one of the main causes

Various criminal motives include material motivation, sexual motivation and emotional motivation such as revenge, jealousy, vanity, curiosity, being afraid of difficulties (see Table 3). The same kind of motive may drive juveniles to commit different kinds of crimes. For example, a juvenile might commit crime of stealing, robbery or even fighting or murder for the sake of enjoyment; in turn, a crime can be caused by different kinds of motivation, a juvenile commit stealing because of curiosity, imitation or being afraid of difficulties.

The purpose why juveniles committed property violation is raising money for luxury, online games. Otherwise, a small number of juveniles committed for living or being persuaded by bad friends to jointly commit crime.

Table 3: Motivation of juvenile delinquency

Motivation	juvenile delinquents	% (N = 519)
sake of enjoyment	272	52.41
Flaunt	62	11.95
Revenge	49	9.44
Brotherhood	43	8.29
Curiosity	33	6.36
Imitation	18	3.47
Forced	18	3.47
Being afraid of difficulties	12	2.31
Ignorance	5	0.96
Unidentified	4	0.77
Erotism	3	0.58
Total	519	100

3.4 Plenty of problem behaviors have been shown before crime

Many previous studies of juvenile delinquency have shown that juveniles show signs of problem behaviors before crime. In the tenth meeting of the ninth session of the standing committee of the National People's Congress, prevention of juvenile delinquency of People's Republic of China was approved. The problem behavior list was as follows: 1) truancy, night out; 2) illegally carrying knives; 3) fighting, and abuse; 4) forced asking others for property; 5) stealing, intentionally damaging property; 6) gambling or disguised way of gambling; 7) watch or listen to pornography, obscene audio and video products, books, etc.; 8) illegally entering into dancing halls and other places; 9) other serious behaviors violation of social morality. Foreign related researches also argue that the following signs of juvenile delinquency: running away from home, drinking, smoking, truancy, violation of curfew, make bad companion, do not accept parents' or teachers' education, early sexual behavior, fighting, stealing, and internet addiction. In this study, juvenile offenders display the following problem behaviors, 1) being infatuated with network games; 2) truancy, night out; 3) fighting, illegally carrying knives; 4) stealing, intentionally damaging property; 5) watch and

listen to pornography, obscene audio and video products, books, etc.; 6) gambling or disguised way of gambling.

4 Discussion

This survey was conducted within Chengdu city in China to understand the situation and analyze reasons of juvenile delinquency, further to provide underpinnings of preventing juvenile delinquency for the government, which involving randomly selected 410 cases from 7 courts and 519 juvenile delinquents.

Finding of this survey research demonstrated that typical characteristics of juvenile delinquents such as low level of education, obvious gender gap, increasing number of student offenders and main characteristics of juvenile delinquency like property violation and personal injury are major criminal types, gang crime is the main crime modality, and plenty of problem behaviors have been shown before crime.

However, juvenile delinquency is a major social problem not only in China but also worldwide, which has been listed as the third public nuisance after taking drug or drugs trafficking and environmental pollution. The number of juvenile delinquents is increasing year by year, and there is a series of tendency characteristics such as younger juvenile delinquency, more complicated subject of crime, more criminal types, more violence, and more gang crimes. Criminologists, sociologists, educators and family members should all cooperate to radically reduce and prevent juvenile delinquency further to promote healthy growth of juveniles.

(reviewed twice)

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Comparison of Automatic, Manual and Real User Experience Based Testing of Accessibility of Web Sites for Persons with Visual Impairment

(scientific paper)

Vojtech Regec

Abstract: *The aim of this paper is to compare different models of accessibility evaluation of websites. It describes various aspects of automatic, manual and user based forms of accessibility evaluation in the context of visual impairment. Automatic analysis of accessibility implemented with the use of special programs brings exact evaluation findings based on the source code, style sheets, scripts, and other parts of the website. We found that the exactness of these findings does correspond with the real-life results based on actual accessibility experienced by persons with visual disabilities. The presented results of individual researches show a big variance in conformity with automatic and manual evaluation. The discrepancies in the conclusions of automated and manual forms of testing in 2008 we recorded in 41 % of web sites. In 2013 on a sample of 135 web sites we recorded noticed significant differences in the conclusions of the 34 % of analyzed web sites. This proves that model of manual accessibility evaluation is in terms of the overall assessment of the state of web content accessibility irreplaceable. However, necessary prerequisite for the implementation of manual evaluation is sufficient expertise, based on the knowledge and accessibility standards as well as knowledge of the principles of the use of assistive technologies for persons with visual disabilities. During an investigation, we also found that with the experience-based user evaluation model we can point out such aspects of accessibility problems, which may not be caught by both automatic and manual evaluation.*

Keywords: *evaluation of e-accessibility, university and college, visual impairment*

1 Introduction

Accessibility of websites has a key impact on the level of integration of persons with visual as well as other disability. Impact of social digital exclusion of these individuals has a direct influence both on the individuals' personal life and on the country's economic development. In this context, the main feature of e-exclusion is a long-term manifestation of digital barriers preventing an individual in terms of integration in general society. When solving the issue of digital barriers elimination, a necessary condition is a system implementation of the assessment models and their individual tools. The key starting point is a constant optimization of these evaluation procedures, particularly due to rapid development of technical standards in the Internet network and assistance technologies. In the following chapters, this paper describes the selected positive as well as risk aspects of websites assessment within automatic, manual and user form of testing. Our goal is to present not only different accessibility assessment models but also to point out to their specifics and possibilities of their cohesion.

2 Bases for assessment of accessibility

According to the MeAC study (Measuring Progress of eAccessibility in Europe), before 2006, only 5 % of public institutions' websites in the European Union was accessible. Declaration of the European Parliament and Council of 2012 accentuates that only less than 10 % of Internet presentations (COM/2012/0721) in the public sector is accessible, which means approximately a 5 % increase in accessibility over the period of six years.

The main deficit of the aforementioned approach to the issue of accessibility assessment is the construction of strict and rigid boundaries between an accessible and inaccessible website. If, according to the latest Declaration of the European Parliament and Council, only about 10 % of the websites is available, does it mean that 90 % of websites shall be simply marked as actually inaccessible for all disabled groups? Where is the methodical boundary between an accessible and inaccessible website?

Considering the rigid definition of these boundaries, it is also important to methodically anchor the level of inaccessibility itself (severity of barriers) of a website. Apart from technical criteria, it is also important that the assessment systems included criteria based on actual needs of a disabled user.

2.1 Automatic accessibility evaluation

Testing accessibility through automated tools (e.g. Total Validator, T. A. W., Truwex, Wave and other.) is a relatively fast and time-saving method of website checking. Another distinct advantage is the exactness of results (graphic object lacks text description; document language is not defined; form fields are not correctly interconnected with descriptions, etc.) and the option to quantify the outcomes expressed for example in form of average number of errors on one website. There are several formulas relating to operationalization of accessibility into mathematic notation – from simple ones (Sullivan and Matson, 2000) focused only on the website error rate (evaluating the proportion of actual and potential errors) up to more complex scoring systems, for example the so called “Web Accessibility Barrier Score” (Zeng, 2004).

Buhler et al. (2006), in their experimental evaluation, compared results from individual automatic controls (also creating their own calculation for this purpose, identified as A3a, which is based on the so called Improved Aggregation Method) with the test results from users. They confirmed that there may be a close relation between automatic and user rating for selected areas. In their calculations for A3a in this test, some of the results have shown as “in most cases are closest to the user ratings”.

In 2008, on a sample of 300 websites, Regec compared accordance in the results of automatic and manual controls. His research indicates high risk of presenting vague results from automatic controls due to the fact that an automatic control without subsequent manual control is not able to reliably evaluate any of the basic accessibility aspects from the user point of view. He found out that a great portion of automatic control results explicitly identified as erroneous has not been confirmed subsequently in manual testing and vice versa. In 2008, total discrepancy between automatic and manual accessibility control achieved 41 %. Our follow-up research in 2013 (n = 135) also confirmed discrepancy (34 %) in the field of automatic and manual evaluation.

Another substantial limitation of automatic control is a complete disregard for qualitative aspect of non-compliance. We found that higher number of errors automatically detected does not necessarily mean a lower accessibility rate. Figure 1 below shows the example of high discrepancy level in the evaluation results of automatic and manual control in accessibility of non-text elements.

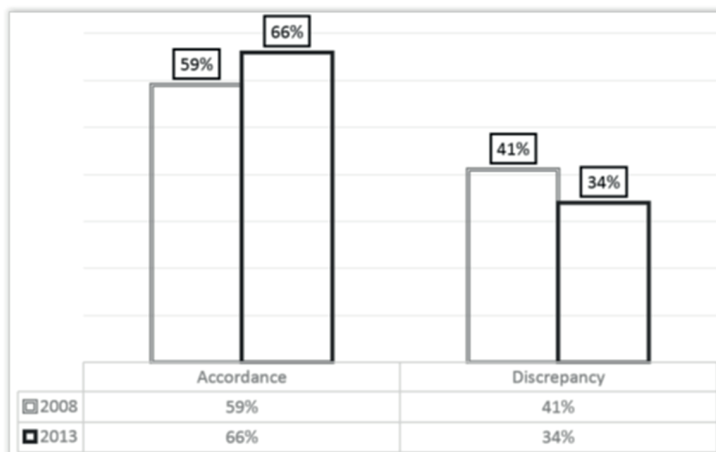


Figure 1: Accordance and discrepancy in the results of automatic and manual control for individual samples of evaluating non-text elements in 2008 and 2013 (WCAG 1.0 – 1.1; WCAG 2.0 – 1.1.1) n = 435.

2.2 Manual accessibility evaluation

Manual accessibility evaluation is defined as professional check by an experienced accessibility expert with relevant competence for such activity. Except being oriented in rules and methodical procedures, a necessary condition for an expert is also the knowledge of operational principles of assistance technologies designed for users with disability. In addition to automatic tools, manual evaluation implies utilization of assistance technologies for testing. A good practice of an accessibility expert is to actively cooperate with the target groups and constantly obtain new information about development and changes to these technologies.

The biggest disadvantage of the manual control is its time-consumingness. In manual testing, there is also a risk that conclusions of individual experts will not match. Such differences are mostly caused by experiences and preferences of the expert, having impact on his/her assessment. Other factors include current level of attention, fatigue, etc.

Regarding manual accessibility evaluation by experts, Brajnik, Yesilad and Harper (2010) found that in many cases, their results are not sufficiently valid. They state that experts recorded 20 % of false errors and on the other hand, failed to identify as much as 32 % of actual errors. In the context of these claims, we suggest that there is no unified accreditation or certification of an “expert for accessibility testing” in practice. Therefore, criteria for an accessibility expert may be very vague and subjective in many cases.

2.3 User accessibility evaluation

User testing is defined as an accessibility control by the target user group. The form of user test implementation may be extremely variable and in practice differs from case to case (from evaluating selected areas on a single web page to exhaustive check of the whole website, from individual testing by a single user to involving several target groups).

A distinct advantage of user testing implementation is the acquisition of information on accessibility status from the target group directly – from individuals for whom the whole concept of accessibility has been designed. However, user testing itself is not able to provide us with fully objective image of accessibility because the user does not necessarily keep track of all accessibility aspects. There is also a risk of his/her subjective preference possibly influencing the user control results.

A common problem in user assessment is the confusion of accessibility with user-friendliness. That means, deficiencies of a website not directly connected with accessibility barriers but with its usability in general. For example, information sought cannot be found not due to its inaccessible form but because of overall problem of the user to orientate on the navigation bars, etc. With visually impaired persons, there is also a high risk that they will skip evaluating certain areas altogether due to being too inaccessible for them to recognize their presence. Also, some users are not able to correctly evaluate all the areas due to their specific disability (visually impaired persons cannot evaluate correctness of graphic object description, accessibility of multimedia, etc.).

According to the extensive research among 1121 respondents, carried out by WebAIM at the turn of 2008 and 2009, it was found that: “there is no typical screen reader user”. This assertion proves an important fact, i.e. that it is not possible to create a universal model of an person with disability. On the other hand, it should be noted that several basic assumptions for an effective model of evaluating electronic information accessibility may be designed on the basis of general preferences of individuals (e.g. higher priority for implementation of semantic organization of information, etc.) as well as experiences (not every error within the source code must have an impact on accessibility, etc.). Figure 2 below shows comparison of the selected features among automatic, manual and user testing.

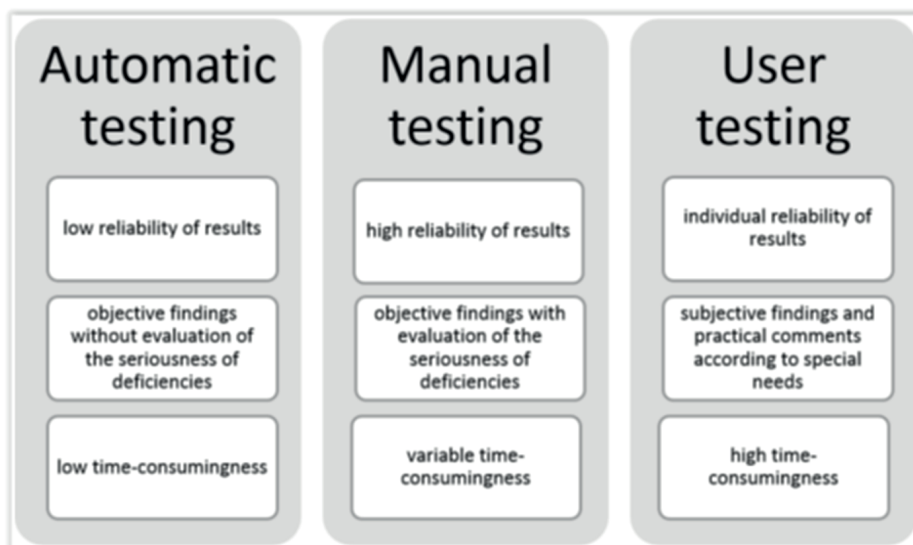


Figure 2: Comparison of individual aspects of automatic, manual and user evaluation model

3 Conclusion

In the study carried out, we found that evaluation of accessibility based exclusively on the automatic evaluation model is not able to assess the rate and quality of barriers on a website fully reliably. At the same time, reducing and founding of accessibility only on the contradictory poles limits the resources based on the aspects of actual needs of individuals with visual impairment. Thus, we may state that incorporation of real needs of disabled individuals into the accessibility evaluation is the key premise for achieving integration and inclusive goals.

Our findings confirmed that the combined concept of accessibility evaluation based on interconnection of automatic, manual as well as user model enables to comprehensively monitor the barriers for persons with visual perception impairment. At the same time, this concept is supportive towards digital inclusion and participation also for users with other types of disability, e.g. hearing impairment (Regec, 2014; Potměšilová, P., Potměšil, M. & Roubalová, M., 2014), motor and mental disabilities. Therefore, the accessibility evaluation process cannot be considered as the goal in itself but has to be the resource for creating websites suitable for all users regardless of their disability.

3.1 Acknowledgement

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(reviewed twice)

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The development of haptic and tactile perception in individuals with visual impairment

(book review)

FINKOVÁ, Dita. *Rozvoj hapticko-taktilního vnímání osob se zrakovým postižením*. 1. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 119 s. Monografie. ISBN 978-80-244-2742-3.

Reviewed by Tereza Treflíková

Visual impairment is considered to be one of the most severe health disabilities by the general society. It is an important determinant of the development and the formation of the personality and has a crucial impact on the possibilities of education and socialisation of visually-impaired people.

Tactile perception is of paramount importance to visually-impaired individuals. It is not possible to acquire the same amount of good quality information using other compensatory senses: the hearing, the smell and the taste. It may be stated that this sense to a great extent replaces the missing visual perception in visually-impaired individuals.

A systematic training of touch is the core theme of the publication called "The development of haptic and tactile perception in individuals with visual impairment". The book was published and printed by the Palacky University in Olomouc in 2011. Its author, Dita Finková, is a docent at the Institute of Special Education Studies of the Faculty of Education at the Palacky University in Olomouc, a special pedagogue and typhlopedic, author of a range of articles and publications in the fields of special education and typhlopedy. The monography is the first print.

The publication is divided into nine chapters providing a general overview on the issue of visual impairment. The first chapter outlines the historic background on the care for a visually-impaired individual, it focuses on the personage of Louise Braille and describes significant historic events leading to the formation of a writing system for the blind. The second chapter deals with the classification of visually-impaired

people. The text that follows describes the unique role of touch in the lives of these individuals; the author lists the forms and ways of tactile perception, addresses the issue of its development and emphasises the importance of typhlographics. The fourth chapter introduces the methodology of Braille writing and reading education, describes the process in children of pre-school and school age, in individuals with late sight loss and deaf-blind persons. The fifth chapter offers a comprehensive overview of knowledge about Braille writing for the visually-impaired, characterises its features and addresses the specifics of using the Braille code in various world languages. In the sixth chapter the author characterises typhlotechnics. She classifies aids for the visually-impaired individuals according to the areas of their use: spatial orientation and independent movement aids, house aids, Braille reading and writing aids and aids for their study and education. The seventh chapter focuses on the area of education of individuals with visual and multiple disabilities. The author presents a summary and characteristics of essential documents dealing with the educational process in the Czech Republic and defines two basic forms of education of children, pupils and students with visual impairment: education in the form of integration and education in special schools designated to the visually-impaired pupils. In the eighth chapter, the author presents a summary and basic characteristic of selected organisations offering services to the visually-impaired individuals. These are Early-Care Centres, Special Education Centres and the Czech Blind United (Sjednocená organizace nevidomých a slabozrakých). The final, ninth chapter, is devoted to art therapy as a means of the development of individuals with severe visual impairment.

The respective chapters are systematically, logically and clearly structured. Each chapter starts with a short introduction into the area. The publication is supplemented with photographs and interesting links in order to provide the reader with a comprehensive overview of the issues. The book, written in scholarly language, is primarily intended for students of special education, typhlopedics, special educators and psychologists. However, people with visual impairment and their relatives may also benefit from reading the book.

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Best practices in special education in Nigeria

OYUNDOYIN, J. In T. A. Ajobiwe & K. Adebisi (Eds.). *Access and Quality of Special Educational Needs Service delivery in Nigeria*. Ibadan-Nigeria: Glory-Land Publishing Company, 2013.

(book review)

Reviewed by James Abua Ewa

Prof. John Oyundoyin is a lecturer in the Department of Special Education, University of Ibadan, Nigeria. He has published many researched articles in Deaf education in both local and international journals.

In this article, the author tries to review the best practices that can be adopted to ensure effective service delivery to the special needs children in Nigeria. According to the writer, 'Best Practices in special needs education implies in meeting the needs of the persons with special educational needs and challenges, the concept of special education service delivery must be a holistic and individual centred program. This will make the service delivery interesting and beneficial to persons with special needs, their families and the executors of the special education programmes. Accordingly, the author identified the parameters that can facilitate best practices of special needs education service delivery to include:

- Total adherence to the fundamental Tenets of Special education.
- Making use of highly qualified special educators.
- Adoption of responsible practices of special education.
- Practical practices of individualized education programme and conferencing.
- Utilization of the principle of Responsible classroom practices.
- Provision of accommodations.
- The need for instructional modification.
- The use of Assistive Technology (AT) devices.
- Advocacy and awareness creation.
- Full implementation of inclusion/inclusive education practices.
- People first.
- Collaborative services from related disciplines.
- Parental involvement.
- Community efforts.

The author upholds that best practices of special education services delivery can be attained if the current trend on inclusive education is put in place. The reason being that inclusion simply aims at removing all forms of labelling and by placing all children in their nearest neighbourhood schools, regardless of the type of disabilities and the level of severity. Moreover, it has been observed that segregation of children in special classes denies these children access to normal experiences and that segregated services have not only but have also resulted in inadequate education for the children with special needs/disabilities. Inclusion on the other hand portrays there are no differences between children with disabilities and those without disabilities thereby encouraging all children to be part of the general education class. The author pointed out that inclusion has been widely supported by governments worldwide and in essence, it assumes that children with special needs are a part of the society and should be educated based on the principles of normalization, that is all persons regardless of ability should live and learn in environment as close to normal as possible (Wolfenbargers, 1972, The Salamanca Statement UNESCO, 1994). The basic idea behind normalization is that persons with special needs should be viewed in the ways in which they are the same as other people, rather than on the way in which they are different.

The author noted that lack of awareness about learners with special educational needs by service providers, policy makers and the community at large is a common problem. In that presently in Nigeria, there is low level of advocacy and lobbying for the rights of persons with disabilities by concern parents, communities and disability organizations. Therefore, owing to that, issues relating to special needs education and disability have not been given prominence in public meetings and the media. He pointed out further that the best practices in special needs education are practices that advocate for the rights of persons with special needs/disabilities and ensure that they are fairly treated. This is because persons with disabilities are marginalized. The marginalization which is largely founded on misconceptions and mistaken beliefs, cultural practices and attitudes which have led to prejudice paternalistic treatment and at times, outright discrimination and as a result majority of persons with disabilities have limited access to education due to lack of public awareness on the capabilities of the individuals with special needs that would have otherwise addressed these issues.

The writer opines that the best practices in special needs education service delivery can be on the offing with multidisciplinary collaboration, the use of assistive technology devices, parental involvement as well as community efforts put in place, much can be achieved. He sums up by holding that:

- Special education programmes and services should be a top priority of government budget to the education sector, as this is the only means by which the government can show her commitment/concern for persons with special educational needs in the country.

- The official acceptable best practices in special education should be clearly spelt out in the education policies of the countries of the world.
- The use of IEP should be mandated in the education of persons with special needs.
- Frequent on the job training should be made available to the regular classroom teachers in order to acquaint them with the principles and dynamics of special needs education practices.

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Information for authors



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Journal of Exceptional People (JEP), should be based on 2 times a year publishing period in both electronic and traditional – printed form. To guarantee professional standards of the Journal we have applied to the front of special needs teachers, psychologists, therapists and other professionals in the U.S., Finland, Spain, Slovakia, Hungary, China, Russia, Poland and other countries. Above mentioned scientific journal aspires to be registered into the international database of impacted periodicals (Journal Citation Reports).

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