



Communication Skills of Children with Down Syndrome¹

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The purpose of this article is to present the results of a study devoted to the setting of functional cooperation with the interlocutor in children with Down syndrome in a peer group. Analysis of results indicates the relationship between methods of therapy and development of children with Down syndrome. The methods of Alternative and Augmentative Communication (AAC) are important in achieving success in building relationships for children with problems with verbal communication. Secondly, peer group is important to increase social skills. This study shows that children with Down syndrome need similar friends. The above leads to the conclusion that a group with homogeneous disability is the proper area of development.

KEY WORDS: communication skills, peer group, Down syndrome, alternative and augmentative communication (AAC)

The approach to people with disabilities has changed throughout the last century. De-institutionalisation, integration and normalisation have resulted in the fact that more people with disabilities

¹ The text presents selected results of studies from a PhD dissertation, published in a monograph entitled „Wspomaganie rozwoju społecznego dziecka z zespołem Downa w przedszkolnej grupie rówieśniczej”, Oficyna Wydawnicza Atut – Wrocławskie Wydawnictwa Oświatowe, Wrocław 2017.

were able to change their social position. Helplessness and isolation gave way to hope, empowerment, activity, fulfilment and sense of life.

Changes in the attitude towards people with difficulties in development has set a new direction for support which I would like to present using the example of studies conducted among children with Down Syndrome (in a further part of the text, the DS abbreviation will be used). Małgorzata Skórczyńska notes that in the recent times, more emphasis has been placed on supporting the development of children with this syndrome by encouraging them to take part in activities in which they can make use of their skills and talents². Nevertheless, certain specific features accompanying their development will always determine the accomplished successes or experienced failures. In relation to this, the educational needs of such children, understood as learning needs, are fulfilled by taking the individual potential into account, including hindrances and blockades in development which determine the mode and the conditions of meeting such needs. However, this does not form a basis to separate, among all needs of a child, special educational needs. In children with DS, these needs are the same as in their fully able peers. Satisfaction and fulfilment of such needs sometimes requires adjustment of the mode of pedagogical activities to the varied levels of the child's development. Wincenty Okoń emphasises that the purpose of such procedure is to ensure a maximum possibility of development for children with varied capacities³.

Specific features that influence the capacity of children with DS to participate in contacts with other people, as well as learning, have varying intensity in different individuals. They include hypotonia, i.e. weak muscular pressure, which impacts manual and motor skills. Here, as a consequence of the above, it is possible to perceive a more limited participation in games involving movement,

² M. Skórczyńska, *Wspomaganie rozwoju dziecka z zespołem Downa w wieku przedszkolnym*, [in:] *Wczesna interwencja i wspomaganie rozwoju małego dziecka*, ed. B. Cytowska, B. Winczura, Oficyna Wydawnicza „Impuls”, Kraków 2008, p. 345.

³ W. Okoń, *Nowy słownik pedagogiczny*, Żak Wydawnictwo Akademickie, Warsaw 1998, p. 134.

which constitute one of the basic activities of children. Other features which may affect the functioning of children among peers may include: lower efficiency of speech apparatus, problems with speech and language, slower rate of expressive vocabulary development and lexical and syntactic deficits. Monika Nikłasińska examined the manner in which healthy children perceive their disabled peers from kindergarten. She proved that for fully able children from kindergarten, readiness to play, clarity of communications and mode of showing emotions were more important than intellectual skills and external appearance. On account of the inborn desire to establish contact, children with DS excited the desire to offer assistance and care in other children⁴. To confirm this, it is worth comparing results on the functioning of children with autism spectrum disorder, whose unpredictable and unclear behaviour is often the cause of reluctance and rejection by peers. The ability to co-exist in a group is combined with the development of the mind theory, i.e. the ability to read somebody's thoughts and emotions. Children with DS have a high level of empathy, which positively affects the building of contacts in a group. At the same time, it is necessary to be aware of the fact that even though the age of social maturity is moving forward, children with DS will never accomplish full emotional maturity (expressing, recognizing and controlling emotions). It may be concluded that children with DS will better function in simple social situations. Circumstances that are incomprehensible may trigger off difficult behaviour in them⁵. An example of such behaviour that may be observed in the work with kindergarten groups is de-concentration, abandoning play in a circle, talking, provoking other children, fussing with pieces of cloth-

⁴ B. Bartosik, L. Sadowska, A.M. Choińska, *Dojrzałość społeczna dzieci z zespołem Downa rehabilitowanych zgodnie z zasadami Wrocławskiego Modelu Usprawniania w środowisku rodzinnym*, [in:] *Zespół Downa – postępy w leczeniu, rehabilitacji i edukacji*, ed. J. Patkiewicz, Polskie Towarzystwo Walki z Kalectwem, Wrocław 2008, pp. 106–107.

⁵ B. Bartosik, L. Sadowska, A.M. Choińska, *Dojrzałość społeczna dzieci z zespołem Downa rehabilitowanych zgodnie z zasadami Wrocławskiego Modelu Usprawniania w środowisku rodzinnym*, [in:] *Zespół Downa – postępy w leczeniu, rehabilitacji i edukacji*, ed. J. Patkiewicz, Polskie Towarzystwo Walki z Kalectwem, Wrocław 2008, p. 108.

ing, vocalisation, boredom. The teacher's awareness that such behaviour is not a manifestation of the child's bad intentions, but a limited potential in the cognitive realm is crucial for the process of education and therapy. The child's difficult behaviour is not meant to undermine the teacher's position, but it is a cry for the adjustment of methods, forms and means of work to the child's needs.

These children, apart from motor difficulties and difficulties in the area of verbal communication, also suffer from sensory deficits (visual and auditory). Yet first and foremost, psychical processes are less developed; there are difficulties in short-term auditory memory, shorter attention span, cognitive delays, difficulties with generalising, connecting knowledge with previously acquired knowledge and its storage and understanding.

In relation to the above, Alina Smyczek⁶, an expert in the area of alternative and augmentative communication, suggests that situations of multi-sensory cognition should be arranged. Multi-modality of the message consists in the fact that verbal communication (dominant in the instruction-based method of education) is intensified by a non-verbal communication (a look, a gesture indicating places or persons, an item, a manual or a graphic sign). It is necessary to engage various systems of perception, which:

- improves understanding (receptive communication): word + visual stimulus + movement (gesture) increase the chances of understanding the situation and the communication addressed to the child; exhibiting an item/ a graphic sign and/ or a manual sign + uttering a word teaches the child the modes of representing (marking) elements of reality;
- creates conditions for expression (expressive communication): a new code for communication is built - spatial and tactile signs, manual and graphic signs are easier to use for the child; the adult models the potential communication behaviour of

⁶ A. Smyczek, *Zastosowanie wspomagających i alternatywnych metod komunikacji (AAC approach) w terapii małych dzieci zagrożonych poważnymi zaburzeniami w porozumiewaniu się*, [in:] *Alternatywne i wspomagające metody komunikacji*, ed. J.J. Błeszyński, Oficyna Wydawnicza „Impuls”, Kraków 2006, p. 79.

the child; the repertoire, efficiency and speed of transmitting communications by the child in safe conditions increases - there is no threat of being misunderstood by persons from the immediate surroundings.

Children with DS acquire new skills by learning based on the use of the visual channel and ability to learn with the use of gestures and visual signs, e.g. pictures⁷. This leads to the conclusion that supporting the development of such children is possible by applying adequate methods of work (adjusted to the specific development and individual potential, and not applied, for example, on account of the commonly approved efficiency).

An adequate method gives the child an opportunity to develop the modes of communication that are available to him/ her. This is important on account of the second constitutive condition of development of children with DS in the group, i.e. dialogue (even without words) based on ties among children and significant others. Significant others may include peers with DS, fully able peers and teachers or therapists. Being in a communication and in a relation results in the fact that a person feels accepted, important, respected by others and also needed by others. "Rejection, separation and exclusion are painful, because we are no longer in a circle where we are obliged to take care of each other, offer help to each other and where we are liable for each other. This entails being in a depopulated area, in a place of carelessness"⁸.

Study Methodology

As a special education teacher in a kindergarten integration group, I observed children with DS from the point of view of their

⁷ A. Żyta, *Życie z zespołem Downa. Narracja biograficzne rodziców, rodzeństwa i dorosłych osób z zespołem Downa*, Oficyna Wydawnicza „Impuls”, Kraków 2011, p. 38.

⁸ J. Mizińska, *Troska o Innego – potrzeba bycia potrzebnym*, [in:] *Troska o Innego. Szkice humanistyczne*, ed. J. Sońnicka, J. Dobrołowicz, Kieleckie Towarzystwo Naukowe, Instytut Pedagogiki i Psychologii Uniwersytetu Jana Kochanowskiego, Kielce 2011, p. 13.

disrupted development and difficulties in meeting the expectations addressed to them; on the other hand, I saw children among other children who were aiming for establishing relations and who built them in a specific manner. Thus, it was important to perceive social mechanisms and tendencies that transpire in the functioning of such children by means of studies (observation, analysis of behaviour) and to find a way to support psycho-social development of children with DS.

The diagnosis of psycho-social development of children took place on the basis of analysis of documentation, i.e.:

- decision of a psychological and pedagogical clinic about the necessity of special education;
- individual educational and therapeutic programme prepared for every child from year 2010/2011, preceding the year of the experiment;
- daily log of revalidation and didactic classes conducted by a teacher;
- observation book of behaviour of children with DS prepared in the form of socio-grams in the situations of free play, instructed play and organised classes from year 2010/2011;
- talks conducted with children, teachers and educators taking care of the child.

The tools for diagnosis of psycho-social development were P-PAC and P-PAC-1 of H.C. Gunzburg (PAC: Progress Assessment Chart⁹).

Additionally, the "Communication Efficiency Profile" of Magdalena Grycman was determined for every child prior to the implementation of the experimental project of didactic and therapeutic impact¹⁰. The author of the tool suggested that the evaluation of the children's communication efficiency consisted of the ability to communicate information, to build utterances, functional interac-

⁹ T. Witkowski, *Metody PAC i PAS w społecznej rewalidacji upośledzonych umysłowo*, Centralny Ośrodek Metodyczny Poradnictwa Wychowawczo-Zawodowego Ministerstwa Edukacji Narodowej, Warsaw 1988, p. 3.

¹⁰ M. Grycman, *Sprawdź, jak się porozumiewam*, Stowarzyszenie Rehabilitacyjne Centrum Rozwoju Porozumiewania, Kraków 2009, p. 6.

tion with the interlocutor (conversation-based interaction), general attitude and motivation to communication. Based on such tools, I evaluated the communication skills (communication is the sphere least developed and disrupting the functioning of children in the group). Subsequently, I created a programme of tasks and interactive plays developing communication skills. The programme of didactic and therapeutic measures entitled "I Can Speak" was prepared for five children with DS and diversified with respect to the needs and the potential of every child.

When diagnosing the functional interaction with an interlocutor, I used the levels proposed by M. Grycman¹¹:

Level 0: complete lack of interaction during communication: passivity in contacts with the interlocutor, potentially difficult behaviour, e.g. biting and auto-stimulating behaviour, e.g. swinging, hitting the wall.

Level 1: almost complete lack of interaction during communication, one type of communication behaviour from the group or negating or requesting types of behaviour;

Level 2: brief moments of interaction. The other person maintains the conversation, the respondent requires assistance to maintain contact, e.g. the interlocutor says: "I do not understand what you are saying. I will be asking other questions to find it out. Did you mean water?" If the respondent is unable to communicate his/her thoughts, it is possible to observe withdrawing behaviour, e.g. averting eyes from the communication partner, change in mood.

Level 3: clear absence of balance between the role of the speaker and the listener. In the conversation with the child, there are irritating breaks, which result from misunderstandings. There is no balance between the roles of the speaker and the listener. The active person in the dialogue is the speaker. Such person initiates the conversation and keeps it going. During the conversation, the respondent does not withdraw from conversation, he/ she is

¹¹ M. Grycman, *Sprawdź, jak się porozumiewam*, Stowarzyszenie Rehabilitacyjne Centrum Rozwoju Porozumiewania, Kraków 2009, p. 16.

capable of active cooperation in search of proper understanding of the communication that he/ she wishes to impart. He/ she prompts words that may lead the listener in the right direction of the conversation.

Level 4: quite good interaction, yet there are difficulties with maintaining it. No effort is observed in relation to the purpose and direction of the selected form of conversation. It refers to a single subject matter. There may be lack of clarity with respect to the structure related to communication, e.g. a clear commencement, elaboration and end, e.g. the respondent expresses a wish at the beginning: "I want to play with you" when the social standard is to say "hello" to a person whom we see for the first day on a given day.

Level 5: good functional interaction. The respondent has a good feeling of balance between the role of the speaker and the listener. The message is unequivocal, compliant with the subject matter.

In my study, I decided to apply the method of a quasi-experiment. The model of this experiment does not fulfil the randomisation requirement, thence the quasi-experiment (qE). The sampling of groups in my studies was purposive. As a researcher, I did not have the possibility of creating an experimental and control group by random assignment from a common sample (I worked as a teacher in a group of children with DS, assigned to me by the headmasters of the facility). I found an existing control group *in situ*, which seemed similar to the experimental group (in methodology known as a non-equivalent control group)¹². The advantages of the quasi-experimental plan included the possibility of conducting studies in natural and real conditions. In such quasi-experimental plan, the following drawbacks may be indicated: lack of proper control over alternative explanations as to what affects difficulties when formulating unequivocal conclusions. The second weakness of the plan was the researcher's inability to manipulate

¹² E. Babbie, *Podstawy badań społecznych*, translated by W. Betkiewicz, M. Bucholc, P. Gadomski et al., PWN, Warsaw 2013, p. 400.

the independent variable; due to this, it was necessary to determine the direction of cause and effect relation only by logical or theoretical concluding.

Organisation and Area of Study

Out of over 100 public kindergartens and approx. 30 non-public kindergartens in Wrocław, I chose integration facilities in the purposive sampling for the study. Among such kindergartens in purposive sampling, I selected these facilities which have been implementing the premises of inclusive education for groups with uniform disability since 2009 and I looked for children with DS in such kindergartens. The sampling was conditioned by the child's participation in the integration group in which there are 1-4 peers with the same disorder.

Subsequently, I divided the group of 15 children with DS into a control and experimental group. The division was purposive due to the fact that as a researcher, I also acted as the special education teacher, implementing the didactic and therapeutic programme in the experimental group.

In the summer semester of 2010/2011, I prepared an observation book for nine children with DS (in the form of socio-grams), picturing the psycho-social functioning of children in the peer group (five children from the experimental group and four from the control group). The observations were carried out in situations of free play, instructed play and classes organised with respect to interaction with peers.

At the stage of pilot study, it has turned out that communication on the part of fully able children in the direction of observed children with DS is exceptionally rare and non-spontaneous. Lack of mutual understanding resulted in the fact that they were not attractive partners for play and companions in joint tasks. Furthermore, it was clear that children had difficulties with understanding requirements and situations arranged by teachers in the kindergarten,

as well as could not physically handle them on account of weaker, as compared to their peers, motor development. The observation of emotions experienced by children suggested a comparison to emotions that accompany a person who just “missed” a bus (in spite of exercising maximum effort, a person running to the bus stop to which a bus has just arrived, is limited by his/ her capacity; he/ she cannot move faster or stop the driver; emotions experienced by such person when the bus is leaving include anger, regret, frustration, despondence, withdrawal). Such emotions accompanied every child several times a day (e.g. when a peer was quicker to get a ball and played with it; when a peer built a higher tower; when a peer was able to get dressed quickly and without difficulties, and was later praised by the teacher).

The experimental procedure (and thus therapeutic work, conducted individually and in groups) lasted from October 2011 to June 2012. The therapy encompassed stimulation of all spheres of development with special attention given to communication. Verbal communication was accompanied by elements of alternative and augmentative communication: primarily natural gestures and signs derived from the GuK system: Gebarden unterstutze Kommunikation – “gesture-supported communication”¹³), items, item-related tactile symbols, photos, selected PCS symbols, pictograms.

After nine months of therapy, final measurement of the level of psycho-social development of every child was made with the use of PPAC/PAC-1 tool and the profile for evaluation of communication skills by M. Grycman (as in the initial measurement). Individual descriptions of children’s functioning were prepared. What is more, the pre-test and post-test of results accomplished in individual areas were juxtaposed in the form of a table: self-service skills, communication, socialisation, participation in classes.

Such procedure allowed for examining the role of alternative and augmentative communication in the functional development of

¹³ Method from the scope of Alternative and Augmentative Communication, based on gestures and pictures, created by Professor Etta Wilken, who initially worked with children hard of hearing and later with children with Down Syndrome.

interaction with the interlocutor (on account of a very broad scope of studies, I will only present a part of the results that pertain to the subject matter of this text). I was looking for an answer to the question whether and in which degree a child with DS could be taught the communication skills (receiving and sending) with the application of individual therapeutic programmes built on alternative and augmentative communication methods.

Analysis and Interpretation of Study Results

Aleksandra Maciarz¹⁴ emphasised that mastering various types of social skills is conditioned by the formation of motor, physical, emotional, motivation and intellectual disposition in children. In relation to the fact that all children with DS are accompanied by deficits or delays in the above-listed disposition, it was essential to support these areas in a mode that makes their functioning in a peer group easier.

Participant observation and performance of studies in a group where apart from fully able children (15), there were also children with a uniform disorder (in this case, five children with DS) showed that this may be a key solution for supporting social development of children with development difficulties. The group of children with DS started to function within a group that presented models of correct social behaviour. Daily observation of interactions among children with DS led to the conclusion that apart from social development, children stood a chance for a happy personal development.

The observations have shown that the source of the feeling of happiness, safety, joy and satisfaction from contacts among children with DS is the conviction about mutual similarity. Children with DS noticed that they were similar in a number of dimensions: they looked similar, they saw similar behaviour (e.g. stubbornness, hug-

¹⁴ A. Maciarz, *Rewalidacja społeczna dzieci*, Wyższa Szkoła Pedagogiczna, Zielona Góra 1981, p. 23.

ging) and they copied such behaviour, often uncritically. The cause for the feeling of communion were also experiences resulting from the same or similar treatment by teachers and experts (during games and classes, they were usually assigned to one group; they often expected it; the same/ similar requirements were set for them). Children with DS also performed categorisation. A majority of observed children during free play chose children with the same disability as partners. During organised activities, at tables or on the carpet, they chose places close to one another (even when they were assigned places at a distance, they changed them after a moment).

This indicates a close and important bond between the children. Bonds are the foundations for friendship. Having a friend results in the fact that a child has a better opinion about himself/ herself, feels liked and appreciated, has better access to play, which is the basic form of the child's activity. In studies performed by Judy Dunn, four year-old friends also turned out to be similar with respect to the level of understanding the thoughts and feelings of other people, in their verbal capacity and with respect to overall intelligence¹⁵.

Alternative and augmentative communication (AAC) made it easier for children to communicate with their immediate environment. However, the immediate environment is not to be understood as proxemically close, but close on account of bonds and trust which the children had in selected persons. Development of communication skills took place in interactions among children with DS and between children and adults (teacher and other therapists).

Alternative and augmentative communication accompanied children in natural situations; it was a means to an end, and not an end in itself. Mastering of familiarity with gestures and pictures also took place in the office in the form of games and not instruction-based learning. At the moment of commencement of therapy, children communicated with the use of all means available to them, thus the selection of the system of signs took into account their communication skills.

¹⁵ J. Dunn, *Przyjaźnie dzieci*, Wyd. Uniwersytetu Jagiellońskiego, Kraków 2008, p. 53.

By means of the proposed impact, the basic direction of social development has been set. Children, thanks to the use of gestures, pictures and vocalisation became more and more independent, self-confident, composed and ready to undertake tasks. The outcomes included new (socially accepted) forms of behaviour, new interests, extension of the circle of friends, ability to enter into social interactions conditioned by readiness for verbal and non-verbal communication.

A social individual not only co-exists with others, but also cooperates with them. The studies led to the conclusion that children with DS are able to adjust to daily life in various degrees. This is primarily determined by the degree of development disorder. The second factor is the environment which should look for a place of meeting, a dialogue beyond such disorder. In children who were offered assistance in the form of AAC, it was possible to see progress in the area of communication skills. The range of improvement of this area after a year of work was different in the case of every child.

Paulina¹⁶ at the beginning of the study primarily used vocalisation and communicated clear "yes" / "no". After nine months, the girl's dominant forms of communication were gestures; she showed a number of daily-use items and activities: doll, fish, bread, yoghurt, cat, dog, banana, apple, car, train, eat, sleep, drink, dress, play on the computer (with an intention that she needed this item or activity); she used simple words - mum, dad, Mata - Marta (sister), Basia (babysitter), Aga (teacher).

Mateusz mainly communicated via mimicry and single words and treated gestures as a play and did not transfer their functions to daily life. He usually copied them after other children without any intention. It seemed that he wanted to get close to them through such activity. In line with his parents' decision, after the end of the school year he continued education in a special school.

¹⁶ Children's names were changed.

Kuba advanced from vocalisation and gestures to communication with the use of simple sentences, consisting of 3–4 words, e.g. “Karol goes to the swimming pool”, “Aga, don’t go home”.

Adrian, after a year of systematic exercises, communicated with the use of gestures and did it so fast that it was often difficult to keep up with the course of “recounted” events. He told entire stories, which testifies to his smartness and development of cause-and-effect thinking; he re-enacted scenes from fairy-tales, e.g. he used gestures to re-enact Zig-Zag McQueen that moves fast, suddenly stops because he drove into a nail; Adaś took out a jack, lifted the car, changed the type, wiped dirty hands on his trousers, then wiped his forehead, got into the car, waved goodbye and drove off.

Wiktoria: she vocalised and gestured a lot; words in the form of elision started to appear: mum, dad, Róża (sister), “Aa” (Aga – teacher), “Aś” (Adaś), “Ol” (Karol). She expected, similarly to Adaś, that her language would be commented on.

In a situation when I incorrectly interpreted a gesture or vocalisation, children said “no” or shook their heads/ fingers and repeated the gesture slower and more precisely. Here, it is possible to draw an analogy to a situation when a foreigner arrives in a country whose language he/ she does not know and has to ask for directions. Even though the native explains and repeats the words slowly and loud, maintaining eye contact, this does not result in understanding of the message, as it is still in an unknown language. Meanwhile, it is sufficient to change the verbal code for a gesture or a map drawn on a piece of paper to understand each other.

The observations of children (for subsequent four years, I was a special education teacher in a facility attended by children who took part in the experimental procedure) led to the conclusion that manual signs positively influence learning of speech. All children started to use verbal communication in a smaller or greater degree.

Learning of manual, graphic, spatial and tactile signs very often starts too late. The main reason may be fears that teaching a child alternative communication may hinder the development of speech. Meanwhile, speech and alternative forms of communication do not exclude each other.

Efficient communication is a great personal accomplishment for a child, which results in causal joy and the necessity of improving contacts with significant others.

The characteristic features of behaviour of children who had the possibility of compensating verbal communication with the use of gestures or pictures were harmony and peace. Children were more willing to undertake renewed attempts at communicating when they were misunderstood, and they looked for other ways because they were aware that the environment wanted to understand them. Such behaviour of clemency, high spirits, fearless acceptance of challenges transferred to social behaviour. The frequency of biting and shoving among children with DS (this was often the line of self-defence, when a fully-able peer was physically and verbally stronger in a conflict for a toy) was reduced. Children with DS could approach a teacher and show who harmed them or even re-enact the scene in which they were wronged.

Thanks to thematic boards, it was possible to maintain a dialogue with children in which they decided about its course.

Children did not communicate with everybody with the use of gestures and pictures. They consciously chose a person with whom they wanted to talk. Most frequently, these were peers with DS, fully able peers with mild and caring nature or adults. Children knew who wanted and was capable of interacting and communicating with them. These persons were often included in games organised by children with DS. It may be said that a certain culture of play has developed among these children. It was dominated by simple and clear rules, which could be explained with the use of gestures. Here, it was possible to see the greatest application of gestures which the children learnt via augmentative communication. The rules of a play could be understood also from the prepared aids, e.g. a thematic play "birthday": the children prepared a table, settings, draw a birthday cake on a card, pretended that they played "Happy Birthday" on guitar (the teacher, when one of the members of the group had birthday, usually played "Happy Birthday" on guitar – and children carefully re-enacted this scene in their play).

Another form were theatre scenes where they re-enacted situations that they saw in the past (from fairy-tales, films, other theatre plays) or used puppets to do it. In spite of the fact that there were no verbal parts here, children tried to communicate the content of the play most faithfully with the use of mimicry, gestures and proxemics. They engaged a lot of emotions and were able to re-enact emotions of characters of the play (through this, they learnt to express them). They also set up the audience, welcomed the viewers to watch the performance by gestures and subsequently encouraged them to applaud.

In task-based situations, thanks to gestures and pictures, it was possible to maintain the children's attention for longer periods of time. This was the result of the fact that they understood the tasks better. Even though they were frequently unable to finish a task independently, yet with maintenance of attention and thanks to visual instruction, it was easier for them. Furthermore, it is important to give the child more time to understand the information that was heard and to prepare an answer, which results from delayed time of reaction, characteristic for children with DS.

Recapitulation and Conclusions

Summing up, the specific nature of neurological development of children with DS affects their learning. However, knowledge about such development among teachers and parents makes us liable for searching for methods thanks to which the child will more efficiently internalise specific materials and skills. Determination of specific features of development, i.e. an individual profile of the child's weak and strong sides sets the direction of work.

Children with DS, just as all other children, in a mode more or less clear for the environment, aim for contacts with other people, in particular their peers. They try to establish contacts due to various reasons, e.g. social ones, guided by the desire to communicate what

they think and feel in a given moment, to receive information that is important for them, to communicate a desire or to procure assistance for others. The necessity of establishing such contacts is often released by the situation conducive to communication, e.g. via play. The ability to communicate and to receive linguistic and verbal, correctly constructed communications which are one of the significant features for man, is sometimes hardly available for persons with DS. However, in reality they handle this problem well. In a communication situation, they use the means that are available to them and that assist their communication with the environment, i.e. various types of gestures, mimicry, important proxemic signs for the recipient. Communicating information not only takes place verbally, but also non-verbally (non-verbal communication). Non-verbal signals may be communicated and received via the oral and auditory channel, oral, auditory and kinesic channel or kinetic, optical and emotional channel, which facilities – in particular for children with DS – establishment of contacts with the environment¹⁷.

Summing up, the fundamental task for the organisers of kindergarten education is to build such conditions where children with disabilities will have peers that are similar to them (in various respects). Conviction about mutual similarity brings them closer and protects them from loneliness. Groups with a homogeneous disorder are undoubtedly a good solution in this respect. This results from the fact that they offer a possibility of identifying with somebody who has a similar potential and limitations, which, in effect, builds a feeling of safety. Such safety is a foundation for establishment of bonds conditioning a person's development in all areas. Establishment of bonds also via multi-modal communication with the child affects his/ her happier functioning in the environment.

¹⁷ E.M. Minczakiewicz, J.J. Bleszyński, *Niepełnosprawność intelektualna jako zaburzenie współwystępujące*, [in:] *Diagnoza i terapia logopedyczna osób z niepełnosprawnością intelektualną*, ed. J.J. Bleszyński, K. Kaczorowska-Bray, Wydawnictwo Harmonia, Gdańsk 2012, p. 79–80.

A person who wishes to contact the child (a teacher, a peer) searches for paths of understanding and makes the child fully accepted the way she/ he is.

Bibliography

- Babbie E., *Podstawy badań społecznych*, translated by W. Betkiewicz, M. Bucholc, P. Gadomski i in., PWN, Warsaw 2013.
- Bartosik B., Sadowska L., Choińska A.M., *Dojrzałość społeczna dzieci z zespołem Downa rehabilitowanych zgodnie z zasadami Wrocławskiego Modelu Usprawniania w środowisku rodzinnym*, [in:] *Zespół Downa – postępy w leczeniu, rehabilitacji i edukacji*, ed. J. Patkiewicz, Polskie Towarzystwo Walki z Kalectwem, Wrocław 2008.
- Dunn J., *Przyjaźnie dzieci*, Wyd. Uniwersytetu Jagiellońskiego, Kraków 2008.
- Grycman M., *Sprawdź, jak się porozumiewam*, Stowarzyszenie Rehabilitacyjne Centrum Rozwoju Porozumiewania, Kraków 2009.
- Jędrzejowska A., *Wspomaganie rozwoju społecznego dziecka z zespołem Downa w przedszkolnej grupie rówieśniczej*, Oficyna Wydawnicza Atut – Wrocławskie Wydawnictwa Oświatowe, Wrocław 2017.
- Maciarz A., *Rewalidacja społeczna dzieci*, Wyższa Szkoła Pedagogiczna, Zielona Góra 1981.
- Minczakiewicz E.M., Bleszyński J.J., *Niepełnosprawność intelektualna jako zaburzenie współwystępujące*, [in:] *Diagnoza i terapia logopedyczna osób z niepełnosprawnością intelektualną*, ed. J.J. Bleszyński, K. Kaczorowska-Bray, Wydawnictwo Harmonia, Gdańsk 2012.
- Mizińska J., *Troska o Innego – potrzeba bycia potrzebnym*, [in:] *Troska o Innego. Szkice humanistyczne*, ed. J. Sońnicka, J. Dobrołowicz, Kieleckie Towarzystwo Naukowe, Instytut Pedagogiki i Psychologii Uniwersytetu Jana Kochanowskiego, Kielce, 2011.
- Okoń W., *Nowy słownik pedagogiczny*, Żak Wydawnictwo Akademickie, Warsaw 1998.
- Skórczyńska M., *Wspomaganie rozwoju dziecka z zespołem Downa w wieku przedszkolnym*, [in:] *Wczesna interwencja i wspomaganie rozwoju małego dziecka*, ed. B. Cytowska, B. Winczura Oficyna Wydawnicza „Impuls”, Kraków 2008.
- Smyczek A., *Zastosowanie wspomagających i alternatywnych metod komunikacji (AAC approach) w terapii małych dzieci zagrożonych poważnymi zaburzeniami w porozumiewaniu się*, [in:] *Alternatywne i wspomagające metody komunikacji*, ed. J.J. Bleszyński, Oficyna Wydawnicza „Impuls”, Kraków 2006.

- Trybuś M., *Rola komunikacji niewerbalnej w relacji nauczyciel – dziecko*, [in:] *Rozwój daje radość. Terapia dzieci upośledzonych umysłowo w stopniu głębokim*, ed. J. Kielin, Gdańskie Wydawnictwo Psychologiczne, Gdańsk 1999.
- Witkowski T., *Metody PAC i PAS w społecznej rewalidacji upośledzonych umysłowo*, Centralny Ośrodek Metodyczny Poradnictwa Wychowawczo-Zawodowego Ministerstwa Edukacji Narodowej, Warsaw 1988.
- Żyła A., *Życie z zespołem Downa. Narracje biograficzne rodziców, rodzeństwa i dorosłych osób z zespołem Downa*, Oficyna Wydawnicza „Impuls”, Kraków 2011.