



THE CONTRIBUTION OF TACTILE SYMBOLS FOR THE COMMUNICATION OF CHILDREN WITH MULTIPLE SENSORY DISABILITYⁱ

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Abstract:

This paper aims to present orientations and alternative forms of education based on strategies that favor the communication of students with multiple sensory disabilities, especially those with visual impairment associated with other impairments, from the use of tactile symbols and from alternative and extended communication. There are several resources that are used to promote the communication of these people, but here he has chosen to present the Alternative and Expanded Communication and the Tactile Symbols, in order to answer the following question: can alternative communication and tactile symbols favor the communication of these students? Language can be an inclusive factor and its lack can lead to exclusion, because when a person can not understand what others are saying or making themselves understood by others, it is no longer included in the various social situations. In this way, it was concluded that it is convenient to devise strategies, adapt resources of alternative communication and turn them into alternative communication resources with tactile symbols, to favor the language and autonomy of these students. And that alternative communication and tactile symbols are effective resources to favor the communication of those who do not communicate functionally.

Keywords: multiple sensory deficiency, alternative communication and tactile symbols

Resumo:

Este artigo tem como objetivo apresentar orientações e formas alternativas de educação baseadas em estratégias que favoreçam a comunicação de alunos com múltiplas deficiências sensoriais, especialmente aqueles com deficiência visual associada a outros

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comprometimentos, a partir do uso de símbolos táteis e da comunicação alternativa e ampliada. Existem vários recursos que são usados para promover a comunicação dessas pessoas, mas aqui nós escolhemos apresentar a Comunicação Alternativa e Ampliada e os Símbolos Táteis, para responder à seguinte questão: a comunicação alternativa com os símbolos táteis pode favorecer a comunicação desses alunos? A linguagem pode ser um fator inclusivo e sua falta pode levar à exclusão, porque quando uma pessoa não consegue entender o que os outros estão dizendo ou se fazer entender para os outros, ela deixa de ser incluída nas diversas situações sociais. Dessa forma, concluiu-se que é conveniente elaborar estratégias, adaptar recursos de comunicação alternativa e transformá-los em recursos alternativos de comunicação com símbolos táteis, para favorecer a linguagem e a autonomia desses alunos. E que a comunicação alternativa e os símbolos táteis são recursos eficazes para favorecer a comunicação daqueles que não se comunicam funcionalmente.

Palavras-Chave: deficiência múltipla sensorial, comunicação alternativa e símbolos táteis.

1. Introduction

Because they do not have reliable access to clear visual and auditory information, children with multiple sensory disabilities should accept and rely on pre-determined and generic modes of learning (Chen; Downing; Rodriguez-Gil, 2001). Thus, it is universally recognized that there is a need to adapt the modes of learning that make them compatible with the people for whom they are intended, but it is still recurrent to teach children and adults alike with different limitations (Von Tetzchner, Martinsen, 2000).

For many of these children, touch is the most elementary form of communication, and although there are a variety of tactile strategies that are often used with these children, there is still little evidence based on research attesting to their effectiveness. However, the great challenge in identifying tactile strategies valid for children with multiple sensory impairment, particularly those with visual impairment associated with cognitive or physical impairments, is recognized. According to Von Tetzchner and Martinsen (2000), the great obstacle refers to the lack of distinction of objectives and teaching methods for people with different types of needs. Thus, what is proposed in this work is not to offer a "recipe" that solves all problems, but rather to present orientations and alternative forms of education based on strategies that favor the communication of these students through alternative communication and tactile symbols, that is, symbols that serve to represent actions, people, objects, days and months of the year.

2. Communication as an Inclusive Factor

Many people with severe limitations in language and communication reveal a great lack of knowledge about everyday activities and events. In some cases, they are taken passively from one place to another, from one activity to another, without being able to anticipate what will happen later and, consequently, they can not organize themselves to understand the sequence of events (Von Tetzchner; Martinsen, 2000). According to these authors, these children also can not take initiative to participate actively in the activities presented, clearly show preference or dislike for what is being proposed.

For these reasons, inclusive pedagogical practice for children with multiple sensory disabilities requires both practical modifications and complementary integration between professionals from different areas of knowledge (education, physiotherapy, occupational therapy, speech therapy, psychology) and these with the family in order to information about the child's daily needs, preferences, communication skills and daily routine. The elaboration of inclusive pedagogical practices is a task that challenges educators and the school. Such a challenge is to develop a child-centered pedagogy that can effectively serve all children, including those with severe disadvantages (Brazil, 1994).

Stainback and Stainback (1999) cite the three essential factors that must be added to the inclusive process. The first factor is the organizational component, including direction, coordination, supervision, guidance and all support staff; the second factor is teamwork. Inclusion is not practiced alone, so teachers and technicians must work together to plan and implement programs that aim to include all students. It is also worth valuing the information coming from families and providing conditions for them to participate in the elaboration of this whole process. The third factor is related to the classroom environment, which should be welcoming and facilitating the learning process in order to provide functional means for all students to develop their skills to access information in the environment, especially those students who do not communicated through oral language. In fact, communication can be seen as an inclusive factor. It should be noted that the communication between the teacher and the student, between the students and especially the different forms of communication that take place in the educational context, are preponderant for the success and inclusion of students with some type of limitation.

Valiati and Gusso (2013) mention that the inability to understand and even understand others seriously affects behavior and may manifest itself in inappropriate behaviors such as, for example, children who self-promote, nod, scream, bite, among other behaviors misunderstood or socially unacceptable. This means that when a child can not develop language through natural pathways, many aspects of their life are seriously undermined. Situations such as these are not distant from our reality, on the contrary, it is estimated that "*one in two hundred people is unable to communicate through speech*" due to neurological, physical, emotional, cognitive, motor or (Nunes, 2003, p.3).

It is known that there are many questions to be researched about the difficulties

of communication presented by this diverse group of people, but in this article we have chosen to direct the analysis to the pedagogical resources that favor the communication of children with sensorial multiple deficiency, with the objective of answering the following question: can alternative communication and tactile symbols facilitate the communication of these children?

3. Language and Communication

Language is the most important process in human development and marks the distinction between man and animals. Its relevance stands out as being an essential factor for the learning of other symbolic systems, such as reading, writing and mathematics and the development of interpersonal communication (Nunes, 2003). In this sense, language is conceptualized as a system of information exchange, formed by a set of arbitrary symbols that are constructed and governed socially by rules that serve to represent ideas about the world, so that the experiences are communicated and their content are transmitted (Nunes, 2003; Scopel; Souza; Lemos, 2012).

Communication, in turn, corresponds to the behaviors that occur during the interaction between two or more people, creating meaning between them. Under this bias, both language and communication are inherent needs and a basic right of all human beings, so the quality of life is associated with the ability to communicate and to make itself understood effectively in the social context where it is inserted. But communication is generally defined as the ability to use speech to express through words the more diverse sensations, feelings, needs and all the clues that make us known and offer us information about others.

Communication is an extremely versatile skill that can be represented by conventional or unconventional signals, by linguistic or non-linguistic forms, and occur through spoken language or other forms of communication and expression. Thus, all people can communicate in some way and the efficiency or quality of this act depends on individual characteristics and environmental factors (Brady, 2016). In this way, interpersonal interaction between two or more people is more comprehensive than oral language, because when we speak we can smile, gesture and use expressions that indicate pleasure, displeasure, agreement or disagreement. In fact, facial expression is an important ally of speech and serves to convey various emotional states such as anger, joy, sadness, fear, disgust, pain and others. In addition to facial expressions, gestures are social resources that also complement speech due to its content of social meanings as regards the indication of people, objects or places, or simply wave to say "bye" or "hi" (Manzini; Deliberato, 2006).

This suggests that all people - even those with severe limitations - can communicate, even through stereotyped behavior, as some people with severe limitations may develop unconventional and very peculiar forms of communication. In this sense, Downing and Falvey (2015) affirm that accepting this suggestion is to favor inclusion and respect the right of all individuals in relation to their communicative acts.

To accept and put into practice this suggestion is also to extend the sense of responsibility to all those who interact with these people in regard to recognizing all their communicative acts as potential and to seeking forms and resources that promote the effectiveness of their communication.

4. Resources and Strategies for Favoring Communication

There are several technological resources that can be used to facilitate our day to day life. In general, we can say that any tool or device such as cellular, remote control, washing machine or television are technologies that facilitate and simplify the accomplishment of several daily tasks (Pelosi, 2011).

The term Assistive Technology (TA) is used, more specifically, to refer to all the resources and services offered to people of all ages for the purpose of promoting and expanding functional abilities that are deficient or enabling a desired need to be met (Pelosi, 2011, Rodrigues, Alves, 2013). According to the Committee on Technical Assistance - CAT, assistive technology can be defined as being

“(...) an area of knowledge, with an interdisciplinary character, encompassing products, resources, methodologies, strategies, practices and services that aim to promote functionality related to the activity and participation of persons with disabilities, disabilities or reduced mobility, aiming at their autonomy, independence, quality of life and social inclusion” (Brazil, 2009).

Resources are all items, equipment, products, materials manufactured in series or made specifically for certain people with the goal of improving their functional capabilities and providing quality of life. They can range from a simple walking stick to sophisticated software. And the services are related to the services rendered by professionals of different areas with the purpose of selecting, elaborating or using assistive technology instruments. The professionals who offer these services can be: physiotherapists, occupational therapists, speech therapists, psychologists, nurses, doctors, engineers, architects, technical professionals of other specialties and educators (Bersch, 2017).

As it turns out, assistive technology is essentially interdisciplinary, as it not only enables the involvement of different professionals; it also involves users and their families. In addition, assistive technology constitutes a wide range of equipment, services, strategies and procedures whose objective is to offer conditions of independence, quality of life and social inclusion (Brazil, 2009; Bersch, 2017). However, this text is dedicated to presenting aspects related to Alternative and Expanded Communication and to Tactile Symbols, which are part of assistive technology.

4.1. Alternative and Expanded Communication (CAA)

Many conditions, arising from congenital or acquired diseases, from trauma or injury that may have occurred during conception, during childbirth, or that have settled at some point in life may lead to inability to communicate. For people who can not communicate due to these factors, as well as due to others caused by different etiological agents, alternative systems using pictographic, ideographic and arbitrary signs / symbols are indicated as effective communication resources (Nunes, 2003).

Thus, Alternative Communication and Extended or Supplementary Communication are resources that replace or supplement speech functions. In the case of Alternative Communication (AC), hand gestures, facial and body expressions, two-dimensional graphic symbols (such as photographs, pictures, drawings and alphabetic language) and three-dimensional (such as real and miniature objects), digitized or synthesized speech which provide the face-to-face communication of people who do not speak (Manzini; Deliberato, 2006).

On the other hand, the Extended or Supplementary Communication (CAS) has the function of promoting, supplementing speech functions and guaranteeing alternative options if the person is not able to express himself through oral language (Bortagarai; Ramos, 2013). It is important to emphasize that CAA does not intend to substitute oral language, since its goal is to achieve it and its great objective is to offer the conditions for the person to communicate not only with their peers but also with other people and in the same situations as those who speak (Tetzchner et al., 2005).

Many researches have demonstrated their effectiveness in improving the communication of people who do not use functional language (Millar; Light; Schlosser, 2006; Lund; Troha, 2008; Sulzer-Azaroff, 2009; Mirenda, 2013; Nunes; Santos, 2015). The CAA consists of resources, strategies and techniques. The features refer to the equipment that will serve to transmit the messages, such as communication boards or a tablet, for example. The strategies correspond to how alternative communication resources will be used and the techniques relate to how the messages are transmitted. This transmission may occur through looking, pointing or picking, through codes or through the choice of other options (Pelosi, 2013).

There are different CAA features that can be adapted to the classroom routine, such as the Picture Communication Symbols (PCS) that was proposed by Johnson (1998) and has 3000 figures that deal with a variety of words in situations of activities daily and practical. Its use requires two conditions: the use of visual acuity and perception to assist people who do not speak to identify the desired symbols and the existence of communication partners to create, maintain and organize communicative situations. The PECS communication system, developed by Bondy and Frosty (1994), can be used individually or in a group, and consists in using the exchange of figures with the presentation of sentences, each of which is composed of specific objectives, environmental arrangement, instructions and training procedures. PECS can be used in many places such as at home, at school and elsewhere.

4.2. Tactile Symbols

In addition to the Alternative and Expanded Communication (CAA), another resource has proved to be very effective in favoring the communication of people with multiple sensory disabilities, including those with serious difficulties. It is a communication system that uses symbols with textures to represent people, things, places, actions, days and months. In general, the literature highlights different levels of communication that oscillate between non-symbolic and pre-intentional behaviors for formal language.

These different forms of communication can be found at all points throughout the development of individuals who can use methods of one or more levels (Murray-Branch; Bailey; POFF, 1998) - pre-intentional level: crying and facial expressions; - concrete and symbolic communication: miniatures and objects; - Abstract symbolic communication: Bliss symbols and hand signs. Thus, an individual can communicate through vocalizations and facial expressions, while another can use both forms, as well as objects and signs (Murray-Branch; Bailey; Poff, 1998).

It will all depend on the level of cognitive development, physical conditions and opportunities offered to favor communication and interaction with others. A deafblind person, for example, can communicate by gestures, sign language, objects or symbols.

Textured symbols or tactile symbols refer to tactile, three-dimensional, and artificial representations whose purpose is to support the receptive and expressive communication of children with multiple sensory (visual and auditory) disabilities, in the sense of representing objects, people and activities. The tactile symbols can be individualized for each child or they can follow a standard directory of categories of representations to be used by all, but with individualized direction. In any case, the following aspects must be considered:

1. the textures for the symbols must be made from the interests and abilities of the child in discriminating them;
2. the selected textures should be prominent and distinct from each other to mean the category (person, objects, activities, days and months) they represent;
3. the selected textures should maintain their uniformity of protrusion and surface when reduced in size;
4. each tactile symbol must be clearly understood by the communication partners in order to favor the intention of communication of its user.

Besides these aspects, two others are also of paramount importance: to consider the level of development and the time of the child. Considering the level of development of the child means being in no hurry to present all categories of symbols at once, for many of these children are still at the pre-symbolic level and so will initially recognize objects used as tactile symbols rather than the tactile symbols themselves. To consider the time of the child, is to respect the time of understanding, acceptance and participation of the child in the activity offered.

Thus, to begin the procedure of teaching tactile symbols, a step-by-step approach should be followed to introduce them to the children. Initially one can select something reinforced and very specific, for example wafers. The texture can be introduced to

represent the referent during consistent routines, for example: a square covered with dots of embossed glue at snack time; another option is to present an empty wafer packet to signal that the child will eat wafer at snack time.

At first, the textured symbol should be large in size (eg 8 by 10 cm) so the child can easily touch and identify it. You can associate the symbol with a gesture, such as putting your hand in your mouth to represent that you want to "eat" the wafer. As the child is familiar with the symbol, the symbol may be reduced in size, and it is appropriate to consider the individual needs and abilities of each child to decide the final size of the tactile symbol. Children with severe limitations in language and communication are often unaware of the content of everyday activities and events. They are often carried from one place to another, from one activity to another, without knowing for sure what will happen next. In addition, they do not take initiative to carry out activities and do not clearly show preference or dislike for what has been proposed. Some may react with irritation, anguish because of the uncertainty of what will happen, others will be passive and disinterested or may still resist being taken to perform a certain activity (Von Tetzner, Martinsen, 2000).

Therefore, it is convenient to organize school programming through routines. A routine is defined by the dictionary Aurélio (Ferreira, 2010) as being "*a constant practice; a path already trodden or known; or as a sequence of instructions or steps in performing a task or activity.*" Many times this term is applied only to things that have to be done, that is, daily obligations such as brushing teeth or preparing the snack. However, routines are essential to organize, provide confidence and anticipate activities that will occur next.

The first goal, according to Von Tetzner and Martinsen (2000), is to first inform them about all the activities that will be taking place in the teaching of forms of communication for children with multiple sensory disabilities, who generally can not decide what to do in every moment. One of the ways to offer this information is by structuring the activities that should always occur in the same place, at the same time and in the same sequence. All established routines should be marked by tactile symbols. For example: the snack time is represented by a square with points of raised glue signaling that the child will eat wafer at snack time.

In her book "Communication: A Guide for Teaching Students with Visual and Multiple Impairments," Linda Hagood (1997) points out seven items to work out a successful routine:

- a) Both the beginning and the end of the activity should be very clear to the teacher and to the student. When the routine is signaled, it should begin immediately and when it is announced, it should be terminated immediately to proceed to the next activity;
- b) The sequence of steps to be developed throughout the day should be simple, especially in the initial phase that is the implementation phase of the routine. As the student gains independence and involvement, the routine can be expanded to become more complex;

c) The student should be offered multiple opportunities to respond within the routine. The object used in the routine is not only to provide greater independence to the student, but also to enhance their communication skills. For this, opportunities must be offered for the student to make requests with the object;

d) The interactions must be reciprocal between the adult and the student, because instead of the interactions are exclusively oriented by the teachers, it is necessary to consider the forms that the student uses to communicate and to interpret them as communicative acts, in order to establish a balance between the communicative acts of the teacher and those of the student;

e) The objects and actions should be used to highlight the student's answers, which when concentrating on the objects and actions that are part of their routine, acquires the conditions to organize themselves in relation to what is going to happen;

f) Rather than worrying about encouraging the student to interact in a more complex way, the simple answers that the student can give at that moment should be valued. Such responses can be: looking, pointing, vocalizing, the ability to perform a routine step, requesting help or repetition of the activity, delivering an object when requested, interacting with the teacher. Evaluating the student's communicative actions at this stage helps to identify their intentionality in giving answers and making requests;

g) The whole organization of the routine should be consistent, including the people involved, the sequence of steps and interactions, the objects that are used, the location and time of day the routine occurs. This consistency will offer a greater opportunity for the student to organize. But it is worth clarifying that consistent routine should not be confused with static routine, because the routine should change as the student evolves. When the student demonstrates preparation for more participation and interaction, the routine should change to favor the student.

5. Defining Multiple Sensory Disability

Often multiple disabilities are defined as being a set of two or more associated physical, sensory, mental, emotional or social behavioral deficiencies. However, it is not the sum of these conditions that actually characterize multiple disabilities, but rather the level of development, functional communication skills, social interaction, and learning ability that determine needs and differentiate people with this condition (However, The performance and competences of these students are quite heterogeneous and variable, so they present very peculiar characteristics, thus causing greater or lesser losses that interfere in their individual and social functioning (Godói, 2006; Pletsch, 2015).

It is these characteristics that make them unique, because even when they receive the same classification they differ from each other in relation to unusual interests, varied motivations, unusual ways of acting, communicating and expressing feelings and interests. Although they present significant changes in development, learning and adaptation to social conditions (such as noises, different people, for example), these

children should not be treated by what limits them and hinders their performance, but by their potential and functional capacity.

Thus, changes in the physical environment of the school and the elaboration of a pedagogical proposal in line with the needs of these students should consider the level of commitment, the deficiencies associated, the needs of the child, the choice and adequacy of the methodological strategies and resources used and, mainly of the school structure to receive and effectively include this demand.

With regard to people with multiple sensory disabilities, Nunes (2002b) points out that they have marked cognitive, sensory (sight or hearing) or motor limitations and may still require health care. The sum of these conditions influences not only development, but also how they react in different environments and also how they learn, thus requiring ongoing support and specialized education. The relevant is not the sum of these conditions, since each person presents a very particular combination of deficits that are interrelated and entail different disadvantages (Nobre et al., 1998).

This is because multiple sensory impairment encompasses the association of distinct conditions, such as visual and auditory deficiencies related to other impairments, such as physical, intellectual or emotional impairment, and learning difficulties. Therefore, they need to receive a multidisciplinary assistance to support their needs. It is critical to adopt a multisensory approach, especially when the child has developmental delays and sensory limitations. In the case of children with multiple disabilities and visually impaired, their difficulties relate to learning through vision, so they can benefit from intervention based on the stimulation of the other senses. Hearing can help you to interpret and understand what you hear, in addition to the taste and smell you will be able to experience the taste of food and smell things, and if the child is blind, tactile experiences will be essential for she gets information about the world around her (Nunes, 2008c).

It is worth mentioning that the interaction established between these conditions influences children's development, how they react in different environments and how they learn. According to Nunes (2001a), due to the effects caused by the association of these different conditions, many children with multiple disabilities and visually impaired people have difficulty staying alert. And as you know, when children are alert learn better and are able to interact in a more reciprocal way in social terms.

Therefore, what is useful for one child may not be for another. According to Nunes (2002b), these children may face difficulties in accessing information and understanding the world around them, so they need stimulation and a variety of opportunities for interaction with partners that communicate with them by contextualizing experiences with situations in order to favor and reinforce their attempts at interaction. Under the educational bias it is fundamental to know, understand and evaluate what these children need to learn, because as they do not learn spontaneously all their learning has to be planned, including teaching simple and basic situations of daily life that can help and contribute for their quality of life.

Without neglecting the interest for multiple sensory deficiencies in general, the present work is directed to analyze procedures that favor the functional language of people with visual impairment and with other commitments associated with this condition, because as it is a subject with vast content, targeting is necessary, but it is not enough to exhaust the subject.

6. Starting a Communicative Intervention

Before answering this question, it is appropriate first to consider the educational guidelines that are emphasized by the Salamanca Declaration (Brazil, 1994). According to this statement, education is a fundamental right that should be offered to all children, regardless of their conditions. After all, each one has characteristics, skills, learning needs and interests that are very peculiar. In this sense, classroom teaching strategies should be planned and organized to provide experiences related to the real world, through activities and functional and meaningful routines (Ladeira; Amaral, 1999).

Orelove and Sobsey (1991) mention that people with multiple disabilities and with visual impairment present severe or profound mental retardation in association with one or more sensory or motor deficiencies, thus requiring special care.

These special care fall into three categories: a) physical and medical needs; b) educational needs; and c) emotional needs.

Although these three categories form an important set of conditions to be considered, in educational terms the categories that most interfere in teaching practice are educational and emotional needs. In this sense, it should be emphasized that the education of these children and young people should be full of strategies that encourage communication and interaction, not only as a means of making contact with the world around them, but especially to develop their social skills, to offer elements so that the child has an autonomous and functional resourcefulness in its relations with the environment and with the other people.

Thus, in order to initiate the intervention process and elaborate an inclusive planning, Nunes (2002b) emphasizes that teachers should aim to provide the educational success of these students, not forgetting the importance and the collaborations that the family can offer. The aforementioned author presents a step-by-step guide that guides the construction of educational practice for children with multiple disabilities and with visual impairment, since it is important to define what will be taught as more important than to define what will be taught. learning process.

The first item to be observed is information regarding the child's medical history. This information should be collected with the family and other professionals who attend it to see if they need special care, whether they have educational implications, whether they take medication, whether they have epilepsy, and what signs are presented has some material (clay and paints, for example) and some kind of specific communication.

The next item is to make the necessary adaptations, because as mentioned earlier, many children have difficulties accessing the information of the world around them due to lack of vision or little visual residue, lack of hearing, and limitations motor and cognitive.

These adaptations can be made in toys (by gluing different textures or placing chinks inside objects, for example), in materials (thicker wax chalk, pre-clamps to facilitate pinching, and others) and environments (tactile cues that identify the classroom, the bathroom and others).

The third item refers to making the environment conducive to the best performance of the child. In this case, attention should be paid to lighting, the arrangement of furniture and materials, avoiding many noises, excessive stimulation and circulation of many people that may cause discomfort and distractions.

These items are based on the functional model, whose objective is to provide individualized and specific opportunities that help the student. The objectives of this model are to promote socialization, autonomy and communication, and are different from the models that support their objectives in the standard development, that is, in models that do not consider the differences among the students. As far as communication is concerned, it can be classified into three levels: the basic, the medium and the high.

At the basic level, communication is limited to the simple aspects of daily life and students usually use concrete communication systems or expressive communication, such as: pointing, moving the body, using isolated signs of pounds or even facial and body expression. These students may have severe visual limitations, requiring constant mediation from a communication partner to obtain information about the medium, since they do not learn by imitation (Maia; Araóz; Ikonmidis, 2010).

For these reasons, the intervention should be based on functional activities that have meaning for these students, such as: let them participate in the preparation of the snack. The activities should offer concrete experiences and be based on real situations, but always taking into account the characteristics of each one and the different forms of communication that can increase the opportunities of learning, independence and autonomy. When students make use of more than one form of effective communication, it is because they present a residual vision allow them to learn spontaneously through imitation. In these cases, the intervention should also consider the functional approach, offering different forms of communication that can be supported by Assistive Technology

"...resources that cover products, resources, methodologies, strategies, practices and services that aim to promote the functionality related to the activity and participation of persons with disabilities, disabilities or reduced mobility, aiming at their autonomy, independence, quality of life and social inclusion." (Gasparetto et al., 2009, p.43).

At the high level, communication between students is very efficient because they use more than one form of communication, such as braille and extended writing. To improve academic performance, the use of Assistive Technology features is quite effective. This form of intervention should be based on encouraging the use of communication systems and the teaching of Orientation and Mobility techniques, with the intention of boosting the learning process.

In general, the learning effectiveness and communication of these students should take place in an organized and unchanged environment where objects have their place. Activities should always be held in the same space, so that students feel safe and form a mental picture of activities and the environment.

Therefore, the activities must follow the functional approach, with concrete experiences based on real situations and must be carried out together with the teacher, in resonance, that is, the teacher should position himself behind the student, initiating the movement hand in hand. Or by means of co-active movements, positioning next to the student, in the position of hand on hand so that, little by little, he learns to carry out the activity.

As can be seen, in addition to the functional approach, the co-active approach also presents positive results. Such an approach emerged from the studies of Van Dijk (1989) who considers that the child's body, its needs and its interests are the central elements to start exploring the world. This approach is composed of six phases. The first phase corresponds to the relationship of attachment and trust and consists of establishing a bond between the child and the adult. At this time, the child's first language is emotional.

The second phase is resonance, that is, it is the melee movement that always starts from the child part and aims to approach the adult of his universe through movement and the introduction of modalities of communication based on movement.

The co-active or hand-on-hand movement corresponds to the third phase and is based on the communicative expansion between the teacher and the child in a wider environment. At this stage, the teacher stands side by side to carry out the activities together with the child and, gradually, the physical distance between them increases.

The fourth phase is called a non-representative reference and consists of offering conditions so that the child understands that some symbols serve to represent activities, people and situations. The fifth stage is the imitation which represents a continuation of co-active movement, and the difference here is that the child is encouraged to perform the action after the demonstration of the teacher in the presence or absence, and the co-active movement the action is simultaneous. Imitation begins with simple actions that gradually become more complex depending on the characteristics of the children.

In addition, Van Dijk (1989) mentions the importance of using known objects during communication activities and associating them with movements so that the child understands the functions of the objects and learns what to do with them (example: first a ball, then this action is performed in the absence of the ball to talk about it).

The sixth stage refers to natural gestures that arise from the motor experiences of objects, ie, arise from the hand movements similar to the action objects (eg simulate that are drinking water by a glass with your fingers in the absence of the glass). It is emphasized that it is not enough simply to place the objects in the child's hands, it is necessary to help them to know their functions and to know what to do with them. In this sense, Van Dijk (1989) mentions that learning can happen at all times from the encouragement and the accomplishment of intentional movements. Therefore, to perform a gesture it is important to associate the object with it and then perform the gesture without that object. Thus, after performing this sequence of initial procedures, which contribute to the child to know and relate better to what will be working with it, you can develop a routine so she does not feel anxiety about what will happen (anticipation).

In addition, it is fundamental to respect the child's response time, and even if she does not yet present a usual communication one must act with her naturally speaking, touching her or making gestures.

But if the child shows a rejection to the touch, it is a good idea to create pleasant situations where they can be touched in order to feel good about it. Such a reaction may result from experiences in which the child has been touched, pulled, turned, or dragged without prior anticipation, making the touch perceived as negative. To undo this resistance, nothing better than elaborate jokes and activities of your choice to show that touch can be a good and pleasurable thing (Maia; Araóz; Ikonomidis, 2010).

From there, it is possible to present more formal forms of communication with the use of objects that will be reference for the activities to be carried out. Firstly, it is convenient to use the objects of the child's daily routine, such as: the vest that she wears when she arrives at school, the utensils she uses to feed herself (cup, spoon, dish), materials used in pedagogical activities (paints, paintbrushes, clay), playtime toys. It is possible to make a sequence to present these materials so that the child anticipates what he will do throughout his day in school.

After this presentation of the reference objects, the child will begin to understand that an object serves to represent a particular situation and based on this can start the use of resources that organize their daily routine, such as personal diaries where they can be stored objects will use. These calendars can be adapted with the use of aprons with pockets where objects can be watered, or shoe boxes. The routines work with resources that favor the notion of time for the child to understand the passage of time and assimilate concepts of past, present and future. In addition, they provide emotional support, reducing anxiety and allowing anticipation of situations that will happen, support the development of communicative skills and allow the teaching of temporal and abstract concepts (Cambuzzi; Costa, 2007).

Therefore, consistency in the presentation of routine activities, the organization of the environment (classroom) and the elaboration of alternative communication resources with tactile symbols, provide meaningful and useful experiences for the daily life of the child.

Thus, as the child demonstrates an understanding of the use of this procedure, it is possible to advance the use of alternative communication resources with the use of tactile symbols in order to promote their communication, their independence and their quality of life.

7. Conclusions

Before thinking about developing inclusive practices that favor the communication of children and students with multiple sensory disabilities, attention must be paid to what excludes the student and prevents him / her from taking advantage of opportunities for learning and interaction. It is necessary, first of all, to recognize the existence of exclusion, to know its meaning and, on the basis of it, to act to dilute its effects. Exclusion is a very complex term that encompasses different conceptions of social life.

Language can be an inclusive factor and its lack can lead to exclusion, because when a person cannot understand what others are saying or making themselves understood by others, it is no longer included in the various social situations. This is the case for some students with multiple sensory disabilities who do not use the functional language and need alternative media to communicate. It is concluded, therefore, that strategies should be devised, adapting alternative communication resources and transforming them into alternative communication resources with tactile symbols, to favor the language and autonomy of these students. It is important that the procedures developed for this purpose be disseminated and transformed into research to support all those who work or care for children under these conditions.

The development of these works will favor the communication of people with severe speech impairments. For when they receive stimuli and experience meaningful experiences, students who do not use speech to communicate show how much they are able to tell us their feelings, needs, interests and the pleasure of being part of all learning opportunities. Thus, it can be said that the alternative communication resources with tactile symbols function as a valuable option - temporary or permanent - to favor communication of those who do not express themselves through functional language.

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WITH MULTIPLE SENSORY DISABILITY

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