Assessment, Intervention and Consulting in School Psychology in Children with Autism: LAPITEA Laboratory in Brazil

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Abstract

This paper presents an experience report on the implementation of the Assessment, Research and Intervention in Autism Spectrum Disorder Laboratory—LAPITEA—in a Brazilian University. The Laboratory aims to develop assessment and intervention methods for children with autism in order to establish social skills such as language, communication, imitation, motor and school repertoires, such as reading and writing, based on a multi-methodological proposal that integrates three different dimensions coming from the science of Psychology: Psychological Evaluation; Applied Behavior Analysis; and consulting and collaboration in School Psychology. The implementation of LAPITEA went through four major steps: 1) selection of children referred by NGOs from parents of individuals with autism; 2) psychological assessment for mapping children's impaired skills; 3) psychological interventions in Applied Behavior Analysis for the teaching of language and related skills; and 4) monitoring of school inclusion of children with autism through counseling in school psychology to Brazilian elementary and middle schools. It is the focus of this article to describe the characteristics that integrate each one of the stages, including the theoretical-methodological foundation and the operationalization of the dimensions of action. Currently, eleven children are attended in the Laboratory and all show evolution with the proposal of teaching and educational accompaniment offered. The current configuration of advances in school inclusion policies in Brazil encourages the accessibility of the autistic student to the formal education system, from elementary to higher education. These aspects stimulate initiatives by Universities to create teaching, research and extension spaces that seek to corroborate with treatment and follow-up actions in school inclusion with the individual with autism and

offer support to teachers of educational institutions with practices of school inclusion.

Keywords

Autism, LAPITEA, Assessment and Intervention in Psychology, School Psychology

1. Introduction

The Brazilian legislation on special education has been offering initiatives for the implementation of intervention proposals to broaden social and school inclusion. More specifically, the Brazilian Law 12.764/2012, policy to the protection of autistic rights, establishes in the 2nd Article, items VII-VIII, "incentive to the formation and capacitation of specialized professionals to attend the person in the autism spectrum disorder, as well as the parents and other caregivers and to encourage scientific research" (Brazil, 2012). In the direction to strengthen teaching, research and extension practices for the formation of Psychology students to treat autism, Ceuma University (São Luís-MA) institutionalized the Assessment, Research and Intervention in Autism Spectrum Disorder Laboratory (LAPITEA, according to the original expression in Portuguese: "Laboratório de Avaliação, Pesquisa e Intervençãoem Transtorno do Espectro Autista"). The LAPITEA proposes three axes of intervention: 1) Psychological Assessment; 2) Applied Behavior Analysis; 3) advisory in School Psychology.

The main purpose with the present manuscript is to present the experience of implementation of this Laboratory, by describing the steps to its institutionalization at the University and discussing the outcomes so far. The first dimension of action at the Laboratory refers to psychological assessment and seeks to delineate and apply instruments to identify cognitive changes, which serve in part as baseline to behavioral intervention to children with autism. The second dimension addresses the provision of interventions in Applied Behavior Analysis to develop impaired skills such as language, communication, imitation and motor behavior. Finally, the consultation and collaboration in School Psychologyis the dimension committed to accompany and to assess the school inclusion practices to access, maintenance and participation of individuals with autism at school. All activities are in development by professors with doctoral degree at Ceuma University, with the support from undergraduate and graduate Psychology students in specific formation to treatment and school support of children with Autism Spectrum Disorder (ASD).

In Brazil, it is estimated that there are approximately 2 million youngsters and children diagnosed with autism and other cases of learning disabilities, considering the data base of CDC (Center of Diseases Control and Prevention), from United States, that confirms that there is one case of autism in each 110 people

in the world. The Brazilian Autism Association (ABRA) states that approximately 600 thousand people present an autism diagnosis, representing 0.3% of the population (Paula, Fombonne, Gadia, Tuckman, & Rosanoff, 2011). Autism Friends Association, another Brazilian NGO, estimates that currently in Brazil, the individuals diagnosed with ASD represent 1% of Brazilian population, according to Ministry of Health (AMA, 2014). This is a factor that has led to an increase on the demand for treatment in Brazil aimed at the teaching of basic language, communication skills and several others that are relevant for the development in many social contexts (Galvão & Beckman, 2016; Matos, 2016; Matos, Matos, & Figueiredo, 2017; Schmidt et al., 2016).

Official Brazilian statistics about the prevalence of cases diagnosed with ASD are scarce, although it is possible to recognize some advancements related to national public policies as to specialized public services to attend people with an ASD diagnosis or suspect, such as the Specialized Center in Rehabilitation and Health Promotion (CER) by the Secretary of Health of the Government of the State of Maranhão.

Since its initial description, the concept of childhood autism suffered some changes with time. Souza et al. (2004) states that, historically, the term autistic was first employed in Swiss psychiatry literature in 1906 by Plouller, to describe a set of symptoms related to squizophrenia, based on the Greek etiology with "autos" prefix. Leo Kanner, a childhood psychiatrist from John Hopkins University (USA), in 1943, described common characteristics encountered in children with severe lesions, who were incapable of engaging in a relationship with other people, what culminated in the use of the syndrome as childhood autism later.

With time, other denominations were used to classify the Childhood Autism, like Early Childhood Autism, High Functioning Autism, Atypical Autism, Global Developmental Disorder Not Otherwise Specified, Childhood Disintegrative Disorder. Impairments are identified in the domains of social communication, as well as restrictive and repetitive behaviors and the disorder is currently known as Neurodevelopmental Disorder. Souza et al. (2004) acknowledges that the Childhood Autism presents great difficulties for the diagnosis, once it involves, based on current concepts, several diseases with different clinical manifestations, which have the autistic symptom as a common factor.

According to the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013), the Autism Spectrum Disorder refers to part of the Neurodevelopmental Disorders: Autism, Asperger's Syndrome and Global Developmental Disorder Not Otherwise Specified. Children with autism commonly present deficits in important areas of human development, such as language and communication, besides presenting undesirable behaviors that are frequently resistant to change, such as stereotyped behaviors, which may be shown in several ways. As an example, stereotyped behaviors may be demonstrated through repetitive motor responses like "hand flapping", on which many children usually engage when they seem to be euphoric because of a cartoon or

other things that may produce feeling of joy and excitement. The problem may also be demonstrated through the emission of repetitive speech sounds or noises with the mouth, which may be many times maintained by sensory self-stimulation. In the case of children with better language capabilities, self-stimulatory verbal behavior may be established as clear words or phrases that are consistently employed without an appropriate context. Patterns of inappropriate behaviors, like the ones mentioned, are frequently incompatible with the learning of socially relevant skills in several contexts, because the behaviors may become sources of distraction or may be emitted with an escape/avoidance function when the children are faced with activities that, although relevant, are undesired by them (Matos, 2016; Neef & Peterson, 2007; Sundberg, 2008).

Children with autism may also show great difficulty in understanding verbal instructions. Besides, many tend to present problems in using expressive language skills. For example, to make a request, an autistic child, instead of verbally describe what he/she wants appropriately, manipulates a familiar adult as a kind of tool by holding the hand and guiding the person to the source of what is motivating at specific moments. In the case of children with these characteristics, there is a strong impairment on language and communicative capabilities (Matos, 2016). In cases of children who have more advanced skills to communicate their needs to other people by organizing phrases with an appropriate linguistic structure, problems may be found in more challenging functions of language, like the ones important to establish and maintain conversation with other people. Anyway, the case of each child, severe or not, shall undergo a cautious assessment to determine the level on which he/she performs in tasks related to several capabilities important for a better functioning in society. Assessments are essential for the definition of effective interventions that may be applied later to ameliorate identified impairments (Partington, 2006; Sundberg, 2008).

Once children with ASD develop prerequisites necessary for the functional use of receptive, expressive language and related skills, it may be possible to change their patterns of functioning in society in a way that they may progressively get close to the patterns exhibited by typical children. This also shall be relevant for the acquisition of basic capabilities for the learning in the context of school (Galvão & Beckman, 2016; Stichter, Riley-Tillman, & Jimerson, 2016; Souza et al., 2004, Matos, Matos, & Figueiredo, 2017). Nevertheless, it is necessary to reiterate that the treatment prognosis and accompaniment of the children has limitations due to the atypical developmental conditions of autism compared to typical development. For that, the perspective of social and school inclusion of all individuals with special educational needs is based on the principle that the equality and difference are inseparable values, intrinsic to human subjectivity and to coexistence with respect and tolerance in a plural and democratic society.

Up next, the initial steps from LAPITEA will be presented, which involves since the organization of space for attending and materials, the selecting criteria of the children along with the NGOs of mothers of individuals with autism,

interviews with the family and capacitation of Psychology students to attend the children with ASD based on methodologies from Applied Behavior Analysis.

2. The Emergence of LAPITEA Project: From the University's Institutional Philosophy to the Conception and Materialization of the Laboratory

The educational policies and the protection policies of the rights related to special education favored a mobilizing force of actions, programs and formation proposals that expand the consolidation of social inclusive practices. Galvão and Beckman (2016) states that the perspective of inclusive education is consequence of international movements conducted by social organizations, policy leaders, educators, among others who mobilizes the initiative of specific conferences to this social demand.

In Brazil, the year of 2008 represented a historical mark for the consolidation of educational policies, which were created to ensure the expansion of access and quality of special teaching. The National Policy of Special Education on the Perspective of Inclusive Education was created by the Secretary of Special Education, from the Ministry of Education (SEESP/MEC).It was born under the basic principle that it is not only a pedagogic action, but also cultural and social, the policy imputes to the educative institutions to elaborate strategies to include the demand of special education at regular schools. In parallel, protection policies of rights, as the Law number 12.764/2012 that is specifically about the rights of individuals with autism, provokes the incentive, within the scope of higher education institutions, to the development of scientific researches, formation and capacitation of professionals, parents and caregivers in attending the individuals with ASD.

In the direction to strengthen the teaching, research and extension practices at the University, specially at the level of undergraduate and graduate studies in Psychology to treat autism, the Nucleus of Studies of Psychology in Education of Maranhão (NEPEMA), from the Psychology course at CEUMA University, instituted the research group Psychology, Education and Special Education: Processes of Development and Intervention along with the Research Groups Directory from National Counseling of Scientific and Technological Development (CNPq), agency connected to the Ministry of Science, Technology, Innovations and Communications (MCTIC). The focus of this group privileges teaching, research and university extension activities, developing studies in regional and national partnerships with the emphasis on the area of typical and atypical development, global developing disorders and inclusion policies.

With this initial step of the research group's conception, the LAPITEA includes teaching, research and university extension activities. The Laboratory focuses on enhancing capabilities in Psychology students in the field of Education, especially in the context of action at school institutions and with the goal of intervene on the development of professional competences related to the psychologist's

work, who acts on the interface with the education that, on this case, emphasizes the special education of individuals diagnosed with ASD. The focus is on the development of the student's professional competences through the interventions in Applied Behavior Analysis, Psychological Assessment and School Psychology, as a curriculum stage and preparation of the students for each of these dimensions. Likewise, the LAPITEA concentrates academic extension activities to develop actions along with local society on the individual treatment of children with autism, support groups and communities therapy, training parents and educators on the thematic.

Through the support of Brazilian rights policies, and the precept on the attainment of specialized competences by Psychology students for the treatment of autism within the development of research and extension activities, the project concerning the LAPITEA laboratory was presented to the managers of the University (Coordination of the Psychology course, Academic Rectory and Academic Board). The project was approved and necessary human and material resources were gathered for the functioning of the laboratory. This way, specific workloads were established to four proponent professors at the laboratory and the weekly functioning began with 30 hours/class.

The first infrastructure providences were the organization of two rooms to attend the children involved. The architecture of each room was designed for childhood psychological sessions, with each room measuring 2.33 meters × 4.07 meters, with acoustic isolation (a demand by the class council in Psychology in Brazil) and with floors and walls at safe conditions. In both rooms there are: a table and chair with an appropriate size for children; a chair for one of the Psychology students (the most skilled one to work with the discrete trial training procedure in Applied Behavior Analysis); three chairs for other three less skilled Psychology students. They remain in the room for the purpose of improving their skills by observation and as a support to deliver physical prompts and help addressing behavioral issues in general; a diagonal table and two chairs so that two of the supervising professors may be able to observe sessions; a locker where psychological tests, protocols and other relevant materials for the sessions are kept.

To address the development of theoretical-conceptual repertoire for the students, regular classrooms and spaces at the University's library are used for literature search and review purposes. Also, rooms to be used for group sessions at the University's clinic area are utilized for the purpose of psychotherapeutic support for the parents of the children with autism who are participants at LAPITEA. When necessary, bigger spaces like auditoriums are used to develop conferences and other events to an audience of approximately 100 people.

Up next, descriptions on activities concerning interviews, observing procedures and also the use of assessment protocols to establish baseline levels of relevant behavioral repertoires, as well as partial outcomes so far reached, are presented.

3. Psychological Assessment, Interventions in Applied Behavior Analysis and School Psychology

The first dimension of LAPITEA, psychological assessment, comprises interviews, observing procedures and the use of assessment protocols concerning the need for the establishment of baseline levels of relevant repertoires for behavioral interventions. Thus, the psychological assessment guides the second dimension, intervention, which is mentioned later. At LAPITEA, specific components from three assessment protocols are in use to guide behavior analytic interventions with 11 children with ages ranging from 3 to 12 years old who currently benefit through them. The assessments are 1) Verbal Behavior Milestones Assessment and Placement Program/VB-MAPP by Sundberg (2008); 2) The Assessment of Basic Language and Learning Skills Revised/ABLLS-R by Partington (2006); and 3) School Skills Assessment Protocol from The Assessment of Functional Living Skills by Partington and Mueller (2013). The first two assessments were chosen to serve as baselines to curriculum placement at the LAPITEA laboratory to amend deficits concerning language and related skills. The behavioral interventions at LAPITEA are based on discrete trial teaching (DTT) procedures.

The VB-MAPP has five components: 1) milestones assessment; 2) barriers assessment; 3) transition assessment; 4) task analysis and skills tracking; and 5) placement and IEP goals. At LAPITEA, the first two components from the VB-MAPP are used for curriculum placement. The first component is the one responsible to, in part, help determining IEP goals to ameliorate deficits. The milestones assessment measures language and other skills across 3 developmental levels. Level 1 assesses the students' performance in tasks based on what would be expected from typically developing children aged from 0 to 18 months; level 2 assesses the students' performance at tasks based on what would be expected from typically developing children aged from 18 to 30 months; level 3 assesses the students' performance at tasks based on what would be expected from typically developing children from 30 to 48 months. In general, the tasks include the verbal operants by Skinner (1957), which in part represent the foundation for the establishment of a functional and socially relevant communication with other people (specially mand, tact, echoic and intraverbal behavior). However, other skills present in the repertoires of typically developing children are also addressed. It is not the goal of the present paper to thoroughly discuss about each skill, or milestone according to the author, but to present a brief overview on what has been of concern at LAPITEA. The reader may refer to the original protocol (Sundberg, 2008) for a complete description of all components. Table 1 presents a list of skills that need to be assessed throughout the three levels addressed in the milestones assessment protocol.

The second most important component of main concern at LAPITEA is the barriers assessment from the VB-MAPP (Sundberg, 2008). The VB-MAPP barriers assessment addresses 24 learning barriers, which may compromise many

Table 1. Skills assessed through the milestones assessment protocol component from the VB-MAPP by Sundberg (2008).

Level 1	Level 2	Level 3
Mand	Mand	Mand
Tact	Tact	Tact
Listener responding	Listener responding	Listener responding
Visual perceptual skills and matching-to-sample	Visual perceptual skills and matching-to-sample	Visual perceptual skills and matching-to-sample
Independent play	Independent play	Independent play
Social behavior and social play	Social behavior and social play	Social behavior and social play
Motor imitation	Motor imitation	Reading
Echoic	Echoic	Writing
Spontaneous vocal behavior	Listener responding by function, feature and class	Listener responding by function, feature and class
-	Intraverbal	Intraverbal
-	Classroom routines and group skills	Classroom routines and group skills
-	Linguistic structure	Linguistic structure
-	-	Math

autistic students in developing the necessary mentioned capabilities in the milestones assessment for a better functioning in society. Barriers may be due to impairments in increasing language related and other relevant repertoires. A child's inability to functionally demonstrate vocal mands, for example, may relate to prompt dependency and the protocol favors the identification of this and several possible other issues. However, problems usually are not related only to barriers to skills that need to be increased in a given individual's repertoire. It is also of concern the identification of behavioral excesses to which the functions need to be established carefully in order to determine the scientifically appropriate interventions to promote changes. Examples of possible undesired behavioral excesses in children with autism and other developmental disabilities are tantrums and repetitive self-stimulatory behaviors (Neef & Peterson, 2007). The 24 learning barriers are the following: negative behaviors; instructional control; defective mand; defective tact; defective motor imitation; defective echoic; defective matching-to-sample; defective listener repertoires; defective intraverbal; defective social behavior; prompt dependent; scrolling responses; defective scanning skills; failure to make conditional discriminations; failure to generalize; weak or atypical motivators; response requirement weaks motivators; reinforcement dependent; self-stimulation; articulation problems; obsessive-compulsive behavior; hyperactivity; failure to make eye contact, or attend to people; sensory defensiveness. For a complete description about them, the reader may refer to the original publication (Sundberg, 2008).

The LAPITEA laboratory has an emphasis on DTT because the majority of children involved lack several skills on levels 1 and 2 from the milestones assessment and the development of a curriculum in a more structured environment with the therapist and the child only seems to be suitable. Nevertheless, the need for assessments to determine if the child is progressing and benefitting from interventions based on baseline levels within the milestones assessment is decisive to know if the child is ready for learning in less restricted contexts. The transition assessment from the VB-MAPP (Sundberg, 2008) helps the assessor to determine this. This component is based on overall scores of both milestones and barriers assessments and other criteria. However, at LAPITEA, other protocol is used to determine baseline levels about skills from important domains at the context of school more specifically (Partington & Mueller, 2013). Brief information on this matter will be addressed shortly.

Two of the children involved in LAPITEA perform at levels beyond several of the milestones (levels 2 and 3) from the VB-MAPP. For these specific cases, the demands are related to the teaching of academic skills and management of inappropriate behaviors, specially related to ones with a possible escape/avoidance function as suggested by interviews with the parents and descriptive functional analysis. Early academic skills are assessed at level 3 from the milestones assessment and consist of reading, writing and math. Each repertoire includes five items, as it happens to every other skill areas. However, besides this protocol, the Assessment of Basic Language and Learning Skills-Revised (ABLLS-R) has also been used at LAPITEA to determine baseline levels for intervention. This protocol has similar purposes compared to the VB-MAPP and the domain of academic skills was chosen in part because it contains more items for each skill and may complement the VB-MAPP as academic skills play a major role on the assessment depending on the child. Academic skills in the ABLLS-R relate to reading, math, writing and spelling skills. Reading is comprised of 17 items; math, 29 items; writing, ten items; spelling, seven items.

The author of ABLLS-R (Partington, 2006) stated that the skills from the academic section not necessarily should be a priority over those related to more basic learning skills involving language and other capabilities addressed by both the ABLLS-R and the VB-MAPP protocol. If a given child has many difficulties in learning to receptively identify (listener responding) many common items from their usual environment, as well as learning how to request or labeling them appropriately (mands and tacts), than the teaching of academic skills should be saved for later. However, although a given child presents a poor repertoire on more basic skills, but also demonstrates strong interest in numbers and other stimuli related to academics, then it can be reconsidered. At LAPITEA, the ABLLS-R has been the main protocol to help determine IEP goals for the two children without much impairment on the more basic skill areas.

The last protocol chosen for the purposes of the LAPITEA laboratory is the School Skills Assessment Protocol from the Assessment of Functional Living Skills developed by Partington and Mueller (2013). The specific chosen module

contains task analyses of many skills as they relate to school. It comprises eight skill areas that may be assessed through the individual's lifespan. The areas are classroom mechanics, routines and expectations, meals at school, social skills, technology, common knowledge, core academics and applied academics.

The establishment of each skill throughout the assessment areas shall let the learner become less dependent on teachers and typically developing peers in the context of the classroom and others at school. Although all the areas are relevant to independence at school, two of them specially draw attention in the case of LAPITEA because of demands by the educational staff from school and the parents: 1) routines and expectations and 2) social skills. According to Partington and Muller (2013), the first one assesses one's ability to follow rules and expectations at school and the section involves several routines from the basic (like sitting and lining up) to the more advanced ones (like organizing personal materials and describing schedules). The second section assesses the ability to engage in interactions in a socially appropriate manner. Some of the skills relate to the greeting to others, initiate and maintain conversation and request to join a group activity. The reader may refer to the original publication for a complete description of all sections. Some of the skills are similar to the ones presented in the milestones assessment from the VB-MAPP, but the School Skills Assessment may both complement or favors a more deep assessment outside the context of a structured environment for one-to-one interactions.

Before the use of the already mentioned assessment protocols, the first contact with each case at LAPITEA involved an interview with the parents and brief observations of the children. The goal was to have an idea of the current repertoires of the children and some of their impairments quickly, because the protocols like VB-MAPP and others are time consuming and were saved for later. After the interview and first observations, some interventions started with the purpose of pairing the therapists with highly valued reinforcers to establish rapport with the children and to work on basic skills such as eye contact, sitting and imitation (Greer & Ross, 2008). The more formal assessment protocols mentioned began after 2 weeks. During the interview along the first contact, the interviewer asked questions regarding verbal behavior and other basic skills (Barbera, 2007). Table 2 depicts 14 questions concerning the interview.

The parents of all the 11 children who are directed to the activities conducted in LAPITEA went through the interview and the children were observed for at least 2 hours. Table 3 depicts percentage data representing either the presence (yes) or the absence (no) of skills on children's repertoire.

As it can be seen in Table 3, all children showed impairments on several of the skills assessed during the interview to the parents and the first two hours of observation of each child. The skills mostly absent for the majority of participants refer to questions 5 (91%), 7 (91%), 8 (91%) and 14 (82%). 5, 7 and 8 are very challenging for the children at LAPITEA, considering that they specially refer to intraverbal behavior and the children shall respond solely in the presence of verbal antecedent stimuli without point-to-point correspondence with

Table 2. 12 questions conducted by an assessor during the process of interviewing the parents of the participants at LAPITEA.

	Question
1	Does your child make use of any words?
2	Does your child request what is desired through the use of words?
3	Does your child label objects and images?
4	Does your child demonstrate vocal imitation of words?
5	Is your child able to describe past time events?
6	Is your child able to fulfill missing words or parts of them in songs?
7	Is your child able to fulfill missing words of neutral statements or phrases?
8	Is your child able to vocally answer questions?
9	Does your child attend to you and others after being called by the name?
10	Does your child receptively follow instructions?
11	Does your child imitate modeled actions with and without use of toys?
12	Is your child able to match objects and/or pictures to their corresponding samples?
13	Is your child able to manipulate age-related puzzles appropriately?
14	Is your child able to remain seated for a long time to work on an activity with an adult?

Table 3. Analysis of the questions made to the parents about the children's percentage repertoire during the interview. Y = yes (the skill is present); N = no (the skill is allegedly absent).

Questions	Yes	No
Question 1	82%	18%
Question 2	73%	27%
Question 3	73%	27%
Question 4	73%	27%
Question 5	9%	91%
Question 6	73%	27%
Question 7	9%	91%
Question 8	9%	91%
Question 9	91%	9%
Question 10	46%	54%
Question 11	46%	54%
Question 12	46%	54%
Question 13	46%	54%
Question 14	18%	82%

the response. The only participant who does not lack this skill is P3, but he does lack basic repertoire, depicted by question 14 and that refers to remain seated for a long time to work with an adult. This is one of the most important concerns for most of the participants (82% with the skill absent), since the lack of this skill

is incompatible with the learning of other skills to be addressed during the sessions at LAPITEA. Plus, two of the children with the poorest repertoires were P7 and P9 (18% of the participants) who do not verbalize and to whom the first months of behavioral intervention would address more basic repertoires. Although Table 3 shows that several repertoires were present at the time of the interview and observation, the extent was variable among the children and the majority of them demonstrated a discrete and limited performance. P1, P2, P4 and P6 (36% of the participants), for example, showed limited repertoires of expressive language skills, like requesting/mand and labeling/tact due to the fact that the children were able to verbalize a group of stimuli ranging from two to three. Vocal verbal imitation was not generalized to promote an increase of the mentioned verbal repertoires and promoting a generalized repertoire was defined as one of the long-term goals of the interventions.

P5, P8 and P10 (27% of the participants) showed more elaborate repertoires, regarding expressive and receptive language, but were among the ones who failed at the questions concerning intraverbal skills represented by fulfilling missing words from verbal statements or phrases and answering questions. As previously said, intraverbal is a complex repertoire and frequently very challenging for many children with autism (Sundberg, 2008). Also, the three mentioned participants were among the majority of children from LAPITEA that were also unable to describe past-time events, which is also related to the intraverbal skill. P3, the one referred to show lesser deficits on the majority of the repertoires assessed, including those related to intraverbals, was directed to the laboratory with demands specially related to addressing undesired behaviors during the course of academic tasks, such as reading and writing.

During the first contact with the children and parents at LAPITEA, an indirect assessment to identify undesired behaviors was also conducted and consisted of an interview with the parents. The information from the interview was also used later to corroborate a more formal assessment with the children during the contact with them at the laboratory and school. A script with several questions to identify possible inappropriate behaviors is provided at Table 4.

Overall, all the participant children at LAPITEA present, according to the parents, behaviors that they classified as undesirable and that may represent barriers to the development of important skills through intervention (Sundberg, 2008). Since the administration of the interview and observations of the children in several contexts, direct assessments have being conducted with the children during the day-to-day contact with them in order to determine the function that problem behaviors may serve. One kind is called descriptive assessment and involves the continuous data collection over responses and possible related events (antecedent and subsequent events) from natural environment. Another way to determine the possible functions of behavior is through the deliberate programming of antecedent and subsequent environmental events to test their effects over the problem behaviors. According to Neef and Peterson (2007), the behaviors

Table 4. Script sample with possible questions to be addressed during an indirect assessment with parents and caretakers.

	Questions
1	Tell me about your reasons for the search to treat your child
2	What does your child do and that you would like him/her to stop doing?
3	Tell me about the frequency with which the child engages in undesirable behaviors that you have mentioned and their duration
4	How did the behaviors start? Tell me about possible people involved, places and times
5	What happened just after the undesired behaviors were emitted?
6	What do you and other people do when the child behaves the way you have mentioned? Please, present an example
7	What do you and other people do when the child does NOT behave the way you have mentioned? Please, present an example
8	How much time has passed since the beginning of the behaviors and the search for treatment?
9	What do you believe it is good and what do you believe it is bad when your child behaves the way you have described as undesirable?
10	What would you declare as positive about your child? Please, state examples of behaviors that you believe to be positive
11	How do you react over the behaviors you consider to be positive?
12	What does your child do not do and that you would like he/she to start doing?
13	Describe about how you would define your relation with the child
14	How often do you spend time with your child and how long do the episodes last?
15	How do you perceive the child during interactions with you?

may serve different functions as operant behaviors that relate to their consequences: 1) social positive reinforcement; 2) tangible reinforcement; 3) automatic positive reinforcement; 4) social negative reinforcement; 5) automatic negative reinforcement.

Function 1 may be the case where the responses by a given child produce immediate attention by another person with a strengthening effect of the responses by the child. In the case of children with ASD, especially those with difficulties to establish communication with words, behaviors related to screaming, tantrums and aggressions are possible examples of behaviors maintained by someone else's attention. Function 2 refers to the case where the responses produce access to possible desired items or preferred activities to which a given child would not be allowed. However, the possible access may function as a reinforcer that shapes and maintains undesired behaviors like those mentioned for function 1 and others. Function 3 refers to possible behaviors maintained by consequences, which are a direct product of the behaviors. They are also called self-stimulatory behaviors and do not depend on other people to be strengthened. This may be the case of many stereotypic behaviors emitted by many autistic individuals. Function 4 is related to the behaviors that, when emitted, allow the cessation of

an aversive stimulus (negative reinforcer). If a given academic activity, for example, represents a negative reinforcer for a given child, its presentation may strengthen undesired behaviors, like those already mentioned, that are reinforced when their emission allows the cessation of the activity. Finally, function 5 relates to more rare behavior cases. That could be the case of a physical discomfort, such as an infection inside the heard, which represents a negative reinforcer that may be slightly attenuated when the person engages in an inappropriate topography of behavior like hitting with the hand near the place of the infection.

At LAPITEA, the majority of participants present problem behaviors with one or more of the functions previously described (except automatic negative reinforcement) and their treatment represent part of the individualized education plan (IEP) with each child. In Applied Behavior Analysis, when the analysis of contingencies responsible for undesired behaviors is established, the more appropriate kind of treatment (and based on the function) may be delineated. Discussing the details about the specific treatments of the behaviors based on their function is out of the scope of the present paper. The reader may refer to the research literature on the theme for more detailed descriptions (Neef & Peterson, 2007).

In summary, the activities at LAPITEA involving Applied Behavior Analysis concern two main objectives: 1) increasing social relevant repertoires related to language and communication directly or indirectly; 2) decreasing undesired behaviors that may be maintained by specific kinds of consequences or functions, as they were previously described. However, the treatment has to be based on cautious assessments, which are always a concern at LAPITEA. As it was already mentioned, the first contact with each of the children and the parents comprised an interview with the parents in order to 1) gather information regarding possible impairments on skills necessary for a better functioning in society throughout several contexts; 2) gather information on behaviors considered undesired and that may compromise the development of desired and impaired skills (besides the direct observation of each child where problem behaviors might be shown).

After these first steps, the next effort shall be the development of strategies with the purpose of 3) pairing therapists (undergraduate and graduate students from the fields of health and education) with access to preferred reinforcers (like items and preferred activities) as a way of establishing rapport with the children or, in other words, establishing the therapists as conditioned reinforcers for the children (this may facilitate the children's involvement during further interventions); 4) developing basic repertoires (like establishing and maintaining eye contact, sitting and remaining seated; generalized imitation; matching-to-sample) for the majority of the children (it is expected that the shaping of basic repertoires facilitates later assessments through the use of more formal protocols previously described); 5) conducting the formal assessments to determine more accurately

baseline levels on several skills through developmentally balanced protocols (Partington, 2006; Sundberg, 2008); 6) determining IEP goals through careful task analysis of impaired areas of development, execute interventions based on DTT from the research literature and manuals based on the literature (Barbera, 2007; Greer & Ross, 2008; Matos, 2016; Sundberg & Partington, 1998) to ameliorate the identified impairments and managing the improvements through the systematic collection of relevant data as a way to facilitate curriculum adaptations; 7) conducting assessments at the context of schools, involving the staff, parents and the children and determining interventions to address several issues, like the adaptation to routines and the development of social and academic skills (Partington & Mueller, 2013).

Effective mediations to address several issues concerning autism and the development of skills shall be based on continuous and cautious assessments and the establishment of interventions focused on evidence-based procedures from the scientific literature in different environments like home and school. The actions at LAPITEA laboratory are based on these principles. The interventions in Applied Behavior Analysis are developed with the 11 autistic children twice a week. Each session lasts approximately 2 hours and the children are attended by two undergraduate students in psychology supervised by the first author, an associated professor at the mentioned university.

Behavior Analysis, as a science of human behavior, is based on the view, which implies that much of human behavior is determined by the effects on environment (consequences). The human repertoires are mainly represented by operant behaviors, which are shaped and maintained by consequences. Operant behavior relates to both non-verbal and verbal behaviors (language) (Catania, 1999; Skinner, 1953/2003, 1957). Overall, the interventions in Applied Behavior Analysis at LAPITEA focus in establishing operant behaviors (non-verbal and verbal) to autistic individuals and other cases of learning disabilities who lack them. Verbal behavior is a major concern at LAPITEA and many efforts are made to develop functions of language or verbal operant behavior, specially the cases named by Skinner as mands, tacts, echoics and intraverbals. Methodologies and technologies of teaching are in continuous development to address issues concerning the need for behavior change (Baer, Wolf, & Risley, 1968, 1987). They emphasize the characteristics of the learner individually, as well as they do respect the learner's pace to learn. This was influenced directly by the work by Skinner (1968/1972). The discrete trial teaching procedure (DTT), which greatly defines the interventions at LAPITEA has been documented along the years in several manuals based on scientific research concerning developmental delays (Alwell, Hunt, Goetz, & Sailor, 1989; Barbera, 2007; Charlop-Christy & Carpenter, 2000; Charlop, Schreibman & Thibodeau, 1985; Charlop & Trasowech, 1991; Charlop & Walsh, 1986; Gee, Graham, Goetz, Oshima, & Yoshioka, 1991; Greer & Ross, 2008; Matos, 2016; Richman, 2001; Sundberg & Partington, 1998) and is based on givingseveral opportunities to respond (massed trials). However, the

need to conduct both DTT in a more structured environment as well as more naturalistic teaching during the day-to-day of individuals with autism in less restricted environments is advised (Sundberg & Partington, 1998). In fact, although it has been already emphasized that DTT is the main approach at LAPITEA, it is important to highlight that naturalistic learning is also a concern and main actions will be applied to train parents, other caregivers at home and educators from the children's school. There is a significant body of research concerning what was named as incidental teaching and variations and the discussion about their effectiveness in producing generalization. The reader may refer to the literature about the theme for details on naturalistic procedures (Allen & Cowan, 2008; Dunlap & Koegel, 1980; Eikeseth, Smith, Jahr, & Eldevik, 2002; Halle, Baer, & Spradlin, 1981; Halle, Marshall, & Spradlin, 1979; Harris & Handleman, 2000; Hart & Risley, 1968; Koegel, Bimbela & Schreibman, 1996; Koegel, Dyer, & Bell, 1987; Koegel & Egel, 1979; Koegel et al., 2012; Koegel & Koegel, 1990; Koegel, Koegel, Green-Hopkins, & Barnes, 2010; Koegel, O'Dell & Dunlap, 1988; Koegel, O'Dell & Koegel, 1987; Koegel, Werner, Vismara, & Koegel, 2005; Koegel & Williams, 1980; Krantz & McClannahan, 1993, 1998; Ledbetter-Cho et al., 2015; Lovaas, 1987; Lovaas, 2003; McGee, Krantz & McClannahan, 1985; Miranda-Linne & Melin, 1992; Mobayeb et al., 2000; Pierce & Schreibman, 1995, 1997; Rogers-Warren & Warren, 1980; Schreibman, Kaneko & Koegel, 1991; Sheinkopf & Siegel, 1998; Valenti, Cerbo, Masedu, De Caris, & Sorge, 2010; Warren, McQuarter, & Rogers-Warren, 1984; Williams, Koegel, & Egel, 1981).

In parallel to the perspectives on assessment and intervention in Psychology, the third dimension refers to counseling in School Psychology to the schools of the participant children at LAPITEA. This dimension focuses in highlighting relevance to this field in the process of consolidation of practices and speeches for the establishment of a democratic school education and with emphasis on human rights (Dazzani, 2010). It is important to highlight that the third dimension of LAPITEA project does not involve the process of advice to schools as a transfer of knowledge and theories from clinical practice to the educational context, which would produce the risk of conducting support to school in strengthening the "psychologization and biologization" of pedagogic processes (Collares & Moysés, 1996, 1992; Patto, 1999, 2005). On the opposite way, the goal is to comprehend the historical, social, cultural, political and economic aspects that may be obstacles to the process of inclusive education and that become true on and for the pedagogic practices and social relations experienced at school routine.

The heart of the intervention in School Psychology at LAPITEA consists in accompanying the process of school inclusion of the autistic children attended at the laboratory and support the educational institution to expand its access and permanence practices and participation of these students with autism in the formal school process of basic education, that demands, from the school psychologist, political and ethical positioning, socially committed to the transfor-

mation of reality in the direction of corroborating with the creation of more democratic social spaces, which respect human diversity (Dazzani, 2010; Galvão & Beckman, 2016; Gomes & Souza, 2011). We agree with Thompson (2017) when confirms that:

School psychologists frequently lend their expertise to students, parents, staff and other professionals in the community. There are effective methods to employ when involved in consultation or collaboration with other people. At the heart of a successful consultation is to first establish a positive helping relationship. After a rapport is established, the people you are helping would be more receptive to the information you provide them. The most difficult aspect of consultation is to gain trust and not to convey a sense of arrogance as an expert. (p. 55)

In this direction, it is important that the establishment of goals and acting strategies for the accompaniment of school inclusion does not substitute the essential role of teachers at school, which it is the autonomy to plan the teaching intervention efficiently. Thus, the consultation in school psychology must support the planning and implementation of institutional policies to include and develop school team's cohesion and potentiate the educational community with necessary changes for the expansion of school inclusion practices (Galvão & Beckman, 2016; Mitijáns-Martínez, 2005).

In Brazilian context, the work with children and youngsters with Autism Spectrum Disorder (ASD) is a target for assessment and interdisciplinary intervention by professionals that join their competences to the planned goals by the school. The theme on autism draws the attention by public and private Brazilian institutions, considering the reality of the students with this diagnosis who are in need of developing important skills for schooling process, whether they are at level of basic, professional or higher education.

The current configuration of the implementation of Brazilian educational policies for the accessibility by the student with ASD is highlighted by the formal teaching system. According to data from the last Brazilian school census, the number of students with special needs enrolled increased at regular school (Brazil, 2014). In 2000, the registry of students was of 382.215 and, in 2012, the registry goes to 636.451, representing an increase of 66.15% enrolled students. On higher education, the last census in 2012 documents 26.663 students with special needs enrolled, considering that 18.664 of them were in private Higher Level Institutions and 7.999, in public Higher Level Institutions.

Though this growing may be considered significant, due to the expansion of educational policies, it does not represent a characteristic that ensures school success. Cases of school failure are commonly taken into account when the stratus relates to the public of special education. Researches in the field of Psychology and Education have signaled that these students do not possess a successful experience in the formal spaces of education, such as schools and Higher Educa-

tion Institutions, which have been subject of continuous processes of pedagogical discussions over these students' impacts on regular teaching (Kassar, 2011).

For nearly a decade, the National Policy of Special Education on the Perspective of Inclusive Education of 2008 (Brazil, 2008) was elaborated with the main purpose of instigating the re-signification of school practices and teaching-learning proposals at teaching institutions, with the goal of establishing their socio-political function on the promotion of physical, cognitive, social and emotional development of the student. For this, it provides directives for the implementation of inclusive educational practices that support the school institution in developing own administrative and pedagogical strategies to its reality and demands. Among its main purposes, the policy highlights the transversality of special education from childhood education to higher education and the establishment of teacher's competences for specialized educational attendance, as well as all other education professionals for school inclusion. It still reiterates that the pedagogical assessment as a dynamic process considers both the previous knowledge and the current student's development, as to the possibilities of future learning, setting up a proceeding and formative pedagogical action, which analyzes the student's development in relation to his/her individual progress, prevailing on the assessment the qualitative aspects, which indicate the teacher's pedagogical interventions. The Law 9.394/96 of National Education Directives and Basis, Article 24, section V, item "a", determines, for the case of students who present neurodevelopmental disorders, the "continuous and cumulative assessment on the student's development", with qualitative aspects prevailing over quantitative ones and the outcomes along the period over those of eventual final exams.

Specifically, the National Policy of Rights Protection of the Person with Autism Spectrum Disorder, from 2012, assures this public's special right to regular schooling (basic and higher), as well as the "incentive to the professional's specialization to attend the person with autism, as well as the parents and caregivers and to give stimulus to scientific research", in accordance with the subsections VII and VIII from 2nd article (Brazil, 2012). To expand educational policies and minimize their implementation difficulties in educational institutions, the LAPITEA also proposes to strengthen the professional's specialization on the most diverse educative fields, such as school, NGOs and Higher Education Institutions.

Galvão and Beckman (2016) state the relevance that all, education and health professionals, students, school staff and community in general, do corroborate to the materialization of school education, to which being inclusive is wished. Specifically, the authors emphasize that School Psychology may provide contributions for the establishment of inclusive special education, through the specificity of scientific Psychology knowledge, expanding creatively the possibilities of psychological intervention strategies. The authors suggest actions from school psychologist's to promote a new point of view about the teaching-learning process, emphasizing the school success culture:

1) To promote the theoretical-conceptual formation through the psychological science, with goal of extending the teacher's view on the developmental processes at school (evaluation, teaching and developmental processes) to expand his/her professional praxis;

2) To create interlocution spaces in relation to doubts, fear, anxiety, questioning and to mobilize autonomy to deal with demands presented by students with special needs;

3) To assist teachers about their doubts, fears, questionings and to mobilize autonomy to deal with demands presented by students with special needs;

4) To advise the teacher so that, in a autonomous and creative way, searches to expand, review and signify his/her teaching didactic, considering the diversity of ways to build knowledge;

5) To include children with educational special needs in the classroom and other institution spaces, through the creation of psycho-educational strategies for the development of social skills by school staff;

6) To propose integration actions involving family and school, strengthening the parent's collective spirit in the joint struggle for the expansion of actions and inclusive culture and its succession from basic to higher education.

In that direction, the LAPITEA also is committed to strengthen strategies for the students who will be in the process of enrollment at CEUMA University in the future, in articulation with the Nucleus of Support to the Student and the Teacher, which already has school psychologists adding the team.

In face of expansion of these educational policies at Brazilian scenario of teaching access, it is important to develop actions that corroborate to specialization for psychologists and all other personnel who act directly in educational institutions to advise, plan and track the building of institutional policies of access to students with ASD at the context of school.

In general, the data derived from two of the LAPITEA dimensions (Psychological Assessment and Applied Behavior Analysis) are used for some needs in the School Psychology dimension (Thompson, 2017): 1) to identify the problem for learning difficulties or behavioral complaints and plan interventions with the teachers; 2) to increase or decrease levels of intervention; 3) to help teachers and principals to make decisions about planning to support school learning; 4) to decide whether interventions in clinical and school contexts are related to positive student outcomes; 5) to support the school to plan individualized instruction and long-term educational planning, with adaptations in curriculum.

In that direction, meetings with Psychology students, during the first school semester, were held to discuss and learn more about the 11 cases currently in attendance, through direct observation of each child during assessment and intervention sessions. For their training on theoretical-conceptual issues, three meetings were held to discuss the following themes: 1) first meeting: Developmental conceptions and learning of the practices and speeches at school; 2) second meeting: Critical School Psychology and change in paradigm, present in the

day-to-day at school institutions, which demands from the school psychologist political and ethical positions and social commitment to change reality in the direction of corroborating to the creation of more democratic social spaces and that respect human diversity (Dazzani, 2010; Galvão & Beckman, 2016; Gomes & Souza, 2011); 3) third meeting: Institutional intervention (Marinho-Araujo, 2014), which encompasses advisory strategies, psychological listening to school demands, observations, informal interviews and accompaniment and support to teacher's work.

Upcoming meetings were organized in order to provide knowledge to the students through the use of scales to measure classroom climate (Fleith, 2011), observation schedules (Marinho-Araujo & Almeida, 2010), analysis of educational institution conjuncture and psychological intervention at levels (Neves & Almeida, 2003). To track the children's profile, semi-structured interviews were conducted with the parents and/or caregivers, with questions which were about school institution data; the children's school records; data on history of first learning at school; main difficulties; challenges and potentialities on children's insertion at school; non inclusion on regular teaching system; parents' migration from suburbs in search for treatment at the main city; lack of motivation to go to school; children being taken away from school under director's suggestions.

Through the accomplishment of the training meetings, observation of the sessions with the children and the gathering of information, the next challenges to be target of attention by the School Psychology axis of intervention were identified. The first one refers to Brazil's contextual and regional aspects, which strengthen a wrong conception on the search for solutions for social inclusion through the exclusive "treatment" outside the school; the need for specialization and critical actuation in Education and School Psychology for professionals, who may be committed to change the reality, that demands thoughts on strategies of continuous specialization that may instigate the professionals to question the scenarios, naturalization of human conventions and practices at school context; that approximates the psychologist along with public agencies and legislative and executive powers on the making of School Psychology; that mobilizes speeches with an emphasis on the culture of school success in consonance with the clarity of school's socio-political function. Also, a great challenge that imputes to school is related to the expansion of dialogue spaces among school, family and education professionals about the education policies of inclusive school.

The School Psychology axis is responsible to think about how the school may and must operationalize the directives established by school inclusion policies, considered oriented to the creation of a less excluding space through the comprehension that it is through the diversity of types of learning that the professionals shall expand the possibilities and teaching strategies. The challenge that is placed upon school inclusion is beyond the individual aspects of the child, which requires a social and scientific responsibility of dedicating more attention to the institutions in order to produce changes on their practices.

4. Final Considerations

On the scene of expansion of incentive policies to capacitation for the treatment of autism, it is important to establish that the formation spaces present limitations, due to the institutional nature. On the other hand, it is estimated that the clinical care by Psychology students addressing psychological assessment, behavioral intervention and accompaniment for school inclusion, may, beyond initial academic formation, avoid the continuous isolation of the child and family with a process that seeks the increase in social and academic competences (Camargo & Bosa, 2009). On the other side, the capacity for clinical care involving this public is still limited in Higher Education Institutions due to several factors, among which there are: 1) the low number of teachers specialized in specific treatment for autism; 2) the low interest by Psychology undergraduate students in relation to the clinical care for students with special education needs; 3) the recent acknowledgment by civil society about the specialized treatment for autism that surpass the barriers of clinical environment in Psychology and that comprises the formation of parents and also educators; 4) the lack of knowledge in scientific principles of School Psychology for an effective process of school inclusion from childhood education to high school and higher education.

It is important to highlight that LAPITEA does not exhaust the many possibilities of intervention with individuals with ASD. According to Richman (2001) different treatment proposals were developed along the years outside and inside Psychology and, about this one, models from different approaches with distinct epistemological basis were delineated. Among the kinds of treatment there are proposals from Psychoanalysis; Sensory Integration; music, art and dance therapies and others, which are relevant for the expansion of researches on the theme. Besides, there should be studies, which may increase the possibilities of parents, caretakers and health and educational professionals to be better prepared to address the behavior of individuals with autism with the purpose of expanding the possibilities of inclusion in institutional contexts. Among them, it is highlighted the school which lives current inclusive policies in Brazil with the goal of ensuring the expansion of access and quality of teaching at regular classrooms, offered to the public of students with autism and other cases of learning disabilities (Galvão & Beckman, 2016; Matos, Matos & Figueiredo, 2017; Stichter, Riley-Tillman, & Jimerson, 2016).

Although the legal right to access education is acknowledged, it is common to observe lack of teacher's preparation to deal with the presence of the public of students who represent autism (Nunes, Azevedo, & Schmidt, 2013; Schmidt et.al., 2016). In Brazil, researches such as those developed by Camargo e Bosa (2009), Gomes and Mendes (2010), Gomes and Souza, 2011, Matos, Matos and Figueiredo (2017), Nunes, Azevedo and Schmidt (2013) and Oliveira (2015) showed the teacher's perception on school inclusion in general and, at the same time, the feeling of not being ready for attending individuals with autism at regular schools. This scenario invites the entrepreneur to new studies in School Psy-

chology directed to the increment of quality of teaching for the public of special education, from the more elementary to higher education (Mitijáns-Martínez, 2005).

It is considered that what is currently shown in the literature of School Psychology on the theme is still scarce, due to the magnitude of epidemiological incidence of cases with autism in Brazil and the world, which implies in giving more attention to the efforts by Universities that, through teaching, extension and research projects, shall be committed with the theme. This panorama, according to Carmago and Paula et al. (2011), suggests the need for a necessary expansion of research that demonstrates the potentials of social competences in children with autism and the possibility of inclusion at regular school and at all levels, considering the notable variation in expressing the autism symptoms presented in the process of psychological assessment.

So far, the assessment processes through which the baselines for the 11 children at LAPITEA were (and currently still are) established and the interventions in Applied Behavior Analysis resulted in improvements by the children in several repertoires from the most basic ones, such as sitting, remaining seated, imitation, matching-to-sample and eye contact, to more complex ones, which relate to both expressive language (or verbal operants according to the terminology by Skinner, 1957) and receptive language. The previously mentioned assessment protocols for curriculum placement (Partington, 2006; Partington & Mueller, 2013; Sundberg, 2008) are in continuous use to help keeping the teaching programs updated for each participant. Undesired behaviors by the children comprises repetitive behavior patterns including noises with the mouth, echolalia, hand flapping and body rocking; aggressive behaviors such as hitting, pinching and biting by some of the children. The treatment of these behavioral excesses, although successful because they were greatly reduced inside and outside LAPITEA, should not be viewed as a finished process due to the fact that they will probably not be completely interrupted. Nevertheless, the continuous and systematic efforts by the staff in order to carefully analyze the behavior functions and implement the best approaches in accordance with the teachings from evidence based practice make all difference for significant behavior change. Plus, the parent's involvement has been of great help in the promotion of generalization effects from the work at LAPITEA with the children. The literature in evidence based practices (the previously mentioned research articles and assessment and intervention manuals) highlights the importance of training parents and caregivers so the learners with autism may benefit inside and outside the context of a more structured environment. A good relation with educators is also very important, considering that they also may and must help youngsters with autism to evolve at the context of school, which is an environment where the children should develop many skills related to several domains, such as following routines and rules and establishing a proper relationship with others. LAPITEA continuously aims at developing the children in several domains inside and outside its own

structure and it is believed that the involvement of everybody related to the children's social contexts is needed for inclusion and attainment of established goals such as being close to typical development in the long term.

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