

Specialized educational care in the public system: Intervention strategy in a case of double exceptionality



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ABSTRACT

Among the diversity of students in the school context, there are those who still have little identification in the regular classroom, including Double Exceptionality (DE), that is, Asperger's Syndrome (SA) and High Skills (AH). Due to gaps in the initial and continuing training of teachers that enable them to recognize the characteristics of specific human talents, the biggest loser in this situation is the student. Qualitative research where the object researched is the trajectory of the student XD (fictitious name) in the school environment. The type of study is the single case study, which places the case as the focus of the research. The Medical Evaluation showed a clearly above average position in intellectual capacity and an average above expected for age and schooling, with percentile equal to or higher than 40% for a group of the same age group; his cognitive development presented some distortions with delays, his academic performance being impaired due to limitations in social interactions, in addition to severe blockages in relation to the environment, with reactions to pressure, anxiety, inadequate feelings, which made him highly attached to his imagination and fantasy, bringing the feeling of a dangerous, uncertain, rigid, inflexible world. In this case, communication increased as trust was established and it was possible to perceive the set of experiences of the subject of the report from the stimulus of a game, since playfulness had a positive role in this process linked to difficulties. The oral communication skill was stimulated with gamification and graphic representation, stimulated by the interest in the English language. The partnership with an institution with a gamification and robotics project greatly facilitated the development of XD as an individual in society, strengthening ties, affirming trust and opening new



professional horizons. A particular actor, the Teacher Coordinator of the Pedagogical Center, and the collaboration of the entire school community leveraged and sustained XD's educational inclusion.

Keywords: Teaching and learning, Special education, Specialized educational care, Intervention strategies, Double exceptionality, High skills / Gifted.

1 INTRODUCTION

In the diversity of students present in the school context, there are those who still have little identification in the regular classroom, among them, the Double Exceptionality (DE), that is, Asperger Syndrome (SA) and High Skills (AH). Due to gaps in the initial and continuing training of teachers that enable them to recognize the characteristics of specific human talents, the biggest loser is the student. In this sense, losses such as deficits in social interactions and communication that are already typical of this student population increase, resulting in a mismatch between intellectual, social and emotional development. However, it is possible to alleviate their suffering by enabling interventions in the follow-up with teamwork composed of professionals focused on support and with individualized interventions coming from different strands that will contribute with support supports for improvements in social adjustment, favoring the performance of this student in the classroom.

2 REVIEW OF RELATED LITERATURE

2.1 SPECIALIZED EDUCATIONAL ASSISTANCE IN THE PUBLIC EDUCATION NETWORK

The right and the guarantee of access to free education are established in the Federal Constitution of 1988, in article 208 [1]. In this perspective, the National Policy of Special Education in the Perspective of Inclusive Education (PNEEPEI), of 2008 [2], emerges with a new milestone for education, this time, a new look at special education that was previously substitutive to common education.

In 2009 [3], Brazil ratifies what was provided by the Committee on the Rights of Persons with Disabilities (CRPD), of the United Nations (UN), in the International Convention on the Rights of Persons with Disabilities (CRPD), establishing that students with disabilities, global development disorders and high skills, are offered education in the regular classroom and in Specialized Educational Assistance (AEE), in a complementary and supplementary way. This issue is then recognized as a matter of justice, human rights and promotion of equality. From Law No. 9,394 of December 1996, Chapter V [4], special education became a transversal teaching modality at all levels, stages and modalities.

Thus, the PNEEPEI guides the systems regarding the organization of this teaching, in this context, Law No. 13,146/2015 (Statute of the Person with Disabilities) [5] is established, bringing the inclusive school model with the requirement of adopting new pedagogical practices. Thus, the training of teachers is necessary to break with conceptions of homogeneous patterns of students. The other



education professionals, as well as the participation of the family and the community, become part of this organizational system for the realization of an inclusive look in urban, architectural accessibility, furniture and equipment, transport, communication and information, in the intersectoral articulation of the implementation of public policies [6].

As a response to families who cannot always identify what the school lacks so that students can gain in their singularities related to school inclusion, Law No. 9,394 of December 20, 1996, the Law of Guidelines and Bases (LDB) [7], establishes the mediation of the specialized teacher in the AEE, according to article 58:

§ 2º: Educational assistance will be provided in specialized classes, schools or services, whenever, due to the specific conditions of the students, it is not possible for them to be integrated into ordinary regular education classes.

Under the law, the AEE is carried out in the multifunctional resource rooms of basic education schools. These are spaces with furniture, teaching and pedagogical materials, accessibility resources and specific equipment for the care of students targeted by special education, in a shift contrary to their schooling, as established in PNEEPEI [2] and Decree No. 6,571/2008 [8].

Resolution No. 4, of October 2, 2009 [3], makes it clear that the AEE will be carried out in the reverse shift of schooling (counter shift). Aimed at students with disabilities, global development disorders and high skills, it brings the guarantee of a specialized teacher in a specific area, within the school itself, whose function is to guide regular classroom teachers, families and classmates regarding the use of materials, their applicability and functionality, in addition to adequately supporting the student in his educational need with content of the Brazilian Sign Language (Libras) and tactile Libras; Digital alphabet; Tadoma; Portuguese language in written form; Braille system; Orientation and mobility; Accessible computing; Sorobã (abacus); Visual stimulation; Alternative and Augmentative Communication (CAA); Development of educational processes that favor cognitive activity. As resources, accessible didactic and pedagogical materials (books, drawings, maps, graphics and tactile games, in Libras, in Braille, in enlarged character, with visual contrast, imagery, digital, among others); Accessible Information and Communication Technologies (ICTs) (mice and actuators, keyboards with hives, voice synthesizers, Braille line, among others); and Optical resources; AAC boards, pencil thickeners, equipment tip, head, inclined plane, accessible scissors, magnetic board with magnetized letters, among others. In conjunction with other professionals, the work of this specialized teacher collaborates with the development of the autonomy of this student in care.

2.2 AUTISM SPECTRUM DISORDERS (ASD) AND THE LEARNING PROCESS

Autism Spectrum Disorder (ASD) in Early Childhood Education (EI) has been a much discussed topic today, as it is observed that children have been diagnosed early, due to the advancement



of studies related to this area of special education [10], as pointed out by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) [11].

Children with ASD face several challenges in their daily lives, whether they are social interaction, communication or in their motor and cognitive development. Through observation, carried out during the EI period, it is found that although the child with ASD has limited language and has resistance to physical touch, this child has feelings and, therefore, the teacher needs to nurture the relationship of affection and stimulate his emotional sensitivity. Another factor of difficulty is the way in which information is understood by the child with ASD. The child needs to be told in detail at school what is going to be done that day. It is also necessary that the activities are done one at a time, because too many stimuli can cause an overload, which makes it difficult to assimilate what is being taught. [10]

Psychopedagogy is also of paramount importance for the development of children with ASD since the psychopedagogue studies the learning process of these children, thus identifying the difficulties that interfere in the assimilation of content [12].

2.3 THE DOUBLE EXCEPTIONALITY

Rezende, Fleith and Alencar [13], mention that Double Exceptionality (DE) is an asynchrony of human development and cite as an example, Asperger Syndrome (AS), Attention Deficit Hyperactivity Disorder (ADHD), Learning Disorders (LD), among others. In these conditions, it can be added to High Abilities/Gifted (AH/SD).

Renzulli [14], defines AH/SD, being it, in his definition, represented in the "[...] Three Rings Conception of Giftedness: creativity and commitment to the task. [...] above-average ability [...]".

Still in this conformity, in agreement with this definition, Resolution CNE/No. 4, of October 2, 2009 [15], considers in its Art. 4-III, some traits for the identification of students with AH/SD, defining them as "[...] those who have a high potential and great involvement with the areas of human knowledge, isolated or combined: intellectual, leadership, psychomotor, arts and creativity".

2.4 THE CONTRIBUTION OF OTHER AREAS TO ESA

The specificity of each ESA student can benefit from the participation of other professionals supporting the development of children.

For example, autistic people, because they present significant deficits in behavior, suffer a great impact on education, requiring stimuli for a better quality of life. The participation of other professionals in the multidisciplinary team can lead to the achievement of new skills, such as the practice of physical activity that improves not only the motor part, but also the cognitive with benefits



in the physiological, psychological, cognitive and social spheres, working the individual as a whole in his integral formation.

According to Oliveira, Santos and Santos [16], in the case of the autistic, due to different dysfunctions, the development of new skills brings progress in the physiological aspect with maintenance and increase of the range of movements, developing coordination with improvement of balance and body posture. In the psychological area, success in the execution of activities results in increased self-esteem. In the cognitive area, it is observed that through body movement, students tend to know themselves better, and in the area of socialization, it enables better inclusion, since the child needs to have contact with others of the same age group, in addition to approaching adults.

According to Teixeira and Hernandes [17], music therapy, through the musical language that is universal, overcomes cultural, cognitive and emotional barriers, opening paths in the communication of all human beings through creation, interpretation, listening and musical improvisation.

In this context, it is perceived that music becomes something organized and essential, integrated with sports practices, becomes favorable for the learning of autistic students served in the AEE, however, the service does not have the support of the multidisciplinary team through state resources, and families must bear the costs for the benefits of children in care.

2.5 GAMES AS A COMMUNICATION CHANNEL

Although it is clear that autism is a very broad disorder, Sá et al [18] mention that intervention with educational games brings the perception of daily progress that is being achieved, according to reports from parents, specialists and researchers, so that it collaborates with a cognitive, social and emotional growth in children. In this context, depending on the autistic child, the games are possibilities found through technological tools, thus creating a productive process.

An approach that has been gaining adherents and being widely experimented involves the application of digital games, which aim, in a playful way, to improve the deficient skills resulting from ASD, which are present in the emotional, communication and social interaction, cognitive, motor and concentration areas [19]. Digital games, as educational tools, allow the student to assimilate concepts, assisting in the learning process and in the development of skills and abilities essential for their training. With the use of digital games, the individual develops his cognitive skills, mainly pattern recognition, information processing, creativity and critical thinking [20].

The use of digital games as assistive technology for people with ASD has been shown to be effective in a considerable number of studies. There is a strong trend towards the growth of the area of development of digital games with assistive characteristics focused on mobile devices, which should increasingly integrate into the daily activities of people with special needs and abilities, in particular, people with ASD. [21]



2.6 THE INSTALLED CONTEXT

The emergence on December 31, 2019, in the city of Wuhan, Hubei province, People's Republic of China, of the SARS-CoV-2 virus, known as Coronavirus, which leads to acute respiratory syndrome, hospitalization and death led from March 12, 2020, the pandemic declared by WHO, the global outbreak of SARS-CoV-2 [22].

This fact, initiates the new conditions of the educational scenario in the pandemic, forcing decision-making with emerging measures by the National Council of Education (CNE) approving Opinion No. 5/2020 [23], which reorganizes school calendars, as well as the performance of pedagogical activities.

In this sense, the State Department of Education (SEDUC), through Decree No. 64,862, of March 13, 2020, amended by Decree No. 64,864, of March 16, 2020 [24], suspends classes within the scope of the Department of Education, to prevent contagion by Covid-19. Thus, the service in the AEE that was previously in person becomes remote and the pedagogical process gains a new modeling in teaching.

As a result, there is a paradigmatic change in the school, as technology becomes part of the school context as never experienced.

Technology becomes the main means of communication between school, family and students, with the cell phone being the most used means of communication through the Whatsapp application, with the creation of groups or with individualized video calls.

School activities were offered in such a way that students did not lose contact with school and did not experience setbacks in their development.

The Law of Guidelines and Bases of Education (LDB) [7], in its Article 62, in items 2 and 3 provides for teacher training to "use distance education resources and technologies", however, the scenario brought to the educational process much suffering.

The decentralized bodies, such as the Teaching Directorates, through the Teacher Coordinator of the Pedagogical Center, also supported teacher training in accordance with what is established in the LDB.

In the meantime, support to schools was based on the elaboration of weekly and biweekly scripts with suggestions of didactic materials made available in Whatsapp groups through exercise lists, videos, pedagogical guidelines, among other notes such as feedback to families, students and monitoring of managers.

In line with this, State Decree No. 64,982 of 15-05-2020 [25], establishes the São Paulo Education Media Center, aiming at the implementation of new methodologies and educational tools complementary to face-to-face teaching. A great advance for the education of São Paulo with moments



of training in real time for all the teams of the teaching directorate and schools, as well as online classes for students.

In this context, the AEE is also inserted, however, the obstacles have emerged in a punctual way, since not all students have tools such as cell phones or computers to perform the activities, requiring the sending of printed materials.

Given this reality, the students served end up being segregated because they do not have the necessary support for their development. This impact ends up being reflected in the activities of the regular classroom, bringing the need for active monitoring by the school team.

3 RESEARCH METHOD

Research of a qualitative nature where the object researched is the trajectory of the student XD (fictitious name) in the school environment. The type of study is a single case study that places the case as the focus of research. The research was conducted at the State School "Jardim Encantado" (EEJE), in the city of Votuporanga, State of São Paulo, Brazil, from May 2019 to March 2020. The research data source included: 1) Pedagogical Core Coordinator Teacher (PCNP) responsible for the special education teaching modality, 2) EEJE Coordinator, 3) English Teacher. The data collection of the case study was through direct observation. The data analysis technique used in this research was the non-statistical technical analysis that applies to qualitative data.

4 SURVEY RESULTS

4.1 IDENTIFYING THE CASE

Attending a routine visit the PCNP is faced with the student XD, fictitious name, whose performance in relation to other students of Specialized Educational Assistance (AEE) caused him a certain strangeness and discomfort. XD had oriental characteristics, was 13 years old and was regularly enrolled in the 7th grade of Elementary School, in the afternoon, at "EE Jardim Encantado". The EEJE is a school considered outstanding, as the location is privileged in this city in the northwest of São Paulo, under the jurisdiction of the Teaching Directorate (DE), in addition to having a faculty almost entirely effective, without turnover, reason for dispute for vacancies for children by their families. Precisely on the day of the visit, XD was in care for students with Intellectual Disability (ID), having been referred by his regular school, with the justification of being a student without participation in classes, not having friends, despite being very nice. Already, the argument of the teacher responsible for the SEA, as to the presence of the student in the service, was to be in evaluation. Well, on that day of the visit, XD crossed his gaze with that of the PCNP and there was established a first interaction. Smart, bright and captivating look, with a synchronized swing of the legs as if he wanted to say something, and said, without sounds of words, but in written form "My name is XD.". Another sign



that attracted the attention of the PCNP who asked him: "Do you like English?"; and the answer: "Yes!". This aroused the curiosity of the PCNP who wondered: "What is hidden in this being? A student with intellectual disabilities, writing in English is not natural ... ". The link was created and the PCNP, delighted, proposed to investigate XD more closely. Back in the ED, and in conversation with the teaching supervisor (SE) about the case found in the SEA room and the strangeness felt with the clues given, the PCNP was surprised by the fact that the SE had also perceived something different, mysterious in this student.

4.2 PEDAGOGICAL CASE FINDING

In the second half of May 2019, the PCNP began the pedagogical survey with XD to get to know him more, interacting with his life story. The first contact was with the school coordinator, who had taken over the function a month ago, however she knew the student in the classroom for having taught him mathematics, which would favor the collection of information. However, the PCNP realized that the work would require a little more patience in this school itinerary, considering that the school still had traces of very conservative conceptions, when it came to the process of inclusion of the target audience of students with ASD, and rightly so, because this audience was hidden, being more visualized in the Special Care Institutions. "EE Jardim Encantado was a school extremely careful with the health of students, so much so that it had an employee of the secretariat to administer medication at scheduled times for students, with due authorization by parents for this purpose.

Thus began the investigative interaction with the school coordinator as a survey of the student's school life: "XD comes from another school network, has been studying at this school for two years, however, he never opened his mouth to talk to teachers, he has no friends, sometimes the appearance is that of a deaf student, because he does not interact with anyone, among teachers the discourse is permeated in a dubious way, whether he hears well or not, because they never heard his voice in the classroom during class time. A curious fact, among us at school, is that this student comes every day with sunglasses and a glove on one hand, other times he comes with a sweatshirt, hiding his head in the hood. The family is oriental, extremely reserved, speaks little of XD's life, and what we know is that the student is autistic, has psychological, neurological monitoring and does swimming activities in the after-school hours. Also, the family order is that he has no contact with one of his classmates because of a past disaffection, when they were in the other network. He comes to school accompanied by his mother to the gate and at the end of classes, she picks him up."

In this way, the first information about XD was obtained. In the Collective Pedagogical Work Activity (ATPC) of the school unit, teachers were informed that the PCNP would participate in the classes for student observation.



The following week the PCNP entered the classroom, sat down at the last desk and began to observe him. He remembers well: math class, XD barely raised his head, his legs continued in that synchronized swing as if a musical echo sounded just for him, the movements did not stop. The teacher began to explain the subject, went through the activities with the participation of the students. The class came to an end, the teacher said goodbye, and the teacher of the next class entered. XD continued with the same posture as in the previous class, so he followed the subsequent classes, until the break time, when the PCNP also left for the survey in another environment outside the classroom. His gaze ran through the courtyard spaces in search of XD, the buzz of the kids were noticed, because the moment was recreation, rest and lots of laughter, however there was also XD in its own way. Interaction with the kids? No! We could see his enormous desire to get in the boys' circle, because he was walking around, but something did not let him interact, thus signaling one of the characteristics of ASD.

The next day the PCNP talked to the English teacher about the interest in the communication of this language by the student, narrating to her what she had witnessed in the communication at the time of the visit in the AEE, when the teacher shared the same thought as the PCNP: "he likes English very much, but has no participation in classes. The activities are seen, corrected, the interest in the language is well perceived." That day, in conversation with the school coordinator, she was informed about the student's poor performance in the math test, a fact that had left her worried, as the student had good grades.

4.3 BREAKING THE SILENCE

Then the PCNP invited XD to a private conversation, since his close and frequent presence no longer caused him strangeness. He readily accepted the invitation, now, the challenge of the PCNP was to expand that interaction initiated in the look of the AEE room, maintaining that it evidenced possibilities of subjectivations in the reception and hidden potentialities, not yet revealed, since the school, being plural in its diversity of students, could have let this monitoring pass. In one of the school rooms, reserved for coordination, XD and the PCNP started the mathematics assessment again as a pretext for a better understanding of what was happening, and, in the midst of the questions, the PCNP asked XD if she was managing to perform the proposed tasks, but she did not get answers and at these times her silence bothered her. "Why did you write in English to me in the AEE room? No answer! Do you like English?" The silence continued, but her eyes were on the PCNP. "I'm terrible in English, I don't know anything about this language", the PCNP said to XD, to see her reaction. The math questions were there to be solved. The PCNP knew she was hindering him in his calculations, but the goal was to open a channel of communication.

Another question was asked: "Do you like to play with your friends? Do you play on the computer or on your cell phone?" At that moment, XD opens the communication channel and reports



in writing in a corner of the test sheet. The PCNP quickly handed him a blank sheet of paper so he could write. "I like Kick the Buddy, a torture game. We torture the doll, it's an anti-stress game, but my mom thinks this cell phone app can get you in jail, she's wrong." The PCNP, although very frightened by what she read, continued with her inquiries, because the channel was opening and could not be missed. Then XD writes: "This one is dead", referring to himself, "I poisoned his soul, only a clone of me can help me". Drawings of knives, saws began to appear in the midst of his creation. The PCNP realized that the student was literate, but wondered how she would act with socio-emotional skills. All the more reason to continue the investigative probe. The clock was ticking and the hours were advancing, they interrupted the task with an agreement to continue the next day. The next day, in the same room, they continued the math tasks. After a while, XD was involved in the calculations and silence again hung in the air, an idea came to the PCNP's mind: to try the Kick the Buddy game, mentioned in the previous class. And so, with the cell phone in hand, the PCNP started, out loud, the wrong pronunciation in English about the words of the mentioned game, and to his surprise, XD gets up from his desk, whispering in his ears "that's not how you read it", correcting his pronunciation of the words of the game. The sounds of the words began to break the silence that had existed until then. Unforgettable human being, different, unique.

In the meantime, the PCNP discovered in this communication that XD was invisible, that is, in his imaginative conception his presence in the school was hidden, so he did not speak, did not interact with anyone and from that moment on the PCNP also became invisible. However, she could not be rude or insensitive, but welcoming in that speech that seemed so distressing and suffocated, kept to herself; but, how to be an invisible friend? the PCNP asked herself, and thought: "there are ways to go so that we can also lead others". She told XD that she was not from the school, but she would be his invisible friend, however he needed another invisible friend who was from the school, he resisted, but accepted the proposal. She presented him with the idea that the school coordinator might be the friend he needed, and with a little resistance he accepted her.

The PCNP left the room in search of the other invisible friend in XD's imagination, who from now on, was also part of this arrangement. This fact surprised the school management team, because until then, they had never heard the student's voice. The coordinator, now the new invisible member, entered the room, whose door was closed, XD's voice echoed for the first time in the environment sharing ideas, even if they were narratives that seemed strange.

It was perceived in the student a possible impairment in this intellectual aspect, as well as adaptive skills, however, knowing the family environmental conditions of an extremely rigid and conservative family, the look at this aspect in the interactions was sharpened.

From that day on, XD started talking to the invisible friends she had just gained at school, telling them what happened to her in the school and family environment. The bond was established



with welcome, otherness, empathy and affection. Also, in order not to miss these precious moments, the PCNP sought XD at the EEJE school, whose building was right next to the ED where she worked.

XD attended the ED every day for about 1h30min, and at these times the use of the computer with the *Kick the Buddy* game was guaranteed. Support was also provided in English conversation stimuli with the coordinating teacher responsible for the foreign language, since with the other teachers of the ED and the school, the retraction in social interaction and communication continued.

4.4 THE DIAGNOSIS AND MEDICAL ASSESSMENT OF XD

But what about XD's family? It was at this point that the mother was called, and was informed of what was happening with her son. Very solicitous, the mother answered the call of the ED and with the participation of the school team, all the monitoring done to the student was narrated. Surprisingly in this conversation, the reports were presented by the mother, since the student was already being evaluated by the multidisciplinary team of a medical school in the northwest of São Paulo, diagnosed as having Asperger's Syndrome.

From there, a greater relationship was established with the mother to better understand XD, such as preferences, routines, autonomy and independence, mobility, family relationships and other environments frequented by the student. The first information was emerging from the partnership established with the mother, reporting games as her favorite activity.

The test results showed a definite above-average position in intellectual ability and an average higher than expected for his age and schooling, his percentile being equal to or better than 40% for a group of the same age group; in his cognitive development, he presented some distortions with delays, and his academic performance was impaired due to limitations in social interactions, in addition to severe blockages in relation to the environment, with reactions to pressures, anxiety, inadequate feelings, which made him highly attached to his imaginations and fantasy, bringing the feeling of a dangerous, uncertain, rigid, inflexible world. Such analysis brought to PCND the feeling of responsibility in initial and continuing education to education professionals, because there are hidden treasures in each human being that can only be discovered, explored if touched with affection, understanding and passion for educational practice.

4.5 EXPANDING THE POSSIBILITIES OF CARE

Thus, the circle of people increased so as not to make the same (or worse) mistakes, was widening, not only in the ED space, but also in the EEJE school that now has in its space the place for the care of students with ASD.

In agreement with the family, XD was transferred from this school in the second semester of 2019, to the State School "Castelo Forte" (EECF), in order to facilitate care for his spectrum. Inserted



in the appropriate AEE and created for this type of student, XD was accompanied by the teacher specialized in ASD who worked different aspects for his advancement. As it was found that the student had High Abilities / Giftedness in some areas, partnerships were initiated with the Universidade Estadual Paulista (UNESP), particularly the campus of the Institute of Biocências, Letras e Ciências Exatas de São José do Rio Preto (IBILCE) and the Federal Institute of Science and Technology of São Paulo (IFSP), Votuporanga campus, through the insertion and monitoring in activities, whose themes would address their areas of interest, such as gamification and programming, with the assumption that learning was centered on the student, using the methodology based on projects and problems.

In the EEA of ASD, the service took place twice a week with activities advised by the researcher responsible for the area of High Skills of UNESP, planned jointly between the PCNP and the specialized teacher of the EEA, with an individualized service plan for XD, aimed at the development of the potentialities presented in their area of interest as skills in games, foreign language, creation, still, seeking to intensify social interaction, communication, with activities and tasks that minimize existing environmental phobias.

The fact is that, the positive side of the student evidenced in the evaluation period by observation in the classroom, was addressed in the care of the AEE TEA, through creations that stimulated his interaction with the specialized teacher. Thus, tasks were planned to be performed by the student. Being a follower of famous *youtubers*, XD had expressed the desire to also be a *Youtuber*, and such a tip was the hook to ensure communication stimulation. Research on the routines developed by *youtubers* was also carried out, seeking to know the values and earnings of these people, advertisements on the channels and video recordings by cell phone were also guaranteed for XD to stimulate speech. Still, valuing the creation side, several activities with *STOP Motion* were done so that the student activated his imagination, putting the scripts and characters into action with the support of digital technology, later transposed to other materials such as sulfite sheet, cardboards.

As for the student's day of attendance, the activation of other spaces that contemplated support was also considered, demystifying the environmental phobias detected by the evaluation of the multidisciplinary team. Classes were held weekly at the IFSP, with the participation of a group formed by approximately 10 students who had a high level of school performance, including participants in the Brazilian Olympics of Mathematics in Public Schools (OBMEP), in addition to a great interest in games, a reason that facilitated personal interaction with peers in moments of creation, bringing motivation in the execution of tasks shared in groups, in addition to the obligation in communication.

The classes took place on Thursdays at the IFSP and were taught by the researcher in technologies and programming, lasting 1h30min. This time was divided between explaining the problem to be solved, indicating the appropriate programming and then applying the concepts by the students, always counting on the final challenge. Thus, the first tool presented was *Scratch*, the second



tool, *Construct 2*, both free and available on the internet. In the *Scratch* environment it was only possible to program using blocks, in the case of the games created by XD the challenge was to make the well-known character "Mario" pass through the pipe, enter an underground world in which he should capture the largest number of coins within the time of 60 seconds. Then the student had to do the Coin Programming. The classes respected the pace of the student, and also of the other participants of the project, in this way it was possible to notice that other students of the same class, also developed different games, using the same mechanics, some use time, others do not, also the uses of lives and points were varied, considering that the scripts and characters had different rules for each student.

A great advance was observed in the tasks performed with the development of XD skills from these stimuli during the school year in the regular school and in the care and partnerships.

The student's care was also continued in the 2020 school year, with great expectations, as his development was clear.

5 CURRENT SITUATION

However, obstacles and barriers arose: the ESA teacher was unable to continue the service because she taught classes at another educational institution, and there was no other teacher with the same training in the list of teachers enrolled at DE level who could teach classes to XD and another negative and impacting factor was that from March onwards, an unusual situation arose, the COVID-19 pandemic, which directly affected health and education. With social distancing, regular classes and assistance became remote with online activities, leaving that routine that until then, one was used to in person. And then the school that used to be the space for inclusion, support and reception, also started to need to be welcomed. In the face of so many events that have led entire families to death, affectivity, empathy and otherness gain space in the integral formation of education, articulated to the knowledge historically instituted in the school space.

5.1 ENGAGEMENT ACTIVITIES AND ACTIVE SEARCHES BY LEARNERS BECAME PART OF PEDAGOGICAL PRACTICE

The faces hidden behind the masks obscured communication, however, alternative activities to guarantee the teaching-learning process were carried out, preventing students from dispersing from school life. Barriers were inevitable in school spaces, so XD care suffered from mediation, even if online, because fear, insecurity, social distance, were present in all families and in all spaces and environments. Time went by, the school year ended, however, the pandemic is increasingly worrying waiting for the vaccine. At school, students have the option of flexible attendance, but is learning the same?



New horizons appear with the threshold of the year 2021, the arrival of the vaccine, and hope is reborn. We are in the new normal, but ending the first semester, but where is it XD? As for the services, even if remotely, they were tried, but without success, with the distance the condition of the spectrum was accentuated again, requiring a resumption, as soon as everything normalizes with school life.

Your family was contaminated with COVID 19. I believe that the suffering experienced with the disease helped to silence the voice, however, the flame can be lit again, just make it possible.

6 DISCUSSION

As trust was established, communication increased. It was essential to take advantage of this moment, as it collaborated with the expansion of the vision in the evaluation of the student. Pragmatic theories consider the context extremely important for communication since the pre-verbal period; that is, even before issuing the first words the child is able to respond to social initiatives, with the emergence of skills that underlie conversational exchanges [27], which is in line with the findings of research [28,29] that demonstrated that the context, attentive and responsive parental behaviors, predict subsequent language gains in children with ASD. Rolim and Antero [26] state that for there to be significant changes in the development of the ASD patient, it is necessary to have bonds, affection, meanings and affections. In this process the sensitivity to perceive words said and even those that were not heard, be perceived, felt and thus obtain a better use in learning. This is what happened in the reported case where the PCNP was lovingly unveiled in the attention and monitoring of XD.

It was possible to perceive the set of their experiences from the stimulus of a game, after all the playfulness had a positive part in this process linked to difficulties. Indirectly, games and language have established communication since the time of Piaget and Vygotsky [30]. Virtual games benefit their patients through health, entertainment, training and education, for example [31]. The game *Kick The Buddy* has a somewhat strange and controversial classification category since it falls under violence, torture and action games. There are those who stand against this classification saying that the purpose of the game is just for people to get rid of stress, a somewhat curious form of therapy. *Kick The Buddy* means "kick the friend", and is like a punching bag to relieve tension. All means of torture can be applied, as the dummy feels no pain and suffers nothing. *Kick the Buddy* features simple gameplay and to play you simply select the desired weapon or power from the menu on the left side of the screen, and then just tap the screen to use the selected object. You can find hundreds of objects, and even extranatural aids, all divided into categories. It is offered by *Playgendary*, it was released on May 22, 2018 (*Android App Kick Buddy - Buddyman Kick Game, Zoldyck Developer*) and last updated on July 5, 2018, because a while after that *Kick The Buddy: Forever* was released. The game is free to



play, but offers in-app purchases of some items, as well as constantly displaying ads. It is compatible with *iPhone*, *iPod touch*, *iPad* with IOS 4.0 or higher and all *Android* devices [32].

In a recent review, Albuquerque et al. [33] state that there is a connection between conventional intervention and the use of technologies as a complement to traditional professional practices by showing that the public involved in the reviewed works showed positive results between the associated therapies and thus, being able to say that there is success in the interventions, improving the communication and interaction of those involved; and that the development of more *serious games* in this area will provide greater gain for patients.

The oral communication capacity was stimulated by providing knowledge about cognitive knowledge such as logical sequence of facts, organization of ideas, perception of the cause and consequence relationship, in addition to the observation of their emotions. These learning elements are of great importance in the lives of autistic people since they have many difficulties in interpreting and constructing narratives, due to characteristics, such as the difficulty of understanding some expressions, ironies and feelings, facing language in the literal sense [34]. *Games* allow the experience of various narratives, in different contexts and virtual environments, which help subjects to, among other skills, develop logical thinking [35].

The use of drawings frequently used in their upbringing were an integral part of the communication process established, initially orally, then written with the mixture of graphic representations. Communication by figures is the most effective communication methodology used with autistic people, something observed since the first years of age [36]. Based on the assumption of the effectiveness of focused interventions [37], *quizzes* with a proposed tool that seeks to assist in the development of the understanding of the linearity of events of ASD patients, with graphic design, where images are shown and the child has the mission to order them sequentially, according to a children's story presented, have been developed with the purpose of evaluating the usability of the game when applying it to individuals with ASD [38].

Among the specificities of people with ASD is the deficit in socialization, communication and behavior so that they commonly encounter difficulties that reflect on social participation [39] and, according to Buemo et al. [40], in the school context the deficits in communication and social interaction of people with ASD cause losses in their socio-educational development. The isolation and eventuality of segregated activities are pointed out as a negative factor in self-reports of people with ASD [41]. Herein lies XD's "invisibility", his imaginative conception that his presence at school was hidden. According to Daniels [42], the social voice becomes the inner voice as it internalizes meanings and transforms them into its subjectivity.

The diagnosis of Asperger's Syndrome given to XD does not exclude the condition of a junction of HS/G and some disability and/or disorder that is revealed in a unique population in the area of HS/G,



where students tend to fail to demonstrate high academic performance or to reveal some specific disability and/or disorder, since their potentialities can be masked by some disability and/or disorder or, the opposite, the disability and/or disorder can mask HS/G [43]. Vilarinho-Rezende, Fleith and Alencar [44] also state that distinguishing between giftedness and double exceptionality is not only a challenge for professionals working in the field of Special Education (SE), but it is also a difficult task due to the similar characteristics between HS/G and AS [45] and this, in fact, promotes difficulties in the evaluation process of the two specificities. This reinforces the need for the topic to be studied, especially when it comes to the scarce production of knowledge on the condition of dual exceptionality in Brazil [46].

The logic of the partnership with IBILCE and IFSP is based on research that revealed that when programming, children learn to solve problems, communicate their ideas and plan and structure projects, and these skills are useful not only for those who intend to enter the job market in the area of information technology, but for anyone, regardless of age, experience, interest or chosen profession. The concepts of programming logic also help in the learning of subjects such as Portuguese, mathematics and physics, arousing greater interest of the child in school.

The fact that the IFSP on this campus has a gamification and robotics project with children and adolescents within the autistic spectrum and / or with high skills, greatly facilitated the attendance of XD. This project has a flexible lesson plan, as it is based not only on the transmission of content, but also on the student's view of the proposed theme and their development as an individual in society, strengthening ties, affirming confidence and opening new professional horizons. Johnson, already in 2010 [47], working with a gifted American adult with Asperger's disorder, showed that early identification and the adoption of differentiated teaching strategies proved to be important educational intervention tools to promote the success of these individuals. Students with dual exceptionality need educational interventions that present interconnectivity between both conditions, in addition to adequately qualified teachers, because failure to meet their needs can cause losses that prevent the development of their talent [48].

The location of the course is also stimulating, as elementary and high school students who do not belong to the IFSP become part of the daily context of the school, being treated as regular students, having the same responsibilities and rules, living during breaks with technical and higher education students, giving those involved familiarity with people, environments and projects developed there and stimulating a future entry into careers in the engineering area. Promising future for XD, with talent and potential in this area, since the development of potential of individuals like XD is possible in school institutions at all levels, from elementary to higher [49].

The project teacher takes into account that today's careers linked to information and communication technology open up a wide range of employment and career development possibilities



for young people, both outside and within the autistic spectrum. What is measured is the ability to solve problems and develop medium to long-term projects, and this professional can work remotely or allocated in any physical space allocated by companies. It is noted that some of the important characteristics for professionals in this area are concentration, logical reasoning, self-taught ability, ease of repetitive and methodical work, verbal and written fluency in other languages, in addition to digital fluency, both in the handling of tools and in the construction of software and hardware prototypes, skills shown by XD in the multidisciplinary evaluation. The cognitive functioning of children like XD presents characteristics of cognitive activity that can be explained by greater plasticity and efficiency and that assist in extensive attentional processes that facilitate the management of cognitive performance through working memory, flexibility and inhibition [50]. In addition, they exhibit rapid learning; greater speed in understanding large, complex and abstract problems; good verbal skills; good problem-solving skills; significant capacity to store and manage information; a good level of understanding; varied interests and a high level of curiosity towards the environment [51].

The educational inclusion of XD, leveraged by the PCNP, was based on the collaboration of the entire school community (manager, teachers, support professionals and family members), since, in general, the various actors involved were committed to enabling actions aimed at promoting their school success, developing their talent and reducing their limitations. According to the literature, it is essential that all institutional segments are truly engaged in proposing and increasing collective attitudes in favor of reducing discriminatory attitudes and consequently increasing respect for diversity [52-54].

7 CONCLUSION

In the case reported, communication increased as trust was established and it was possible to perceive the set of experiences of the subject of the report from the stimulus of a game, since playfulness had a positive part in this process linked to difficulties. Oral communication skills were stimulated with gamification and graphic representation, stimulated by interest in the English language. The partnership with an institution with a gamification and robotics project greatly facilitated XD's development as an individual in society, strengthening ties, affirming confidence and opening new professional horizons. A particular actor (PCNP) and the collaboration of the entire school community leveraged and grounded XD's educational inclusion.



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