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# National research report on learning space and teachers' competence in Portugal

## Preschools and Primary schools

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# Characterization of childhood education and basic education in Portugal

## 1. Portuguese Educational System

The Ministry of Education (ME) and the Ministry of Science, Technology and Higher Education (MCTES) are responsible for the entire educational system Portuguese. Respectively, the Ministry of Education is responsible for Basic Education (which integrates pre-school education and the 1st, 2nd and 3rd cycles of Basic Education) and Secondary Education. MCTES is responsible for all higher education. The ME is supported by the Ministry of Labor, Solidarity and Social Solidarity (MTSSS) in preschool education.

The Portuguese Educational System guarantees the right to education, as enshrined in the Constitution of the Portuguese Republic. It configures the Basic Law of the current Educational System, Law No. 46/86, October 14, with the amendments approved by Law No. 115/97 and Law No. 49/2005, as well as Decree-Law 74/2006 that regulated changes to the model of organization of higher education in cycles according to the structure of the Bologna Agreement. Education is compulsory until the age of 18 and the official language adopted in schools is Portuguese, although students learn English from the first cycle of primary school. The school year begins in September and ends in July.

In Portugal, from pre-school education to higher education, citizens can opt for a public (free) school or a private school (tuition). Private schools should be certified by the Ministry of Education, or by the Ministry of Science, Technology and Higher Education, considered the level of education they protect and by the Ministry of Labor and Social Solidarity/Social Security Institute in the case of preschool education.

### 1.1. Day-care center: children from 0 to 3 years

The education of children from 0 to 3 years is under the tutelage of the Ministry of Solidarity and Social Security. The offer can be from private institutions or social solidarity institutions (non-profit institutions - IPSS). According to the National Council of Education (CNE), the supply of institutions and vacancies is still deficient in Portugal. However, in recent years, there has been an increase in the number of vacancies offered.

In 2017, by reference to December 31, 2,631 day-care centers were registered in Mainland Portugal, 75% of which belonged to non-profit institutions, namely the solidarity network. The total number of places in day-care centers was estimated at 118,500, approximately 62% of which are participated by the State through cooperation agreements with IPSS. The number of children attending day-care centers also increased significantly, reaching almost 100,000 children in 2017 (GEP / MTSSS, 2018) (Table 1).

Table 1 - *Offer of day-care centers in Portugal*

| Number of day-care centers | Non-profit institutions | Private institutions | Number of children attending |
|---|---|---|---|
| **2631** | 1973 | 658 | 100000 |

## 1.2. Pre-School Education: children from 3 to 6 years

The Framework Law on Pre-School Education (Law No. 5/97 of February 10) defines preschool education as the first stage of basic education, in a process of lifelong learning. It is a complement to the role of parents in the education of children. As such, the school must establish a close relationship with families, fostering the development of children, in order to ensure their full integration into society as autonomous, free and supportive human beings.

Preschool education is optional, recognizing that the family plays an important role in the education of children. The State has taken as an official goal the universality of Preschool Education for children from 4 years of age (Law No. 65/2015, July 3), hoping to extend this offer to children from 3 years of age until the end of this legislature (2019).

This educational offer is ensured by kindergartens run by a variety of public organizations, private institutions of social solidarity, schools and private cooperatives, trade unions and other organizations. The public network and the solidarity network of pre-school education institutions are complementary. The public network is composed of educational institutions under the tutelage ME and the MTSSS. The private network is composed of educational institutions with and without profit. The first are private institutions and educational cooperatives, while the latter are private institutions of social solidarity (IPSS).

In 2017, 5,900 pre-school education centers were registered in mainland Portugal, of which 61.25% were from public institutions and 38.74% from private institutions, most of them from the solidarity network.

According to the National Council of Education (CNE), in 2016, 92.5% of 4-year-olds attended preschool education. The data shows a drop of 2 percentage points since 2012. The data show, specifically, that the percentage of five-year-olds attending preschool education was higher than 4-year-olds, showing a difference of 2.7 percentage points. However, there are no significant differences in the frequency between the sexes (Figure 1).

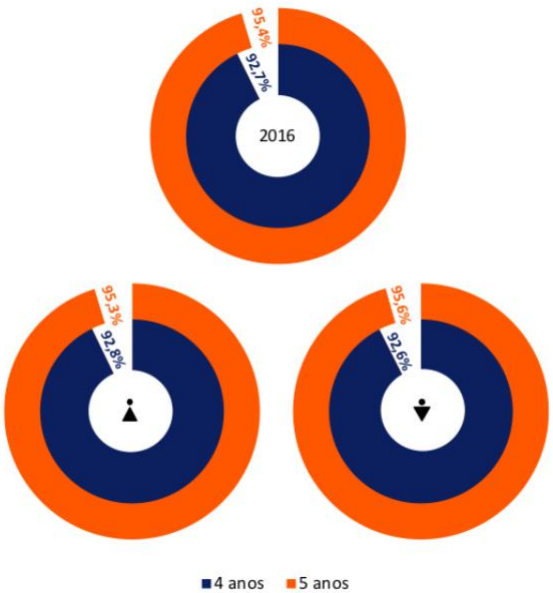


Figure 1 - *Children attending preschool education (CNE, 2016, p. 14)*

According to table 2, the number of children attending preschool education in 2017 was 253,959 children (GEP/MTSSS, 2018).

Table 2 - *Number of children attending preschool institutions.*

| Total institutions | Public Institutions | Private Institutions (non-profit, private schools cooperatives and IPSS) | Number of children who attended |
|---|---|---|---|
| | | | |
| **5 900** | **3 614** | **2 286** | **253 959** |

The ME is responsible for ensuring the pedagogical quality of pre-school education institutions in the public network and the solidarity network. Technical supervision is the joint responsibility of the Minister of Education and the Ministry of Labor, Solidarity and Social Security, which consists of monitoring the organization and functioning of pre-school education institutions.

The main pedagogical objectives of preschool education are:

- promoting the personal and social development of children;
- promoting the integration of children into various social groups;
- contribute to equal opportunities;
- stimulate the general development of children;
- promote the development of expression and communication;
- increase curiosity and critical thinking;
- provide children with well-being and safety;
- identify misfits, disabilities or over-endowment and encourage families to participate in the educational process.

### 1.3. First cycle of primary education: children from 6 to 12 years

Basic education is compulsory and free for everyone. It is intended for children aged between six and fifteen years. Students who complete this schooling receive a basic education certificate.

This level of education extends for nine years and comprises three cycles:

- first cycle is structured in four years and is taught by a teacher (which can be supported by other teachers in specialized areas). The emphasis is placed on the integrated development of studies in the disciplinary areas defined in the curriculum, also initiating the teaching of a foreign language;
- second cycle, lasting two years, covers interdisciplinary areas of basic education, taught by specialized teachers for each disciplinary area;
- third cycle lasts for three years and is structured as a set of disciplines or disciplinary groups taught by specialized teachers for each disciplinary area.
- Basic education aims to provide a common general education that:
- allow students to develop interests, skills and abilities and grow as individuals, according to values of social solidarity;

- allow students to acquire and gift basic knowledge, skills, attitudes and values, forming the basis for general or vocational studies;
- encourage the development of values, attitudes and practices that help develop a sense of civic responsibility and willingness to participate in democracy.

## 2. Curriculum

In Portugal, there is no formal curriculum for day-care and nurseries (children 0-3), nor for pre-school education (children 3-6 years). However, there is a guiding document for Preschool Education, which is configured as the legal document that all childhood educators should use as a reference for their practice.

### 2.1. Pre-school education

The Curriculum Guidelines for Pre-School Education (OCEPE), presented to the public on July 2, 2016, 19 years after the first version, are the result of the revision and updating of the guidelines aligned with the curriculum guidance documents of the first cycle of basic education, promoted by the Ministry of Health.

This new version of OCEPE presents an integrated and holistic approach to the different content areas, presenting the learning processes to be developed, with practical examples and suggestions for reflection for educators. In this updated version, the areas of Expression and Communication, the domains Physical Education and Artistic Education are valued.

Regarding the age group from 0 to 3 years centers there are currently no official curriculum guidelines in Portugal. However, the Ministry of Education is organizing a guiding document for this educational level, in conjunction with the Ministry of Labor, Solidarity and Social Security.

With the coordinated publication of the new version of the OCEPE and the Pedagogical Guidelines of the Nursery, the Government takes a very important step in promoting the quality of offers, facilitating the pedagogical work of the teams, as well as the transitions of the child from the family to the day-care center and from the day-care center to the kindergarten, seen as decisive processes for the educational success of the children.

### 2.2. The Curriculum of the 1st and 2nd Cycles of Basic Education (CEB)

Basic education aims to ensure a general training common to all students, providing the acquisition of basic knowledge that allows the continuation of studies. The guiding principles of the organization and management of primary and secondary education curricula, the assessment of the knowledge to be acquired and the capacities to be developed by students and the process of developing the curriculum of primary and secondary education are enshrined in Decree-Law No. 139/2012 of 5 July.

The curriculum is based on study plans elaborated in line with the curricular matrices. For the 1st CEB, two components of the curriculum are included – disciplinary areas of compulsory

frequency and non-disciplinary areas. Within the disciplinary areas of compulsory attendance are the following disciplines: Portuguese; Mathematics; Study of the Environment; Expressions: Artistic; Physical-Motor areas and non-disciplinary areas are part of: Project area; Accompanied study; Citizenship education.

The knowledge and skills to be acquired and developed by students of each level and each teaching cycle are referred to the programs of disciplines and disciplinary curricular areas, as well as the curricular goals to be achieved by year of schooling and teaching cycle, approved by order of the member of the Government responsible for the area of education. The strategies for the implementation and development of the curriculum are the object of activity plans, integrated in the respective educational project, adapted to the characteristics of the classes, through their own programs, to be developed by the class-holders teachers, in conjunction with the faculty council, or by the class council, depending on the cycles. The curricular perspective values both the pedagogical and organizational autonomy of schools and the professionalism and freedom of teachers in the implementation of methodologies based on their experiences, individual and collaborative practices.

In the 1st CEB, schools will be able to promote assistance in the areas of expression, as well as a strengthening of monitoring the performance of pupils and their specific support needs. As for the 2nd CEB, the possibility of daily support to the study will be guaranteed, depending on the previously diagnosed needs of the students.

## 3. Teacher Training - Legal Framework

The training of childhood educators in Portuga (0 to 5 years) and basic education (1st CEB - 6 to 9 years; 2nd CEB - 10 to 12 years and 3rd CEB - 13 to 15 years), secondary education (16 to 18 years) and higher education, has its legal structure established in the Basic Law of Education and complementary legislation, in particular that which focuses on the accreditation system that provides vocational training for education.

According to legal qualification for teaching in preschool education and primary and secondary education, Decree-Law No. 79/2014, of May 14, for the exercise of the teaching profession is necessary the qualification that ensures for the specific training, which is organized according to the requirements and specificities of each level of education and teaching, that is, according to the specific qualification profiles for professional practice.

In this regard, the Portuguese established a common performance profile for primary and secondary school educators and teachers. The general performance profile (Decree-Law No. 240/2001 of August 30) establishes common criteria for the activity of teachers of all levels of education, showing requirements for the organization of their teaching projects and for the recognition of the professional qualifications of teachers. However, aware of the professional specificities of each level of education, the Government defined the specific profiles (Decree-Law No. 241/2001 of August 30), considering the following dimensions: i) professional, social and ethical; ii) development of teaching and learning; iii) participation in school and community relations; (iv) the dimension of lifelong professional development.

### 3.1. Initial teacher training

In Portugal, the minimum level of initial teacher training (FIP) is the master's degree. It combines three years of degree in Basic Education (180 ECTS) plus a year and a half (90

ECTS) or two years (120 ECTS) of a professional master's degree. The minimum duration is usually between four and a half and five years. Basic Education students (which sets up the first phase of compulsory training for those who wish to become childhood educators or teachers of the 1st and 2nd CEB) can choose from the following master's degrees:

- Pre-school education;
- Pre-school education and 1st cycle of primary education;
- Education of the 1st Cycle of Basic Education and History and Geography of Portugal in the 2nd Cycle of Basic Education;
- Education of the 1st Cycle of Basic Education and Mathematics and Natural Sciences in the 2nd Cycle of Basic Education;
- Music Teaching in Basic Education (students need a bachelor's degree in music)
- Teaching Portuguese and English in the 2nd cycle of primary education (students need a bachelor's degree in Portuguese and English).

Special Educational Needs Training also requires specialisation in this area.

### 3.1.1. The Teaching Practice

The initial training of teachers (bachelor's degree and master's degree) includes five teaching components to ensure the construction of technical, professional, scientific, educational, ethical, deontological and praxeological knowledge, i.e.: a) teaching; b) general education; c) specific didactics; d) cultural, social and ethical area; e) teaching practice.

Teaching Practice is divided into two phases: the first is the Introduction to Professional Practice (IPP - Introduction to Professional Practice), with 15 credits, integrated into the 1st Cycle of Basic Education Studies and a second phase, the Supervised Teaching Practice (PES), within the 2nd cycle of studies (master's degree), ranging from 32 to 48, depending on whether the master's degree is 90 and or 120 ECTS Respectively. This component aims at the integration of future childhood educators and basic education teachers in practical contexts to observe and collaborate in education and teaching situations. PES occurs in the classroom of childhood education centers and in primary education schools. Students have the support of teachers and supervisors of the School of Education.

## 3.2. Continuing education and professional development

In Portugal, the task of determining what childhood educators and teachers need is the responsibility of schools, which sometimes include teachers themselves. Teachers of public institutions, for the purpose of career progression, must participate in training courses, but they can choose, those in which they wish to participate. The offer of training courses is carried out by training centers certified and conducted by trainers, also certified Scientific Council of Continuing Training.

# 4. Professional Conditions

In Portugal there are 5900 pre-school education centers, i.e.: 3614 public institutions and 2228 private or social solidarity institutions. There are 4209 primary schools – 1st CEB, i.e. 3692 public, 517 privates. There are 1201 basic education institutions 2nd CEB, 937 public, 97 deprived of the state and 167 privates.

In the district of Bragança there are 123 institutions of childhood education, basic and secondary education, 98 public and 25 privates. Each classroom can accommodate up to 25 children in pre-school education and 26 in the 1st and 2nd CEB.

Considering the depopulation of the Bragança region, where this study is being carried out, most of the children living in rural areas, who attend public education, are moved daily to urban centers, to the headquarters of the municipalities, where there are school centers that integrate them in the various classes.

Most schools have very good conditions, as there has been a large investment from the Ministry of Education in recent years. Each classroom has a full-time teacher and, in the case of children with special needs, also have the support of a specialized teacher.

To enter the career of public teacher, teachers in Portugal must register in a National Competition according to the vacancies existing in each school area. Teachers who hold positions at the school enter into an indefinite contract. Teachers hired to meet temporary needs through the recruitment grant or work at school enter into a fixed-term employment contract.

Childhood educators and teachers can also be hired by stakeholders from state-dependent private schools (IPSS). These educators and teachers have an indeterminate contract after three years of work.

The public-school salary scale has 10 levels in which childhood educators and teachers progress according to the duration of the service and attendance in training courses. A primary and secondary educator in the public sector, in the initial phase, has an illiquid salary of 1,518.63 euros. With the deductions for the Health System, tax - IRS, the General Pension Fund, he will receive a net salary of 1.082,44 €. At the last level teachers receive a basic salary of 3,364.63€ and a net salary of €1,806.47.

### 4.2. The Evaluation of Teachers and Educators

The teacher's assessment is recent and focuses more on accountability for career progression purposes than on improving their educational action. School and external self-assessments are also new, and not all schools perform self-assessments. Schools organize the internal evaluation of students for all subjects and the Institute of Educational Assessment (IAVE I.P, 2013) conducts external assessments of students in mathematics and Portuguese.

## 5. School inspection

In Portugal, the General Inspectorate of Education and Science (IGEC) is the entity responsible for ensuring the control, audit and supervision of the functioning of the education system in the field of pre-school education, school education, comprising basic, secondary and higher education (Decree-Law No. 125/2011 – Article 11). Among other tasks it is: to contribute to the quality of the educational system in the field of pre-school education, primary and secondary education and out-of-school education, including through control, monitoring and evaluation actions, proposing measures aimed at improving the education system and

participating in the evaluation process of primary and secondary schools and related activities (Decree-Law No. 125/2011 – Article 11, paragraph 2c, p. 5502).

IGEC operates in the field of pre-school education and school education, including its special and out-of-school modalities, with public education and education establishments - including their groupings and school training centres - and private, cooperative and solidarity networks.

From the various activities developed the IGEC (2018) distinguishes the systematic interventions, previously programmed and in which an object of observation is selected, a universe of intervention and objectives are defined. These are the responsibility of a team and supported by a roadmap that guides the activity of inspectors and aims to promote higher levels in the quality of learning, models and management processes. In addition to these, IGEC (2008) ensures specific interventions that are not foreseen, developed by an inspector.

In accordance with Article 12 of Regulatory Decree No. 15/2012 establishing the criteria for personnel selection, general and abstract criteria for the selection of personnel necessary for the pursuit of the tasks of the IGEC are established: a) the performance of functions in the General Inspection of the Ministry of Education; b) the performance of functions in the General Inspection of the Ministry of Science, Technology and Higher Education.

Inspectors are required to hold a bachelor's degree or academic degree higher than this and their integration into the special inspection career depends on the approval in a specific training course, which takes place during the trial period (IGEC, 2008).

## The quality of learning environments 0-12

## 6. Studies from the context Portuguese

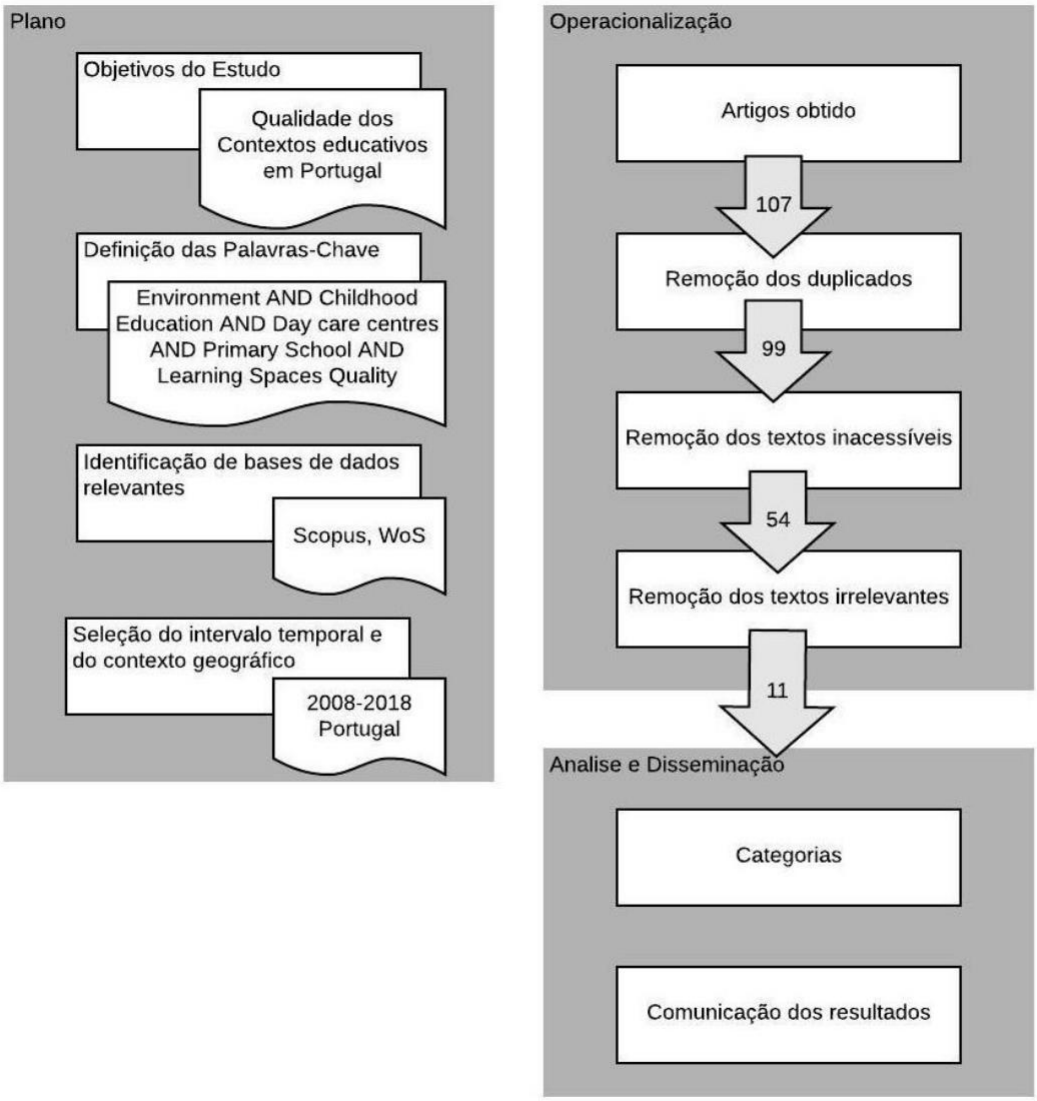
Quality is a simultaneously polysemic concept (Pascal and Bertram, 1999; Moss and Pence, 1994) and controversial, because it includes several views, and it is not possible to find in the literature a proposition that can finally define this term. Quality is, according to Oliveira-Formosinho (2001), a "constructed concept of a subjective nature, referring to values, beliefs and interests, and not an objective and universal reality".

Among researchers and specialists, the understanding of the criteria that define and constitute a quality service varies, because it depends on values and beliefs on the subject; therefore, if we extend the issue to professionals, parents, politicians, the community and other agents who have linked to childhood education, there is a greater diversity of criteria about what is quality and its definition becomes even more diverse.

### 6.1. Methodology and objectives

In this study, as a way to investigate the state of the art around the quality of educational spaces, in the context of childhood education and the 1st CEB, a systematic review of the literature produced in Portugal in the last ten years (2008-2018) was carried out.

The methodology adopted followed the line of Kitchenham and Mendes (2007). For data collection, scientific articles were analyzed, available in the most relevant indexers in academia, WoS and Scopus, and containing the necessary metadata for the identification and obtaining of documents.




The process of identifying the texts was carried out according to the methodological approach that is explained in Figure 2.

Figure 2 - *Methodological approach.*

The search terms or keywords [Environment AND Childhood Education AND Day-care centres AND Primary School AND Learning Spaces Quality] have been defined, simultaneously searching the titles, keywords or summary. The documents were recovered and stored on the computer. From the analysis of the document or obtained metadata, the duplicate documents were excluded, then the removal of those that were not accessible was performed, also excluding those that, although they had the mentioned terms, did not fit the scope of the research.

With the other documents, a text mining characterization analysis was performed in order to identify the most significant and frequent terms. Based on these results, documents were automatically grouped by clustering. Finally, the most relevant document groups were selected and content analysis was performed, following an inductive-deductive line to measure the categories.

### 6.2. Data analysis

A total of eleven articles were obtained, whose research fell between 2008 and 2018, however, the data reveal that there are years without publication (2008, 2009, 2010, 2013 and 2018). The highest concentration of publications occurs in 2015, followed by 2012 and 2016 (Figure 3).

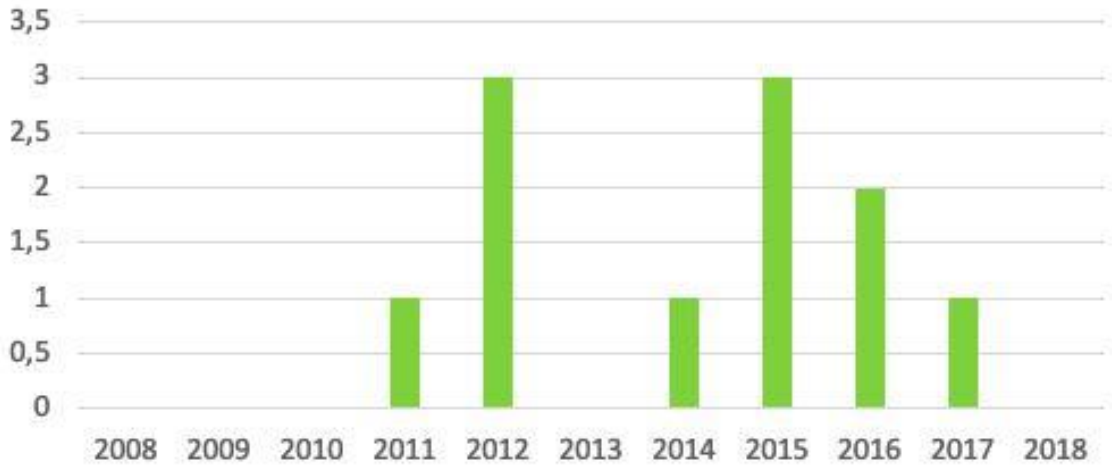



Figure 3 -*Articles per year.*

The articles analyzed highlight the quality issues, considering the education of children from 0 to 10 years of age. Four focus on educational contexts for children from 0 to 3 years, four in contexts that include children from 3 to 6 years, one developed in an institution for children from 0 to 6 years and one at the age of 6 to 10 years (Figure 4).

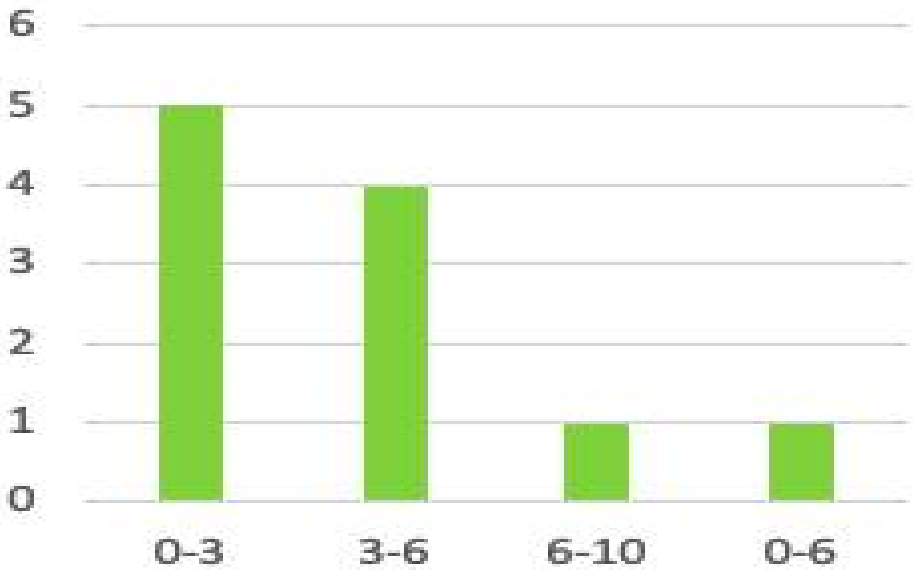


Figure 4 - *Articles for services and ages covered*

### 6.2.1. Interpretation of the data from the dimensions of Oliveira-Formosinho and Barros Araújo (2004)

At first, all articles were analyzed, based on the dimensions defined by Oliveira-Formosinho and Barros Araújo (2004), being grouped by the following categories: (i) criteria for thinking about quality; (ii) instruments for measuring quality and; (iii) ways to evaluate and develop quality collaboratively, as shown in Figure 5.

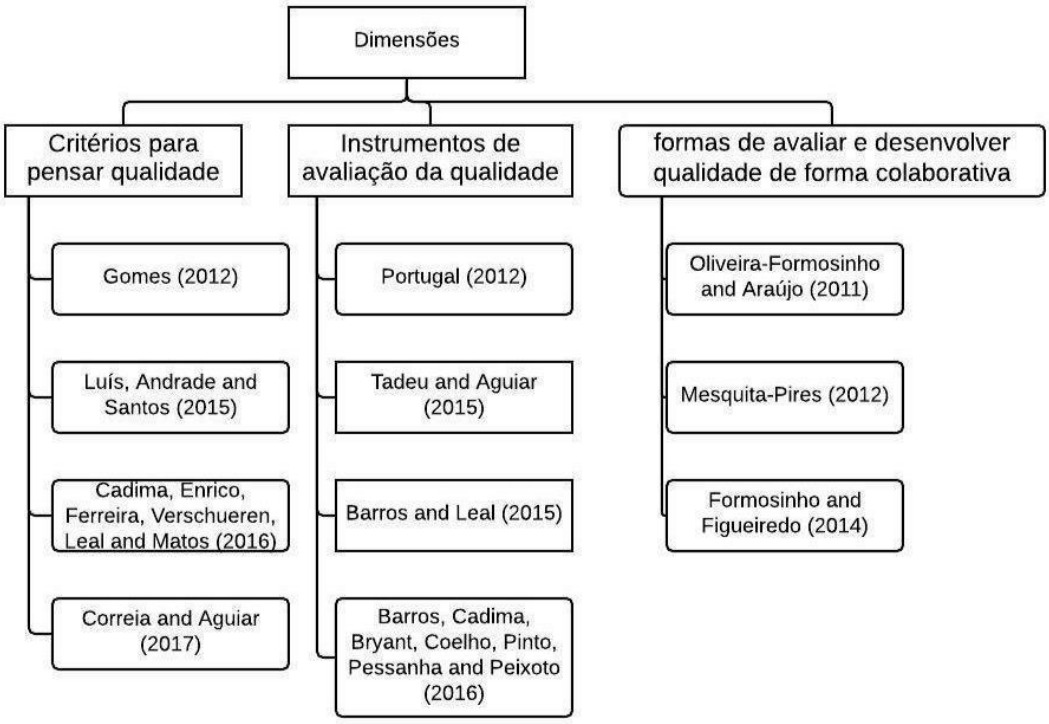



Figure 5 - *Categorization according to the dimensions of Oliveira-Formosinho and Barros (2004).*

#### Criteria for thinking about quality

The scope of the first category includes the studies of Gomes (2012) Luís, Andrade and Santos
(2015), Cadima, Enrico, Ferreira, Verschueren, Leal and Matos (2016) and Correia and Aguiar (2117).
The study by Luís, Andrade and Santos (2015) focused on the educational quality of two kindergarten contexts (children aged 3 to 6 years). The authors analyzed the experiential attitude of the educator, considered as fundamental to promote the emotional well-being of the child. In the experiential attitude, observation, listening, understanding, questioning were considered as quality criteria as a way of documenting and attributing meanings to the child's

action. Two childhood education rooms (context A and context B) with children (3 and 6 years old) and their educators were analyzed. The authors concluded that when the child feels that his/her voice is heard, when he or she really feels included, he expresses his intentions and thoughts enthusiastically. The attitudes of listening, sensitivity, questioning and encouragement assumed by the educator increased the participation of the child. The proper and quality intervention, in the light of an experiential attitude, implies attention, respect and trust. By developing an educational intervention that considers these principles, the educator can guarantee the participation of the child.

In the same perspective, the study by Correia and Aguiar (2017) interprets the participation of children as a criterion to be considered in the quality of action of educators. The study refers to the context of childhood education, presenting an appreciation of children's participation in different curricular areas and in different contexts. The authors used the interview as a means of expression of children in relation to their representations of freedom and democracy. These two dimensions were analyzed in the dynamics established by the educator in the activity room. The authors concluded that the children consider that they have more opportunities to make choices in the room characterized by narratives of participation. They suggest that in rooms where participation is predominant, children feel better and can play more, central aspects of children's well-being. However, almost half of the children described their activity as non-participatory, which means that their opportunities to participate and influence choices may have been limited.

Using another approach, Gomes's study (2012) analyzes public spaces as children's learning spaces, considering that they can contribute to a more meaningful community learning for children. This article recognizes the fundamental value of childhood education as a valuable resource for the personal and social development of children, assuming that public spaces can contribute to the construction of a full citizenship. However, the author warns that out-of-school programs for children may be related to current trends in education and not properly incorporate children's voices.

Another type of approach to validate quality criteria emerges from the study by Cadima, Enrico, Ferreira, Verschueren, Leal and Matos (2016) that investigates the interaction between the family-risk environment, the quality of interactions in kindergarten rooms and their impact on self-regulation skills. The study was developed with two groups of children - children of disadvantaged socio-economic background (at risk) and children without risk. The analyses, using modeling of structural equations of multiple groups, showed that children from family environments at risk presented lower levels of behavior regulation than children integrated in family environments without risk. The research also reveals that the quality of the activity room was closely related to the behavioral self-regulation of children. This study suggests the existence of complex interactions between family risk situations, the quality of the kindergarten room and self-regulation. However, the authors considered that it will be important to investigate other early influences of self-regulation, particularly points in common between cultures and differences between different moderators and self-regulation competencies.

## Quality assessment tools

Studies that emphasize the importance of using instruments to evaluate the quality of contexts define a set of categories, times and procedures that establish a measure of the quality of the educational environment.

In this context, we found the study by Tadeu and Aguiar (2015) that evaluated the quality of formal education structures for children up to 12 months. Specifically, the authors intended to describe the overall quality of nursery rooms and the quality of socialization practices of educators and operational assistants, to study the association between professional socialization practices and the quality of nursery rooms, and the relevant structural variables. To do so, they used the Infant/Toddler Environment Rating Scale (ITERS-R) and The Caregiver Interaction Scale and the Structural Characteristics Grid. From the results emerges the need to improve certain aspects of the quality of care provided to babies, in particular with regard to hygiene and health and the activities provided to children. The authors recommend the creation of pedagogical guidelines within 0-3 years of age and greater investment in the initial and continuous training of day-care educators because the quality of the rooms of childhood educators who work more continuously with babies have better results, considering the items of the scale.

In another perspective, the study by Barros and Leal (2015) uses The Parent Scale Questionnaire and the Childhood Educator Questionnaire (ITERS-RTQ) to assess it, using the Child Environment Assessment Scale (ITERS-R) (Harms). et al., 2003), to evaluate the same quality items by external observers in the same rooms. The results suggest that parents and educators attribute high importance scores to the quality criteria included in the ITERS-R, justifying the use of this instrument in Portugal. Although correlations have been found between the quality ratings of observers and parents and, between the quality ratings of observers and childhood educators, the results suggest that educators and parents consider education and care in small activity rooms substantially more appropriate than those recorded by external observers.

The study by Barros, Cadima, Bryant, Coelho, Pinto, Pessanha and Peixoto (2016) had three main objectives: (i) to understand the level of quality of the activity room of the centers of care for children aged 6 months, especially in comparison with other nations; (ii) study the relationships between different quality measures, using a new measure, together with two of the most used observation tools; (iii) to evaluate the extent to which structural indicators provide for different quality indices in day-care rooms, with the intention of reinforcing the need to improve training programs and professional development of childhood educators. The results revealed that a process of quality structured in two domains: (a) interaction and (b) use of space and materials, presented the best alignment with the data. Among the structural indicators analyzed, teacher training revealed a more significant relationship in both domains. Additionally, a room with smaller groups and centers located in rural areas were the most likely to present more sensitive relationships between educators and children. These results have implications for public policy and professional development effortin childcare centers.

The study of Portugal (2012) is based on the process of building an instrument - Child Support System (SAC) to support pedagogical practice, facilitating the relationship between observation practices, evaluation and construction of the curriculum. With this instrument, the author sought to ensure an "authentic" and dynamic evaluation, based on the experiential approach of education to be used by students attending the childhood education course. This instrument is based on the scales of emotional well-being and involvement of Laevers (2005).

The author concludes that the SAC supports the development of the curriculum in preschool education and takes into account the results of the educational action, giving greater structure and consistency to the process of improving the educational quality. It also concludes that the use of SAC, considers the objectives of evaluation in preschool education, allowing to know the knowledge of children in their usual contexts and routines, support the design of intervention programs and document the development process of children, assuming as an alternative "authentic" evaluation practice.

### Ways to collaboratively assess quality

The three studies that focus on ways to collaboratively evaluate the quality of Oliveira-Formosinho and Araújo (2011), Mesquita-Pires (2012) and Formosinho and Figueiredo (2014) describe the processes and dimensions present in collaborative processes of change and based on the assumptions of Pedagogy-in-Participation and shared understanding of contexts, actors and learning.

The study developed by Oliveira-Formosinho e Araújo (2011) analyzes the theme of early education in its relationship with diversity, considering the intervention and research developed by the Association of Children on education and care of children from birth to 3 years of age. The authors intended to identify the main characteristics of this pedagogical approach, considering that it constitutes a promoter of respect for diversity, for the characteristics of training in context that support the pedagogical approach of childhood and the characteristics of the transformative interventions performed, within a praxiological approach. This was a qualitative case study, developed in multiple contexts, with the objective of investigating the development of the program and the results achieved. The analyses performed point to the important role of the training processes in context and, within them, the central role of the pedagogical dimensions (pedagogical spaces, materials, time, adult-child interactions, observation and planning), the role of families, nature and culture as mediators in the emergence of sensitivity and respect for all forms of difference. The authors highlight that early education of diversity is deeply inserted in the daily experience of the child, in the contexts of education and care for children under 3 years of age.

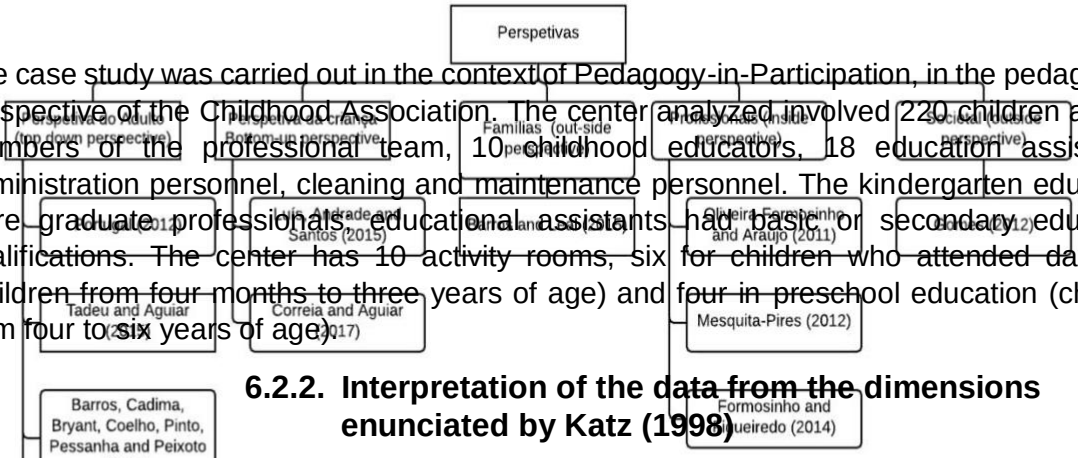
The study by Mesquita-Pires (2013) also focused on the investigational focus of the praxiological transformation of a childhood education institution, using training in context as a strategy to support the professional development of educators, in order to assume in their practices a pedagogy that recognizes and legitimizes children as full-fledged citizens, valuing their participatory competence.

Context training was assumed from an ecological perspective recognizing that there is an interconnection between professional development, curriculum development and the organizational development system. This study assumes a concept of pedagogy that integrates the holistic nature of professional practices. This approach is affirmed in a concept of praxis, as practical intentionality for change and in an ethical commitment to action. This design highlights the unavoidable link between the formative model and the pedagogical perspective. Praxis as the focus of transformation implied the reading of the existing reality and the reconstruction of praxiological knowledge. The reference framework for praxiological transformation was the pedagogy of childhood, which values the child's voice, its participatory

competence and the emergence of a socially situated curriculum, dialoguing with the perspective of Pedagogy-in-Participation developed by the Child Association.

This is a longitudinal case study framed in a qualitative constructivist approach that uses action research as a methodology. It relates to the Effective Early Learning Project [EEL] and uses this framework as a grammar to assess the quality of the context. Data analysis was located in a descriptive and interpretative line, seeking to access the perspectives and practices assumed at different times. This was a long and complex process that had positive effects on praxiological transformation and consequently on the learning and participation of children. The reconceptualization of the child's image was the key element in their right to participate and the motivation that supported educators in their effort to change.

The study by Formosinho and Figueiredo (2014) aimed to understand what it meant to "be a team" in that specific context and to evaluate the quality of pedagogical mediation of educators and assistants among themselves and with children (their interaction as a team) and with children. It was also an important objective to study the consistency of their professional action, especially with regard to the child's image, the adult's image and the role of development situated, in the context, of the students' identity.




The case study was carried out in the context of Pedagogy-in-Participation, in the pedagogical perspective of the Childhood Association. The center analyzed involved 220 children and 60 members of the professional team, 10 childhood educators, 18 education assistants, administration personnel, cleaning and maintenance personnel. The kindergarten educators were graduate professionals, educational assistants had basic or secondary education qualifications. The center has 10 activity rooms, six for children who attended day-care (children from four months to three years of age) and four in preschool education (children from four to six years of age).

### 6.2.2. Interpretation of the data from the dimensions enunciated by Katz (1998)

In a second moment, and for a deeper understanding of the studies under analysis, the articles were grouped by the perspectives set out in Katz's 1998 study: (i) perspective of the adult (top-down perspective); (ii) perspective of the child (bottom-up perspective); (iii) perspective focused on families and other educational agents (external perspective); (iv) perspective focused on professionals (internal perspective); (v) social perspective (perspetive outsider), as shown in Figure 6.

Figure 6 - *Categorization according to Katz's perspectives.*

We can also include these studies in the categorization identified by Katz (1992, 1998) which points to multiple perspectives for assessing the quality of educational contexts, such as:

- the perspective of the adult (top-down perspective) that considers the characteristics of the context, environment, equipment and program, includes, in this case, the studies of Tadeu and Aguiar (2015), Barros, Cadima, Bryant, Coelho, Pinto, Pessanha and Peixoto (2016), Portugal (2012).
- the perspective of the child (bottom-up perspective), which highlights the way the context is lived, are part of the studies of Correia and Aguiar (2017), and Luís, Andrade and Santos (2015) use the interview and observation, respectively, to access the children's perspectives on the educational environment, their sense of well-being and their involvement.
- the perspective of early childhood families and educators (external perspective) that reveals how the context is experienced by those involved is present in the research conducted by Barros and Leal (2015) that analyzes the perception of parents and early childhood educators about the quality of education for children from 0 to 3 years in Portugal.
- the perspective of professionals (internal perspective) that shows how they operate, live the practice and relate. Evidenced in the studies of Oliveira-Formosinho and Araújo (2011) Mesquita-Pires (2012) and Formosinho and Figueiredo (2014).
- the social perspective (external perspective) that considers the factors related to the service and the satisfaction of the needs of the community and society, in which we can include the study of Gomes (2012).

This is an important work that systematizes the work developed in the scope of the quality of learning environments that can support future studies and that reveals the concerns that have been highlighted by practitioners and researchers.

## Evaluation of the educational contexts of day-care, preschool and 1st CEB

### 7. Framework

The study was developed under the TELESPA project and aimed to know the quality of the contexts of day-care and kindergarten in an area of Portugal.

#### 7.1.1. Search sample

Institutions 0-3 (Nursery/Nursery). The sample consisted of a total of six classrooms from four different day-care centers, which included children from 0 to 3 years old. Convenient sampling was used to recruit childhood educators who were willing to participate in the study. All day-care centers were integrated into private institutions of social solidarity. Each center has between 3 and 4 designated rooms of: park room, early march room and 2 year old room (Table 3).

Table 3 - *Demographic data of institutions 0-3.*

| Day-care/Nursery ID | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| **Classroom size m2** | 64 | 64 | 40 | 21 | 30 | 25 |
| **Number of Adults** | 1 | 2 | 2 | 2 | 2 | 2 |
| **Gender (educators)** | 1 | 1 | 1 | 1 | 1 | |
| **Age (educators)** | 42 | 27 | 37 | 52 | 26 | 39 |
| **Professional experience (years)** | 18 | 3 | 10 | 8 | 1 | 8 |
| **Age of the group (children)** | 1 | 0/1 | 2 | 0/1 | 2 | 1 |
| **Academic qualifications (educators)** | 3 | 4 | 4 | 3 | 3 | 3 |
| **Number of children** | 15 | 10 | 16 | 10 | 18 | 11 |
| **Type of school** | 2 | 2 | 2 | 2 | 2 | 2 |
| **Tuition** | 2 | 2 | 1 | 1 | 1 | 1 |
| **Free meal** | 2 | 2 | 2 | 2 | 1 | 2 |
| **Socio-economic status of the family** | 2 | 2 | 2 | 2 | 2 | 2 |
| **Provides parental training** | 2 | 2 | 2 | 2 | 2 | 2 |
| **Provides outdoor exits** | 5 | 5 | 1 | 1 | 1 | 4 |

Institutions 3-6 (Kindergarten). Data were collected in seven public kindergartens that included children aged 3 to 6 years, of different socio-economic levels (Table 4).

Table 4 - *Demographic data of institutions 3-6.*

| Kindergarten ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Classroom size m2** | 40 | 57 | 58 | 21 | 47 | 140 | |
| **Number of Adults** | 3 | 4 | 2 | 2 | 2 | 2 | 2 |
| **Gender (educators)** | 1 | 2 | 1 | 1 | 1 | 1 | 1 |
| **Age (educators)** | 40 | 40 | 40 | 32 | 34 | 39 | 37 |
| **Professional experience (years)** | 14 | 12 | 15 | 8 | 10 | 17 | 14 |
| **Age of the group (children)** | 5 | 5 | 5 | 5 | 4 | 4 | 3 |
| **Academic qualifications (educators)** | 3 | 4 | 3 | 4 | 3 | 3 | 3 |
| **Number of children** | 25 | 25 | 14 | 25 | 21 | 22 | 25 |
| **Type of school** | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Tuition** | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **Free meal** | 2 | 1 | 2 | 1 | 1 | 1 | 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Socio-economic status of the family** | Middle | Middle | Middle | Medium/ high | Middle | Medium/ high | Medium/ high |
| **Provides parental training** | 3 | 2 | 4 | 2 | 2 | 2 | 2 |
| **Provides outdoor exits** | 3 | 3 | 5 | 3 | 1 | 3 | 3 |

Institutions 6-9 (First cycle of primary education). Data were collected in seven public schools that included children aged 6 to 9 years of different socio-economic levels (Table 5).

Table 5 - *Demographic data of institutions 6-9.*

| First Cycle ID of Elementary School | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Classroom size m2** | 40 | 40 | 47 | 49 | 49 | 49 | 49 |
| **Gender (educators)** | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Age (educators)** | 32 | 35 | 34 | 40 | 32 | 35 | 34 |
| **Professional experience (years)** | 3 | 3 | 3 | 3 | 5 | 3 | 3 |
| **Age of the group (children)** | 8 | 6 | 7 | 8 | 8 | 7 | 6 |
| **Academic qualifications (educators)** | 3 | 3 | 3 | 3 | 5 | 3 | 3 |
| **Number of children** | 26 | 9 | 16 | 6 | 26 | 24 | 24 |
| **Type of school** | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Tuition** | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **Free meal** | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **Socio-economic status of the family** | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| **Provides parental training** | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| **Provides outdoor exits** | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

### 7.1.2. Research Instruments

#### Demographic information form

This form was developed by the researchers and used in all programs observed for the study. It included questions such as the age group attended, socioeconomic status of parents, level of education of teachers and whether the program offers free meals.

#### Baby/Young Child Environmental Rating Scale (ITERS-3)

The ITERS-3 is a valid and reliable instrument, which is based on information collected through on-site observation, with three hours of duration, of classrooms for children under 36 months. There are 33 items covering six subscales of the instrument, including space and furniture, personal care routines, languages and books, activities, interaction and program structure.

#### Early Childhood Environmental Classification Scale (ECERS-R)

It is a valid and reliable instrument that is based on the information collected through on-site observation, lasting three hours, of the preschool classrooms. There are 43 items covering seven subscales of the instrument, including space and furniture, personal care routines, language and reasoning, activities, interaction, program structure, and parents and employees.

Data collection. The evaluators who administered the scales were trained until reliability among evaluators was established. Once the intra-examiner reliability of the test has been established, the data collection process was initiated. Data were collected through observations from the same classrooms on two different days, two weeks apart in spring 2019.

## Caregiver Interaction Scale (CIS)

The Caregiver Interaction Scale (CIS) is an instrument that assesses the behaviors and interactions of parents and caregivers (educators/auxiliaries) with children. The instrument consists of 26 items focused on sensitivity, severity, indifference and permissiveness. The CIS was created in 1989 at the Frank Porter Graham Institute for Child Development at the University of North Carolina (CIS; Arnett, 1989)

## PK2 Teacher Roles Observation Schedule

The PK2 Teacher Roles Observation Schedule is used to obtain systematic information about the classroom behaviors of childhood educators and based on the investigation of Waxman, Wang, Lindvall, & Anderson, (1990) Childhood educators are observed taking into account: (a) interactions with students; (b) the situation in which the observed behavior occurred; (c(c) If the action has a direct orientation, dthe work areas theucentered on the child;; ((d)the nactof the interaction; ((e)) finteractioninality; ((f)) Instructional practices; and (g)glanguage used. Each educator is observed during an interval of six toten, times for 30 seconds each, during data collection periods.

## Marzano Protocol

The document Marzano teacher evaluation model, here called the Marzano Protocol, is used to evaluate the quality of the educational environment in the contexts of the 1st Cycle of Basic Education. This instrument focuses on a measurement of the teacher's performance in order to improve their development. It is necessary to point out that this document was carried out in the educational context of the United States of America. This fact induces the need to make some adjustments for application in other contexts.

Until 2014, it was organized into 41 categories of education strategies, organized into nine broader categories expressed in the form of questions, which are organized into three lesson segments (Marzano et al., 2013). It has now undergone changes and is now composed of 23 categories, organized into four broader categories that are now evaluated from 0 to 4, taking into account the level of complexification.

### 7.2.1. ITERS-3

The scale consists of 33 items organized into six subscales, including space and furniture, personal care routines, language/books, activities, interactions and program structure. The total mean scores of the scale and the mean scores of the subscale for each day-care center are presented in Tables 6 to 11.

**Space and furniture - This subscale consists of four items that explore the low aspects mentioned:**

1. Interior space – in this item should be considered if there is enough space for furniture and materials needed for care and play and total space that can be used, depending on the maximum number of adults and children who use it. It also evaluates the cleaning, ventilation and lighting, comes as accessibility. Of the day-care rooms observed, all of them presented excellent conditions, that is, all obtained the maximum score, verifying that all met quality conditions with regard to the aspects related to this item.
2. Furniture for play and routine care - the item refers to the furniture available for routine care and for games. It evaluates the availability of furniture, its strength and comfort. It also takes into account the adequacy of the furniture for children, both for performing routine activities or for playing activities. The day-care rooms observed have a classification between 6 and 7, which means that they meet quality conditions, only one room obtained a lower classification of 4 points, that is, some weaknesses were observed in relation to this item.
3. Organization of the room - this item concerns the occupation and layout of furniture and materials in the space in order to allow adequate supervision of children. It assesses the availability of different spaces in the room and whether the areas captivate the interest of children and are appropriate to the material in use. As we observed about the interior space, the rooms obtained the maximum score with regard to the organization, which means that all have adequate space for the circulation of people and for performing different types of experiences.
4. Materials exhibited for children - assesses the interest and significance of the materials displayed in the room and whether they can be seen by children and people who circulate around the room. It also takes into account whether the exhibited works represent the group and are frequently changed. For this item, it is noteworthy that a room obtained a classification of 1, which means that the observation of the mentioned aspects was clearly insufficient, with no appropriate spaces for the exposure of the materials for the children. For the remaining rooms, the classification varied between 6 and 4, which is more acceptable, verifying adequate conditions for exposure of materials, involving and stimulating children for learning.

Table 6 - *Scores of the Space and Furniture subscale.*

| Space and Furniture | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| **Interior space** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Furniture for play and routine care** | 7,00 | 7,00 | 6,00 | 7,00 | 4,00 | 6,00 |
| **Organization of the room** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |

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| | | | | | | |
|---|---|---|---|---|---|---|
| **Exposed materials for children** | 6,00 | 1,00 | 6,00 | 6,00 | 6,00 | 4,00 |
| Subscale mean | **6,75** | **5,50** | **6,50** | **6,75** | **6,00** | **6,00** |

Overall, there is a uniform distribution of scores by the different items in the table of the space and furniture category. The average classification for the various items is between 5.5 and 6.75, which translates into good quality conditions with regard to the spaces and materials of the room, as well as its organization and suitability for young children. In this way we consider that the quality of space and furniture is an added value and is a promoter of the development and learning of children.

**Routine personal care – This subscale assesses the quality of the following items:**

5. Meals/snacks - this item takes into account the mealtimes and their nutritional adequacy for children. It evaluates the meals served and the diversity of menus. Food hygiene conditions and basic personal hygiene care are still considered. The supervision of the group is also considered, given the age and abilities of the children. Only one of the rooms observed obtained classification 1, which translates into inadequate conditions with regard to this item; a room was classified as 4, i.e., it presents minimum conditions with regard to meals/snacks. Of the remaining, 1 room obtained classification 6 and three 7, showing good or excellent conditions, respectively.
6. Change of diaper / use of the bathroom - this item verifies the hygiene conditions of the bathrooms, taking into account the use of gloves by adults, the physical separation of this area and its use for other activities. It also evaluates the process of monitoring the use of the area and the personal hygiene conditions of children and adults. In the rooms observed, the scores for this item were all excellent, evidencing quality conditions.
7. Health practices – this item takes into account some care with the health status of children (fever, diarrhea, other conditions) and the care taken to minimize the proliferation of microorganisms. It also assesses the appropriation of care to meet the health needs of children (clothing, sun protection, brushing of teeth, among others) and the availability of some health information to families. The rooms observed demonstrated a classification of 7, that is, excellent, evidencing quality. Only one room obtained a rating of 6, being between a good and excellent quality.

8. Safety practices - assesses the safety of internal and external spaces and the conditions that can cause risk to children. It also examines the supervision of the protection of the safety of children in these spaces. One third of the rooms observed obtained classification 2, that is, evidence inadequate conditions that may call into question the safety of children. The remaining two-thirds of the rooms obtained a rating of 7 (excellent), showing adequate conditions with no concern or risks to the children's health, and it is clear that the children were informed about the consequences of their actions on health.

Table 7 - *Scores of the routine personal care subscale.*

| Routine personal care | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|

Co-funded by the Erasmus+ Programme of the European Union

| | | | | | | |
|---|---|---|---|---|---|---|
| **Meals / Snacks** | 1,00 | 7,00 | 6,00 | 7,00 | 7,00 | 4,00 |
| **Diaper Change/ Bathroom Use** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Health practices** | 7,00 | 7,00 | 6,00 | 7,00 | 7,00 | 7,00 |
| **Security practices** | 7,00 | 7,00 | 2,00 | 7,00 | 7,00 | 2,00 |
| **Subscale mean** | **5,50** | **7,00** | **5,25** | **7,00** | **7,00** | **5,00** |

The rooms observed show between good and excellent quality regarding personal care routines, with classifications between 5 and 7. This translates into adequate conditions to respond to the basic needs of children, with regard to their food, health and safety.

**Language and reasoning – This subscale take into account the quality of the items below:**

9. Talking to children - this item analyzes how communication between educators and children is established. It also addresses the frequency and nature of the conversations that are established, and the children's understanding of them. In the nursery rooms observed this item obtained, in all, an excellent classification, which means that educators use a wide variety of words in communication with children, who participate in their verbal games and who talk to them, with respect, about various subjects.
10. Encourage vocabulary development – the item takes into account how educators encourage and value the communication process of children in different activities. It also takes into account the way and how often adults ask children questions and encourage them to respond. All rooms observed obtained an excellent classification, observing that educators develop dialogues with children, add vocabulary to their lexicon of words.
11. Responding to children's communication – this item assesses how educators respond to what children communicate, whether it is pleasant, polite and treats the child with respect. In this item we observed two educators with low level, because they did not demonstrate the attention that the children needed and did not respond positively to all requests. An educator obtained classification 4, because there were evident situations in which there were some weaknesses in the aspects to which this item concerns. The other educators observed obtained classification 7, evidencing quality in the communication process with the children, responded to the various situations in a positive way and encouraged the children to express their ideas.
12. Encourage children to communicate – the item takes into account how educators start conversations with children about various subjects, ask questions and when questioned provide appropriate answers. In the situations observed, all educators obtained a rating of 7 (excellent), because their concern in triggering intentional conversations with children was notorious, they were asked meaningful and pertinent questions and maintained a good balance between listening and speaking, making a clear effort to promote language development.
13. Use by the team of books with children - it concerns how books are used with children. It verifies that educators read books and attend to children's behavior during these activities. Of the rooms observed, we verified that all of them have good quality with respect to this item, all of which received the maximum classification of excellent. Therefore, we observed that there were books of different types available to children

and there were times for intentional reading of these books, we also noticed moments of formal readings and interaction of children with books and adults.

14. Encourage the use of books by children - this item verifies the adequacy, circulation and availability and accessibility of books for children. It also assesses whether adults dispense the attention needed to encourage children's use of books and whether they encourage them for independent readings, making different types of books available over time. These aspects were observed in all rooms, so all received excellent classification, evidencing good quality eferential to this item.

Table 8 - Scores of the language and reasoning subscale.

| Language and reasoning | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| **Talking to children** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Encourage vocabulary development** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Responding to children's communication** | 7,00 | 7,00 | 1,00 | 4,00 | 7,00 | 2,00 |
| **Encourage children to communicate** | 7,00 | 7,00 | 1,00 | 4,00 | 7,00 | 2,00 |
| **Use by the team of books with children** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Encourage children's use of books** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Subscale mean** | 7,00 | 7,00 | 6,00 | 6,50 | 7,00 | 6,17 |

Overall, the rooms observed present quality levels between the good and the excellent for this subscale. Their ratings are between 6 and 7. Fifty percent of the rooms obtained the maximum score for all items, which means that those that adequately promote the development of children's language and reasoning, relying on diversified and adequate resources, highlighting the diversity of books, for the day-care center. Informal reading was encouraged and facilitated at various times, in a pleasant and pleasant environment for children.

### Activities - This subscale assesses the quality of the following items:

15. Fine physical/motor activity – this item assesses the existence of diversified materials, suitable and with different levels of complexity to work fine motor. It also checks your organisation and accessibility for children. Of the rooms observed one reached classification 5, that is, we observed diversified and well organized materials. All the other rooms were rated excellent, because in addition to the previous aspects, there was a diversity of materials to promote variety and materials of different levels of difficulty accessible to children.
16. Art – in this item is evaluated the availability of materials appropriate for the arts, their characteristics that allow to be used safely by children and the supervision and monitoring that adults make of the activities. In this item 50% of the rooms had classification 2, evidencing inadequacy and several weaknesses. One room received a score of 4, which indicates that it is between the minimum and good quality and two rooms showed excellent quality in this item.
17. Music and movement – this item concerns the availability and accessibility of musical resources and the use of diverse music and sounds with children. It also caters to the

musical experiences provided and the intentional use of music. In 50% of the rooms there were no music/movement activities with the children although there were some materials available. The remaining rooms obtained excellent classification, which means that the circulation of musical toys or instruments, the use of various types of music, encouraging children to dance, clap and sing.

18. Blocks - evaluates the availability and accessibility of materials for playing with blocks and the dynamic of intentional activities involving blocks. One of the rooms observed presented a minimum quality, another between minimum and good and the remaining 4 excellent. In these we observed several sets of blocks and accessories of different types and accessible to children, it was also evident the performance of activities involving blocks.
19. Make-believe games – this item takes into account the availability and accessibility of materials for make-believe games, taking into account their nature and suitability for the age group of children. It still verifies the development of make-by-make-by-school games by adults, styling children for learning. In one of the observed day-care rooms this item does not apply. Of the remaining three showed quality between minimum and good and two of them, good quality, obtaining a rating of 4 and 7, respectively.
20. Nature/science - this item assesses the availability and accessibility to natural/scientific materials and the possibility for children to interact with nature in internal and external environments or to participate in activities involving natural/scientific phenomena. One of the rooms was inadequate in this regard, the others succeeded, classification between good and excellent, so it was possible to observe natural/scientific materials are well organized and in good conditions of use and the team showed interest and respect for nature.
21. Mathematics/numbers – this item evaluates the availability and accessibility of mathematical materials, as well as the use of mathematical language and the dynamic of intentional activities in this area, encouraging children to learn mathematics. Like the previous item, one room was inadequate, and the others showed good quality, with ratings between 6 and 7.
22. Use of TV, video and / or computer - analyzes the nature and adequacy of materials and technology and their use in the room. One third of the rooms showed inadequate conditions, that is, the materials were not used or are not suitable for the level of development of children. The remaining two-thirds of the rooms obtained a rating of seven, presenting quality conditions, the materials encouraged the active involvement of children and are used to support and broaden the interest of children.
23. Promoting the admission of diversity – this item concerns the evaluation of racial and cultural diversity evidenced in the available materials and in the activities carried out. Of the rooms observed only one showed minimum conditions with a classification of 3, the others showed good quality and no discriminatory images/materials were visible and the activities developed demonstrated cultural awareness.
24. Coarse physical/motor activity - the item evaluates access to internal and external spaces and equipment suitable for physical exercise. It also analyzes the adequacy of spaces to the needs of children and whether materials stimulate their development. Half of the rooms observed presented inadequate conditions, demonstrating failures in the promotion of coarse physical/motor activity. The others had classifications 4 and 7, presenting the quality for this item between minimum and good, had internal and external areas for play and some specific materials for this area.

Table 9 - *Scores of the Activities subscale.*

| Activities | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| **Fine physical / motor activity** | 7,00 | 7,00 | 5,00 | 7,00 | 7,00 | 7,00 |
| **Art** | 7,00 | 7,00 | 2,00 | 2,00 | 2,00 | 4,00 |
| **Music and movement** | 7,00 | 7,00 | 2,00 | 2,00 | 2,00 | 7,00 |
| **Blocks** | 7,00 | 7,00 | 3,00 | 7,00 | 7,00 | 6,00 |
| **Make-by-make jokes** | 7,00 | 7,00 | 4,00 | 4,00 | 7,00 | 4,00 |
| **Nature / Science** | 7,00 | 7,00 | 1,00 | 7,00 | 7,00 | 6,00 |
| **Mathematics / number** | 7,00 | 7,00 | 1,00 | 7,00 | 7,00 | 6,00 |
| **Use of TV, video and/or computer** | 7,00 | 7,00 | 1,00 | 7,00 | 7,00 | 1,00 |
| **Promoting the admission of diversity** | 7,00 | 7,00 | 3,00 | 7,00 | 7,00 | 7,00 |
| **Physical activity / coarse motor** | 7,00 | 6,00 | 2,00 | 2,00 | 2,00 | 4,00 |
| Subscale mean | **7,00** | **6,89** | **2,40** | **5,20** | **5,50** | **5,20** |

Except for one of the rooms that showed inadequacy in the mean of the items of this subscale, the others present quality, with classification values between 5.2 and 7. Overall, specific areas and materials were observed for the items under analysis, as well as the dynamic of specific activities and, in most cases, appropriate for the development of children.

**Interaction - This subscale takes into account the quality of the items below:**

25. Supervision of play and learning - this item assesses the monitoring of the group and the adequate supervision of children in the areas/activities and in the most varied routines of personal care. All collaborating day-care rooms in the study are quality in relation to this item, with classification 7. This means that the team carefully and frequently observes the group of children, it was also evident that individualized supervision was appropriate to the different types of activities.
26. Supervision of gambling and learning (non-gross engine) – this item assesses whether the constant and individualized supervision of children is carried out and whether adults intervene when it is necessary. All rooms observed present quality, obtaining a rating 7. Thus, we observed that educators constantly supervised children and intervened when necessary, for example in conflict situations and in the support and encouragement of children to carry out the activities.
27. Interaction between peers – evaluates how the team manages interactions between peers, i.e., analyzes how children are encouraged to interact with others promoting positive social interactions. All rooms observed obtained classification 7, evidencing quality with regard to interactions, adults explain the actions, intentions and feelings of one child to the other and provide dialogues about moments of positive social interaction between children or between adults and children.
28. Personal-child interaction – this item analyzes how educators provide emotional support to children according to their needs, how they interact and respond positively to children's communication efforts. As with the previous items, all rooms obtained a rating of 7, demonstrating quality. Adults interacted according to the mood and needs of each child and were sensitive to their feelings and reactions.

29. Providing warm physical environment/ physical touch - in this item verifies that educators are a source of constant affection and warm physical contact, which corresponds to the individual preferences and needs of children. All rooms received an indicator rating of excellent quality.
30. Guiding the behavior of children/discipline – this item takes into account the way adults guide the child's behavior and clarify that it affects other people, verifying whether they use positive behavior management strategies, working empathy and social skills to resolve conflicts and establishing appropriate expectations. In all rooms, excellent quality was observed regarding this item. Adults helped children understand the effects of their own actions on others, encouraged children to learn to use communication and not aggression for problem solving.

Table 10 - *Scores of the Interaction subscale.*

| Interaction | | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| **Supervision of play and learning** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Supervision (non-gross engine)** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Peer interaction** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Personal-child interaction** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Providing warm physical environment/ physical touch** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Guiding children's behavior/discipline** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| Subscale mean | **7,00** | **7,00** | **7,00** | **7,00** | **7,00** | **7,00** |

In all rooms, with regard to interactions, the quality observed was excellent. The adults were concerned with supervising the children, provided positive interactions between all elements of the room and experienced a harmonious and warm environment, also, we verified that the adults intervened appropriately whenever necessary, favoring a good climate and a pleasant learning environment.

### Program Structure - This subscale consists of items that explore the following qualities:

31. Programming and transitions – in this item evaluates the sequence of activities experienced daily by children, verifies whether the schedule and transitions are flexible and appropriate to the individual needs of children. It also takes into account the early preparation of activities, so that there are no waiting spaces and the transitions are smooth for the children. Of the rooms observed, one has a minimum quality, with a classification of 4, in which there were some weaknesses in relation to the aspects previously mentioned. The rest have excellent quality, with classification 7, noting an adequate adjustment of the play schedule throughout the day to meet the various needs of children and most of the transitions between daily events occurred smoothly.
32. Free play – this item evaluates the possibility of the child selecting materials and colleagues, and playing freely, assuming the educator the role of facilitator. Interaction with the adult occurs in response to the child's needs, and conditions are created that allow him/her access to the different materials. Only one room proved inadequate, the rest showed excellent quality. Supervision was used as an educational interaction; educators add materials to stimulate children's interest during free activity.

33. Group play activities - this item refers to games and activities that aim to learn specific content, and not to routine activities. It assesses whether group play activities are engaging, performed in smaller groups, adjusted to the needs of children and complemented with alternative activities for those who do not participate. In one third of the rooms, for this item, we observed minimum quality, which means that no free activities were observed. In the remaining rooms the quality was excellent, the activities performed were motivating and appropriate to the interests of the children, and the educators encourage d.O.

Table 11 - *Scores of the Program Structure subscale.*

| Interaction | | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| **Supervision of play and learning** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Supervision (non-gross engine)** | **7,00** | **7,00** | **7,00** | **7,00** | **7,00** | **7,00** |
| **Peer interaction** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Personal-child interaction** | **7,00** | **7,00** | **7,00** | **7,00** | **7,00** | **7,00** |
| **Providing warm physical environment/ physical touch** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Guiding children's behavior/discipline** | **7,00** | **7,00** | **7,00** | **7,00** | **7,00** | **7,00** |
| **Subscale mean** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |

In this subscale only one of the schools shows an inadequate average quality, which indicates that they presented some weaknesses in relation to the items observed. However, most of them obtained an excellent classification that translates into the availability of diverse educational materials to children, allowing them to perform play and free activities in small groups and for which educators encourage them.

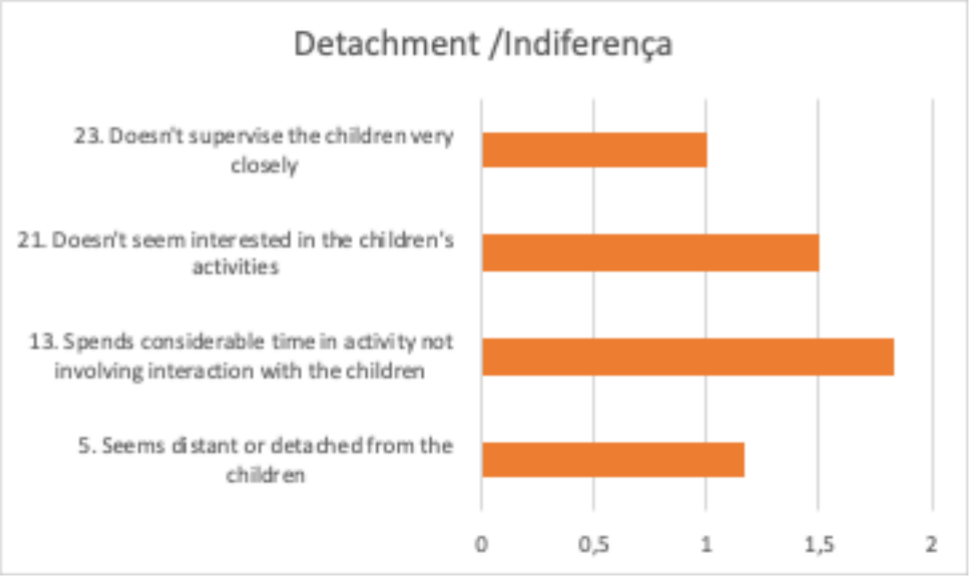
In summary, the following table shows the mean values for each of the subscales analyzed.

Table 12 - *Average scores of each subscale.*

| Average subscale scores | **1** | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| **Space and Furniture** | 6,75 | 5,55 | 6,50 | 6,75 | 6,00 | 6,00 |
| **Personal care routines** | 5,50 | 7,00 | 5,25 | 7,00 | 7,00 | 5,00 |
| **Language and Reasoning** | 5,83 | 5,83 | 4,83 | 5,33 | 5,83 | 5,00 |
| **Activities** | 7,00 | 6,89 | 2,40 | 5,20 | 5,50 | 5,20 |
| **Interaction** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Program Structure** | 7,00 | 7,00 | 2,33 | 6,00 | 7,00 | 7,00 |
| **Total Average Score** | 6,51 | 6,54 | 4,72 | 6,21 | 6,39 | 5,87 |

Overall, for the six day-care rooms observed, the values obtained are indicators of good quality, with the averages between 4.72 and 6.54. Of the various subscales, it is evident that language and reasoning and space and furniture are the ones with the lowest average values, and none of the rooms obtained classification 7. Also noteworthy is room 3 as the one with

the lowest classifications in the subscales activities and program structure that present quality values between inadequate and minimum, so the overall average of this room is the lowest in the set of rooms observed.

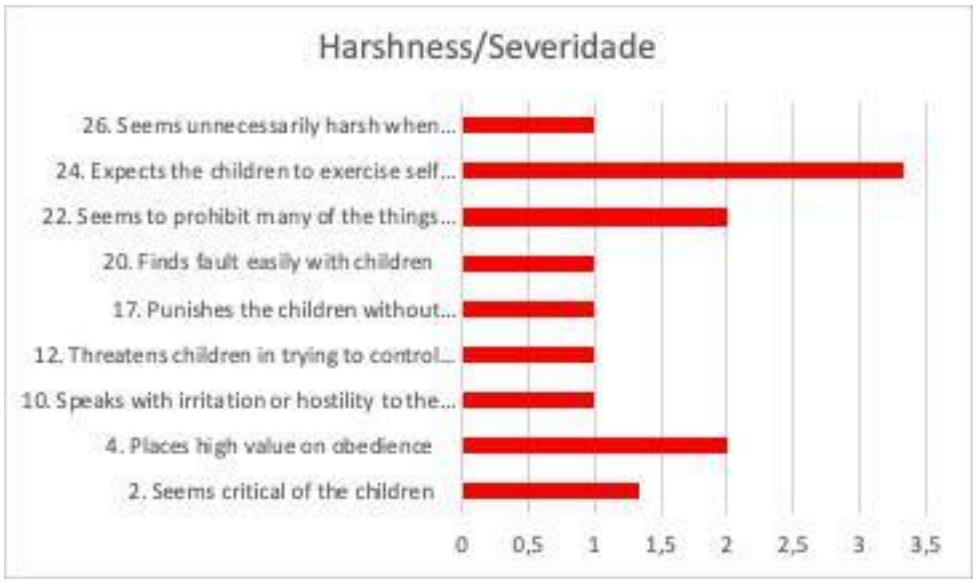



### 7.2.2. Caregiver Interaction Scale (CIS)

The 26 items that comprise the CIS are organized into 4 subscales: (1) indifference, (2) severity,(3) permissiveness and indiferença (4) sensitivity. The results obtained for each of the subscales are presented in the following figures.

Figure 6 - Levels of Indifference

For the indifference subscale, the scale contains four items, namely 23. does not supervise children very closely, 21. is not interested in the activities of children, a 13. He spends a lot of time in activities thatãdo not involve interaction with children and 5. He seems distant or indifferent when children speak to him. From the observations made for this item, the values



are between 1 and 2, and item 21 had a higher value. It is observed, as soon as there are no items that compromise the quality of the practices, however, it was observed, in some situations, some disinterest and disinvestment on the part of caregivers in relation to the activities and interests of children.

Figure 7 - *Severity Levels*

1. Regarding severity, nine items were evaluated, as expressed in Figure 7. Of these, the one that obtained a higher value was item 24, referring to self-control, e.g., that do not disturb the group or the activities guided by the educator, that remain in line, etc. items 22, "prohibit many of the things that children want to do" and 4 "gives great value to obedience" obtained 2 values. Item 2 "is critical in relation to children" passed the value 1 and all the others obtained a score Thus, it was evident that educators did not demonstrate hostile, threatening and severe behaviors with children.

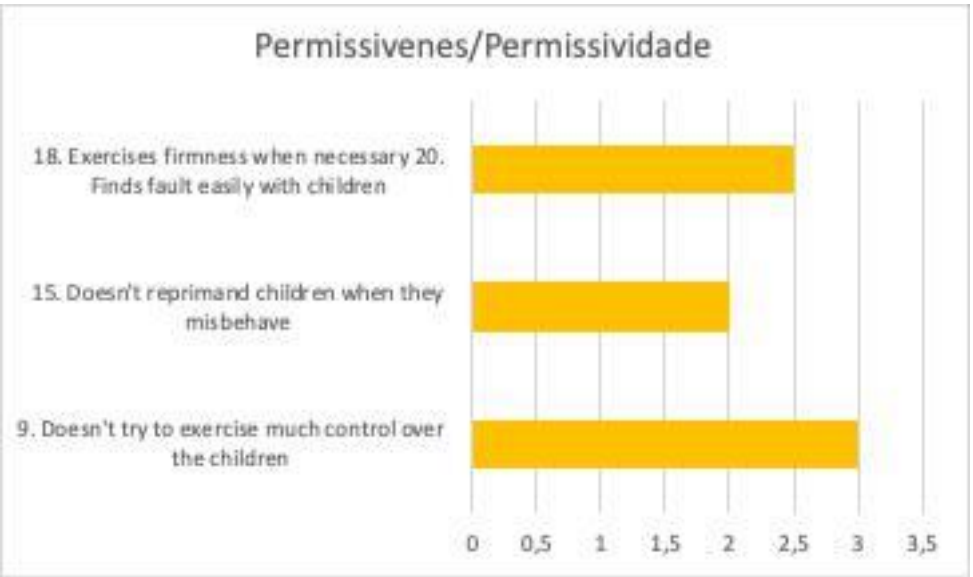



Figure 8 - *Permissive levels*

Regarding permissiveness, three items were evaluated, 18. "shows firmness when needed," 15. "do not scold children when they behave badly" and 9. "exerts little control over the children" obtained scores that are between the 2 and the 3, and item 9 was the one that obtained a higher value, so we can conclude that the educators demonstrated, in some moments, a condescending and more permissive attitude.

For the sensitivity subscale, 10 items were evaluated, and all obtained a score between 3 and 4 points. Since items such as "when you talk to children, kneel, lean or sit at their level in order to establish better eye contact", "encourage children to have positive social behaviors such as, e.g. sharing, helping", "meets the individuality of each child", "encourages children to do new experiences", "seems to like children" and "speaks lovingly with children" obtained the maximum score, which allows us to affirm that educators show affection and affection for children, adopting warm and responsive approaches.

### 7.2.3. ECERS-R

The scale consists of 43 items organized into seven subscales, including space and furniture, personal care routines, reasoning and language, activities, interactions, program structure, parents and employees. The average scores of the subscale for each day-care center are presented in Tables 13 to 19.

**Space and furniture - This subscale consists of analyzing the quality of the following items:**

1. Interior space - this item evaluates the dimensions of the space according to the number of children and adults. It takes into account the accessibility, furniture, ventilation and lighting of the space. Of the six kindergarten rooms observed, four obtained classification 7, which means that they meet excellent conditions in relation

to the interior space. One obtained classification 4 that translates into quality levels between the minimum and the good, observing some weaknesses
regarding the lighting and ventilation of the space. And two obtained classification 1 because the conditions were inadequate.

2. Furniture for routine care, play and learning – this analyzes the quantity and quality of furniture available, also taking into account its suitability for children and the performance of different activities. Of the rooms observed, four showed excellent quality (classification 6 and 7), had diversified furniture in good condition and appropriate to the characteristics of the children. One room showed quality conditions between minimum and good, with a rating of 4. The other two rooms presented inadequate conditions (classification between 1 and 2) with insufficient furniture and some in poor condition.
3. Furniture for rest and comfort - the item evaluates the comfort of furniture and materials available to children, given the existence of comfortable areas (with soft and clean furniture and materials). In this item only one of the rooms observed showed excellent conditions, the remaining rooms obtained scores between 3 and 6, that is, between the minimum and the good, indicating that there were some furniture and toys for the children and some comfortable areas, which they could enjoy throughout the day.
4. Arrangement of playroom - this item concerns the organization and functionality of the space, regarding the clear definition of the areas for performing different activities. Of the rooms observed, four presented excellent quality, that is, it was evident the existence of different and organized areas for children to use them independently, providing diversity of accessible and adequate materials for children. The remaining rooms had quality levels between minimum and good (ratings between 4 and 6), although there are different areas some aspects of their organization, functionality and supervision of children could be improved.
5. Space for privacy - this item evaluates the existence of reserved spaces, offering privacy for children to work alone. In two of the rooms it was not possible to evaluate this item. Of the remaining, three presented quality between inadequate and minimal (with ratings between 1 and 4), which means that there is not or are very small the spaces available for children to work alone or with a friend without the intrusion of other children. Only two rooms presented excellent quality for this item.
6. Exposure of material related to the child - this item evaluates the existence and adequacy of space for exhibition of the works performed by children and the suitability of the material for the age group of children. Three of the rooms observed present excellent conditions regarding this item, and it is evident the exposure of the children's work and three-dimensional works. The remaining rooms obtained classifications between 4 and 6, i.e., they have good levels of quality.
   We observed the availability of material appropriate to the age group of children and most of the work exhibited is at the level of the children's eyes and are related to their activities.
7. Space for global motricity - this item concerns the existence of interior and exterior spaces suitable for the overall motricity of the child. It also evaluates the organization of these spaces and their security. Four of the rooms observed presented excellent conditions (classification 7), that is, the outdoor space for global motricity allowed the performance of different types of games, with protection for the different weather conditions (e.g. shadows) and with appropriate conditions for children. The remaining

rooms presented classifications between 2 and 5, we observed some spaces for global motricity, which generally offered security.

8. Equipment for global motricity - this item refers to the existence of equipment for global motricity, its accessibility and suitability for children. In this situation, two of the rooms observed presented excellent conditions, and in the remaining quality levels were inadequate (with classifications between 1 and 2), had little equipment of global motor skills, usually in poor condition and not appropriate to the age and abilities of the children.

Table 13 - *Scores of items of the Space and Furniture subscale.*

| Space and Furniture | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Interior space | 1,00 | 7,00 | 7,00 | 4,00 | 7,00 | 7,00 | 1,00 |
| Furniture for routine care, play and learn | 1,00 | 6,00 | 4,00 | 7,00 | 2,00 | 7,00 | 7,00 |
| Furniture for rest and comfort | 3,00 | 7,00 | 6,00 | 4,00 | 5,00 | 4,00 | 4,00 |
| Room arrangement to play with | 3,00 | 7,00 | 6,00 | 7,00 | 4,00 | 7,00 | 7,00 |
| Space for privacy | 1,00 | 7,00 | 4,00 | In | 2,00 | In | 7,00 |
| Exposure of child-related material | 5,00 | 7,00 | 4,00 | 6,00 | 7,00 | 6,00 | 7,00 |
| Space for global motricity | 5,00 | 7,00 | 3,00 | 7,00 | 2,00 | 7,00 | 7,00 |
| Equipment for global motricity | 1,00 | 7,00 | 1,00 | 2,00 | 1,00 | 2,00 | 7,00 |
| Subscale mean | 2,50 | **6,88** | **4,38** | **5,43** | **3,75** | **5,71** | **5,88** |

In summary, from the overall reading of the table, we found that room 1 has the lowest classification, which translates into minimum quality conditions for this subscale. The others present quality levels between the good and the excellent, highlighting room 2 with a rating of 6.88.

**Personal care routines - This subscale addresses the quality of the following items:**

9. Arrival/departure - this item evaluates the organization of the entry and exit of children to kindergarten. Three of the rooms observed have excellent quality, which means that when children arrive are helped whenever necessary, they are actively involved until they leave and often the arrival/exit times are used to exchange information with parents. The remaining rooms have demonstrated inadequate quality with regard to this item (classification 1), i.e. the arrival of children is often neglected, the exit is not well organized, and parents are not allowed to accompany the children to the room.
10. Meals/snacks – this item refers to the mealtimes, the nutritional quality of the meals that are served and also to the sanitary conditions and the climate that is living in these situations, verifying if they are pleasant moments for the child and whether their autonomy is encouraged. Two of the rooms observed have excellent conditions, that is, children help during meals, the utensils used are suitable and meals are

moments of conversation. Four of the rooms presented conditions between minimum and good (rating 4), the schedule was adequate, meals balanced, and meals were held in a non-punitive environment. One of the rooms showed inadequate quality (classification 1), which means that the schedule was not adequate, the sanitary conditions were not maintained, and the climate was unfavorable.

11. Sleep/Rest - the item evaluates sleep/rest times, the sanitary conditions offered and the supervision of children at these times. In one of the rooms it was not possible to observe this item. Five obtained classifications of 6 or 7, i.e., they presented quality levels between the excellent and the good. The schedules were flexible, responding to the individual needs of each child. One room presented classification 1, which translates into inadequate quality in relation to the aspects mentioned above.
12. Use of bathroom/diaper - this item concerns the material and hygiene conditions of the bathroom/changing room area. Five of the rooms observed had excellent quality, which means that the toilets are appropriate to the size of the children and autonomy skills are promoted according to the characteristics of each child. Two rooms presented minimum and good quality, with classifications between 2 and 4, respectively. The sanitary conditions were maintained, there were minimum conditions for the provision of care to children, the hours of use of the spaces were adequate to the needs of the children, and adequate supervision was carried out.
13. Health practices – the item refers to practices to maintain the salutogenic space, avoiding the spread of germs and adopting behaviors that promote children's health (hand and tooth washing, appropriate clothing). Only one room showed quality between the minimum and the good (with classification 4), procedures are used to prevent the spread of germs, children and adults often wash their hands and do not smoke in the areas frequented by children. The remaining rooms presented excellent quality, children are taught to follow health practices autonomously, there are individual toothbrushes properly labeled and stored.
14. Safety practices – this item evaluates the measures taken to minimize the rich, ensuring the safety of children. All rooms obtained a rating of 6 or 7, which evidences good or excellent qualityin relation to this item. The areas are organized in order to avoid situations of insecurity for children, these usually follow the safety rules.

Table 14 - *Scores of items of the Subscale Personal Care and Routines.*

| **Personal care routines** | **1** | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Personal care routines | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **Arrival / departure** | 7,00 | 7,00 | 7,00 | 1,00 | 1,00 | 1,00 | 1,00 |
| **Meals / Snacks** | 6,00 | 7,00 | 4,00 | 4,00 | 1,00 | 4,00 | 4,00 |
| **Sleep / rest** | 1,00 | 6,00 | 7,00 | 6,00 | 6,00 | In | 6,00 |
| **Bathroom / diaper** | 2,00 | 7,00 | 7,00 | 7,00 | 4,00 | 7,00 | 7,00 |
| **Health practices** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 4,00 | 7,00 |
| **Security practices** | 7,00 | 7,00 | 7,00 | 6,00 | 6,00 | 7,00 | 7,00 |
| Subscale means | **5,00** | **6,83** | **6,50** | **5,20** | **4,50** | **4,60** | **5,33** |

For this subscale, room ratings range from 4.5 to 6.83, which translates into good and excellent quality conditions. Room 5 was the lowest quality level for items related to personal and routine care, unlike room 2, which shows the highest level of quality.

**Reasoning and language – This subscale consist of evaluating the quality of the following items:**

15. Books and images – this item concerns the availability, diversity and accessibility of books and language material for children. It also evaluates the development of reading activities by adults. In relation to this item five rooms demonstrated quality between the good and the excellent (two rooms with classification 6 and three with 7), the books and the language material are often changed to maintain the interest of the children, some books are related to themes present in the activities developed in the room. One room obtained rank 4, some books were accessible to children and there were some reading activities. One room had a classification of 2, which indicates inadequate quality, with few books and few reading activities developed.
16. Encouraging children to communicate – this item refers to the development of activities and the existence of materials that stimulate communication by children. Six rooms showed excellent quality (classification 7), which indicates that the adult adequately maintains the balance between listening and speaking according to the children's abilities and relating the children's spoken communication with written communication. One room demonstrated inadequate quality (classification 1), i.e. children's communication is not encouraged.
17. Use of language to develop reasoning skills – the item assesses whether children are encouraged to reason and whether activities are introduced in this sense, for example introducing new concepts. Four of the rooms observed obtained classification 7, evidencing excellent quality. In this case adults encouraged children to reason throughout the day, using real events and experiences, and concepts are introduced in response to children's interests and needs. Theremaining three rooms had a rating of 2, which translates into minimum quality levels. In this situation, most of the time, adults do not talk to children about logical relationships and some concepts are introduced inappropriately.
18. Informal use of language – assesses the opportunity and moments that are given to the child to communicate with their peers and with adults. It still takes into account the nature of the established conversations. Four of the rooms observed had quality between good and excellent (one with a rating 6 and three with 7), because adults had individual conversations with most children and questions are asked to encourage children to give longer answers. Of the remaining one had classification 4, some conversations were established between adults and children and they had opportunities to talk for much of the day. Another had a rating of 2, which indicates that there are few conversations between children and adults, and most of the time, adults do not respond to children's interventions.

Table 15 - *Scores of items of the reasoning and language subscale.*

| Reasoning of language | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Books and images** | 2,00 | 7,00 | 7,00 | 6,00 | 4,00 | 6,00 | 7,00 |
| **Encourage communication** | 1,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Use of language to develop reasoning skills** | 2,00 | 7,00 | 7,00 | 2,00 | 2,00 | 7,00 | 7,00 |
| **Informal use of language** | 4,00 | 7,00 | 7,00 | 6,00 | 2,00 | 7,00 | 7,00 |
| Subscale means | **2,25** | **7,00** | **7,00** | **5,25** | **3,75** | **6,75** | **7,00** |

From the overall reading of the table, it is noteworthy that for this subscale four rooms obtained the maximum classification, that is, they present excellent quality for all items under analysis. The remaining ones obtained lower classifications, and room 1 showed quality between inadequate and minimum.

**Activities - This subscale evaluates the quality for the items that are later presented:**

19. Fine motricity - this item evaluates the quality, variety and accessibility to fine motricity materials. Six of the rooms observed obtained classifications between 6 and 7, which translates into quality levels between the good and the excellent, the rooms have a great diversity of materials, which allows turnover and maintain the interest of children. Their organization is adequate, the materials are accessible to children and easily identifiable, encouraging autonomy. One of the rooms showed inadequate quality (classification 1), because they have few materials of fine motricity, or these are in poor condition or incomplete.
20. Art – this item evaluates the availability, variety and accessibility of arts materials for children, as well as the development of activities within this area. Only one of the rooms observed showed minimal quality (classification 3), presenting some material of the arts available sometimes to children, being allowed some individual expression. The remaining rooms reached the maximum rating, shown excellent quality. In these cases, there were three-dimensional art materials, some activities are related to other experiences that are being carried out in the room and the autonomy and creativity of children is stimulated.
21. Music /movement - the item is related to the accessibility and availability of musical resources, as well as the quality of the activities developed in this area. Four of the rooms observed obtained a rating of 7, (excellent), because the music was present every day. Musical activities developed children's understanding and their creativity was stimulated. A room had a rating of 4, with quality between minimum and good, observing some available materials and the development of some activities. Two rooms were rated 2, since there were few materials available and the music interfered with the development of other activities.
22. Blocks - this item concerns the existence of blocks and their availability and accessibility for children in the interior and exterior space. Five of the rooms observed had classification between 6 and 7, evidencing quality levels between good and excellent. Several blocks were visible available for the biricarem children, they were tidy, organized and properly identified and we observed materials of this nature abroad. One of the rooms was rated 4, with some materials and spaces available for the use

of the blocks. One room showed inadequate quality (classification 1) because few blocks were available for children.

23. Sand/water - this item evaluates whether there are conditions for playing with sand and water indoors and outdoors and if there are toys available for these games. Two rooms showed excellent quality, which means that they meet conditions to play with sand and water and that various activities have been developed with these resources. Two rooms had classification 4, evidencing quality levels between minimum and good, having conditions and some toys to use with sand and water. The other three rooms obtained classification 1, with inadequate quality, since there are no conditions or toys to use with sand and water.
24. Dramatic game – this item refers to the existence, variety and accessibility of materials for disguise or dramatic play. Three rooms manifested levels of quality between the good and the excellent (rating 6 and 7), we checked the turnover of materials for disguise and dramatic play, these activities were carried out indoors and outdoors and were accompanied and enriched with other materials, for example images, history, etc. The remaining rooms presented quality levels between minimum and good (classification 3 and 4), with some materials available and accessible at least one hour a day, so that the children can represent roles of family members.
25. Nature/science - this item assesses the existence, quantity, variety and accessibility of materials to work science/nature. It also evaluates the development of activities in this area. Only one of the rooms showed excellent conditions (classification 7), being provided science/nature activities to children, these activities were enriched with books, images and other audiovisual resources. Three rooms had a level of quality between minimum and good (classification 4 and 5), with availability of some materials, children were encouraged to collect elements of nature to share with others and, in some situations, day-to-day situations were used to arrest about science/nature. The remaining two rooms had inadequate quality, in relation to the aspects evaluated by this item.
26. Mathematics/number – the item takes into account the existence, quantity, variety and accessibility of mathematical materials, as well as the development of activities in this area. Three rooms obtained a rating of 7 (excellent). In these rooms it was evident the performance of mathematics activities and the materials were alternated to maintain the interest of the children. Two showed quality between the minimum and the good (classification 4), with some materials available and these were accessible and well organized for the children. The remaining two rooms showed inadequate quality, verifying the lack of mathematical materials and the activities developed were essentially memorization and repetition.
27. Use of TV, video and/or computers – it concerns the use of technological material and its suitability for the development of children. Only two rooms showed excellent classification (classification 7), because the materials were used to enrich the activities of the room and to stimulate the creativity of children. Three rooms demonstrated quality between minimum and good, with classification 4, there are some suitable technological materials that are used by children at limited times, and there are alternative activities while these materials were being used. Two rooms showed inadequate quality regarding this item. The equipment used is not suitable for the development of children and alternative activities were not observed while the TV or computer was being used.

28. Promotion of acceptance and diversity – this item refers to the fact that the materials show cultural diversity and not stereotyped characteristics. It also takes into account the nature of the activities carried out with regard to cultural and social diversity. Four rooms presented excellent quality (classification 7), being visible the inclusion of diversity in daily routines and games and the development of activities that promote the acceptance of diversity. One room had a rating of 6, with quality between good and excellent, with characteristics close to those mentioned above. Another room demonstrated minimal quality, that is, the materials showed some cultural and racial diversity and adults intervene adequately to neutralize prejudices demonstrated by children. The other room had inadequate quality for this item and for the aspects it evaluates.

Table 16 - *Scores of items of the activity's subscale.*

| Activities | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Fine motricity | 6,00 | 7,00 | 7,00 | 6,00 | 1,00 | 6,00 | 7,00 |
| Art | 3,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| Music / movement | 2,00 | 7,00 | 7,00 | 2,00 | 7,00 | 4,00 | 7,00 |
| Blocks | 4,00 | 7,00 | 6,00 | 6,00 | 1,00 | 7,00 | 6,00 |
| Sand / water | 1,00 | 1,00 | 7,00 | 4,00 | 1,00 | 4,00 | 7,00 |
| Dramatic game | 4,00 | 7,00 | 6,00 | 4,00 | 3,00 | 4,00 | 7,00 |
| Nature / Science | 1,00 | 7,00 | 4,00 | 1,00 | 2,00 | 4,00 | 5,00 |
| Mathematics / number | 1,00 | 7,00 | 7,00 | 4,00 | 1,00 | 4,00 | 7,00 |
| Use of TV, video and/or computers | 1,00 | 7,00 | 4,00 | 4,00 | 1,00 | 4,00 | 7,00 |
| Promoting the acceptance of diversity | 1,00 | 7,00 | 7,00 | 3,00 | 7,00 | 6,00 | 7,00 |
| **Subscale means** | **2,30** | **6,40** | **6,20** | **4,10** | **3,10** | **5,00** | **6,70** |

Overall, we verified that the classification of rooms for this subscale is between 2.30 and 6.70. Thus, a room demonstrates, for the items mentioned, quality less than minimum, two situate the quality levels between the minimum and the good and the rest between the good and the excellent.

### Interaction - This subscale takes into account the quality of the items mentioned below:

29. Supervision of activities of global motor skills – this item assesses whether adequate supervision of children is performed, taking the necessary measures to avoid accidents during motor games, taking into account how adults interact with children and how they help them to develop their games. All rooms observed had a rating of 7, presenting excellent quality, as adults talked to children about ideas related to their games, collaborating, with various resources, in their development and encouraging positive social interactions.
30. General supervision of children - this item refers to the nature of the supervision of other activities other than of global motricity. Six rooms showed excellent quality (rating 7), adults talked to children about their games, asking questions and adding

information in order to develop children's thinking. In addition, we observed a balance between the child's need to explore independently and the contributions of adults to learning. The other room presented a good level of quality (rating 5), observing careful supervision of all children according to their needs, encouraging them whenever necessary and showing appreciation for their efforts and achievements.

31. Discipline - this item evaluates the disciplinary methods used in the rooms. Six rooms had excellent quality conditions, adults did not use punitive methods, but actively involved children in solving their conflicts and problems. In addition, they promoted activities to help children
understand social skills, experiencing a pleasant and happy atmosphere. The other room demonstrated levels of quality between the minimum and the good (classification 4) with regard to the aspects under analysis.
32. Personal-child interactions – this item refers to the way adults interact with children, behaviors of affection and empathy are demonstrated whenever the child needs and promotes pleasant environments and respect for children. All rooms observed obtained a rating of 7, revealing excellent quality. Adults showed pleasure in being with children and encouraged the development of mutual respect between children and adults.
33. Interactions between children – this item assesses whether positive interaction between children is encouraged and whether adults develop activities that promote appropriate social behaviors. Six rooms have conditions for this item of excellent quality (rating 7), we found that the interactions between pairs were positive and the adults provided some opportunities for the children to work together to complete a task. The other room had classification 4, which corresponds to quality levels between minimum and good. In this situation, it was observed that peer interaction was encouraged, and adults gave good examples for children to develop good social behaviors with their peers.

Table 17 - *Scores of items in the interaction's subscale.*

| Interaction | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Supervision of global motricity activities** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **General supervision** | 5,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Discipline** | 4,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Interactions between staff and children** | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Interactions between children** | 4,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| Subscale means | **5,40** | **7,00** | **7,00** | **7,00** | **7,00** | **7,00** | **7,00** |

From the reading of the table we verified that with the exception of room 1 all reached the maximum classification of 7, which corresponds to the excellent quality for the items that constitute this subscale.

**Program Structure - This subscale consists of evaluating the quality for the following items:**

34. Schedule – this item assesses the flexibility of the schedule and whether your organization includes diversified activities, responds to the individual interests of children and whether the transitions are smooth. Of the rooms observed, five demonstrated excellent quality conditions (classification 7) in relation to this item. There were smooth transitions between daily events and the schedule was changed according to the interests of the children. Two rooms presented quality between inadequate and minimum (classification 2), and the schedule was rigid, contemplating some diverse activities and being known to the children.
35. Free play – this item assesses whether children have the opportunity to play free and whether you have materials available to participate in these games with proper supervision. All rooms presented classifications between 6 and 7, that is, with excellent quality conditions, because supervision was used as an educational interaction and new materials/toys were periodically added for free play.
36. Group time – this item refers to the type of groups that are formed (small groups and large groups) and the time that children spend in each of them, evaluating whether the child has the opportunity to perform activities individually and in groups. Six rooms gathered excellent quality conditions for this item (classification 7), because it was observed the formation of different groups throughout the day, providing different rhythms to the children, it was evident the involvement of adults in positive interactions with children individually and in small groups and several opportunities were created for children to be part of small groups. The other room had a rating of 4, with quality between minimum and good, observing some activities in small groups, creating some opportunities for the children to be part of these groups.
37. Conditions for children with SEN – this item evaluates the action of educators with individualized plans for children with SEN, make the necessary adaptations so that these children can participate in the activities, get involved in the family and contribute to the child's assessment. This item does not apply to four of the observed rooms. For the rest the classification is between 6 and 7, with quality conditions between the good and the excellent. It was evident the integration of these children in group activities, the educators had individualized plans that contemplated the participation of parents to respond to the needs of the children.

Table 18 - *Scores of the items of the subscale structure of the program.*

| Program Structure | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Time** | 2,00 | 7,00 | 7,00 | 7,00 | 2,00 | 7,00 | 7,00 |
| **Free Game** | 7,00 | 7,00 | 7,00 | 6,00 | 6,00 | 7,00 | 7,00 |
| **Group time** | 4,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Conditions for children with SEN** | In | In | 7,00 | In | 6,00 | In | 7,00 |
| Subscale means | **4,33** | **7,00** | **7,00** | **6,67** | **5,25** | **7,00** | **7,00** |
| **Time** | 2,00 | 7,00 | 7,00 | 7,00 | 2,00 | 7,00 | 7,00 |

Overall, the rooms had a good level of quality in relation to the items of this subscale, and four reached the maximum rating of 7 points. Only one of the rooms was rated below 5, thus translating into quality levels between minimum and good.

**Parents and employees - This subscale evaluates the quality for the following items:**

38. Conditions for parents' needs – this item concerns the information that is given to parents (program, pedagogical approach or other information) and whether they are invited to participate in school activities. Three of the rooms observed had classification between 6 and 7, with quality levels between the good and the excellent. In these rooms parents receive diversified information, are encouraged to participate in activities, and participate in kindergarten assessment and decision-making. The remaining four rooms had classification 4, that is, the quality for this item is between minimum and good, that is, some information is given to parents and are encouraged to participate in some activities, verifying attentive and positive interactions.
39. Conditions for personal needs of employees - this item assesses the existence of spaces to meet the personal needs of employees, for example rest areas. Only one of the rooms showed excellent conditions (rating 7), to allow employees to have spaces for their personal use, with adequate conditions and with comfort. Two rooms had a rating of 4, with quality between the minimum and the good, that is, there are some spaces suitable for the employees, but some weaknesses are evident. The remaining rooms had ratings of 1 and 2, i.e., there was inadequate quality for the aspects evaluated by this item.
40. Conditions for the professional needs of staff – this item concerns the availability and existence of spaces suitable for the personal needs of employees, for example offices equipped to archive and store documents, meeting rooms, among others. Six of the rooms observed had excellent conditions (classification 7), had spaces for archive and storage of documents and meeting room. The other room had a rating of 4, the staff had easy access to the phone, and had some spaces to store documents and for meetings.
41. Interaction and cooperation of personnel - this item evaluates the work developed in groups by adults. It takes into account the sharing of information about children and the meetings held for some tasks, in particular to plan and to define tasks. Four rooms had a rating of 7, evidencing excellent quality. Educators plan together, the responsibilities of each adult are well defined, and kindergarten promotes positive interaction among adults. One of the rooms had a rating of 6, therefore close to excellent and the others had a rating of 4, with quality between minimum and good, there was some cooperation and collaboration between adults and the division of tasks did not interfere in the development of activities.
42. Supervision and evaluation of staff – this item refers to the evaluation of employees, takes into account whether observations are made, whether there is feedback from the evaluation and whether actions are taken for recommendations at the level of this process, in order to improve the performance of employees. Two rooms had rating 7 (excellent), staff participates in their own evaluation, in addition to the annual observation are carried out others and is given feedback in a useful way. Four rooms were located between levels 4 and 5, supervision is carried out and in the evaluation process are valued the strengths and identified those in which it is necessary to improve.

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43. Professional development opportunities – this item assesses whether employees receive guidance and information to participate in activities to support professional development. Two rooms are located at the level of quality between the good and the excellent (rating 6 and 7), being provided support to participate in courses and other actions, there is a professional library with diversified materials on education and childhood and the employees with less training are encouraged to continue their studies. The remaining rooms are between the minimum and the good (classification 4), with some support for the professional development of the employees.

Table 19 - *Scores of items of the subscale parents and employees.*

| Parents and Employees | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Conditions for parents** | 4,00 | 7,00 | 6,00 | 4,00 | 4,00 | 4,00 | 6,00 |
| **Conditions for personal needs of staff** | 2,00 | 7,00 | 2,00 | 4,00 | 1,00 | 4,00 | 2,00 |
| **Conditions for professional staff needs** | 7,00 | 7,00 | 4,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Interaction and cooperation of staff** | 4,00 | 7,00 | 7,00 | 6,00 | 7,00 | 4,00 | 7,00 |
| **Supervision and evaluation of staff** | 1,00 | 7,00 | 5,00 | 4,00 | 4,00 | 4,00 | 7,00 |
| **Professional development opportunities** | 4,00 | 7,00 | 6,00 | 4,00 | 4,00 | 4,00 | 4,00 |
| Subscale means | **3,67** | **7,00** | **5,00** | **4,80** | **4,50** | **4,50** | **5,50** |

From the reading of the table it is verified that, in general, the rooms have good quality to meet the needs of parents and employees. However, in this subscale only one room presents excellent quality.

The total average scores of the subscales of each preschool are presented in Table 20.

Table 20 - *Average scores for each ECERS-R subscale.*

| Subscales | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Space and Furniture** | 2,50 | 6,88 | 4,38 | 5,43 | 3,75 | 5,71 | 5,88 |
| **Personal care routines** | 5,00 | 6,83 | 6,50 | 5,20 | 4,50 | 4,60 | 5,33 |
| **Reasoning and language** | 2,25 | 7,00 | 7,00 | 1,00 | 3,75 | 6,75 | 7,00 |
| **Interaction** | 5,40 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 | 7,00 |
| **Program Structure** | 4,33 | 7,00 | 7,00 | 6,67 | 5,25 | 7,00 | 7,00 |
| **Parents and Employee** | 3,67 | 7,00 | 5,00 | 4,83 | 4,50 | 4,50 | 5,50 |
| **Average total scale score** | 3,43 | 6,81 | 5,98 | 4,83 | 4,33 | 5,58 | 6,28 |

According to the table, the average classifications for this scale are between 3.43 and 6.81. Room 2 and 7 present excellent quality for the items under analysis in each of the subscales, while room

1 is located at quality levels between minimum and good, the others demonstrated good quality.
Thus, overall, the rooms have good quality, and there are aspects that can be improved.

### 7.2.4. Pk2

PK2 data are organized in the following subscales: (a) interaction orientation; (b) group organization; (c) guidance instruction (d) nature of the interaction; (e) type of proposals; (f) and organisation of the learning process. The data for each subscale are then presented.

Table 21 - *interaction orientation*

| Interaction orientation | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **No interaction (instructional)** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **With student (instructional)** | 3 | 0 | 2 | 0 | 3 | 0 | 0 |
| **With student (managerial)** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **With student (social, personal)** | 4 | 4 | 3 | 4 | 4 | 4 | 4 |
| **With student (collaborative)** | 3 | 6 | 5 | 6 | 3 | 6 | 6 |
| **Other** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subscale means | 1,67 | 1,67 | 1,67 | 1,67 | 1,67 | 1,67 | 1,67 |

Regarding the Interaction orientation, it was found that in all rooms observed the average is 1.67. The items related to instructional, social and collaborative interaction were those that obtained scores. On the other hand, items related to the absence of interaction, management and others were not observed in any of the rooms.

Table 22 - *Group Organization*

| Setting | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Whole Class** | 8 | 4 | 4 | 5 | 8 | 5 | 5 |
| **Small Group** | 2 | 5 | 6 | 5 | 2 | 5 | 5 |
| **Dyads** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Individual** | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| **Travelling** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subscale means | | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 |

Similarly, to the previous subscale the average for all items in the group organization is 2.0 points. In general, the items related to large group and small group work were observed more frequently. Individual work took place in only one of the rooms. Activities that contemplated work in dyads or circulating around the room were not observed in any of the

situations, so they did not have any score. Thus, group work predominates in the observed rooms, both in small groups and in large groups.

Table 23 - *Guidance Instructions*

| Inst_Orientation | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Draft instruction** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Seatwork** | 3 | 0 | 0 | 0 | 3 | 0 | 0 |
| **Learner centered** | 7 | 10 | 10 | 10 | 7 | 10 | 10 |
| **Other** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subscale means** | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 |

Regarding the subscale instructions for the orientation that aims to ascertain whether the action has a direct orientation of the work areas or centered on the child, it is verified that the work centered on the student predominates, still verified in some situations the work of the table. All items in this subscale obtained a score of 2.5.

Table 24 - *Nature of interaction*

| Nature_Interaction | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Questioning** | 3 | 3 | 2 | 2 | 3 | 2 | 2 |
| **Explaining** | 3 | 0 | 0 | 0 | 3 | 0 | 0 |
| **Positive commenting** | 1 | 2 | 2 | 1 | 1 | 1 | 1 |
| **Negative commenting** | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| **Neutral commenting** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Listening** | 2 | 3 | 3 | 4 | 3 | 3 | 4 |
| **Cueing or prompting** | 0 | 2 | 0 | 3 | 0 | 3 | 3 |
| **Modeling / Demonstrating** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subscale means** | 1,00 | 1,11 | 1,11 | 1,11 | 1,11 | 1,00 | 1,11 |

Regarding the nature of the interactions, questioning and listening were the items most frequently observed. Some positive comments were also observed in all rooms, although less frequently. The children's encouragement for the activities was evident in four of the collaborating rooms. It should also be noted that only negative comments were visible in one of the rooms. Interactions directed to neutral comments and modeling/demonstration were not observed.

Table 25 – *Purpose of the interaction*

| Purpose_Interaction | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Focus on content** | 4 | 0 | 0 | 0 | 4 | 0 | 0 |
| **Focus on process** | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **Focus on product** | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| **Connect content to other disciplines** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Connect content to global communities** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Present multiple perspective on topic** | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| **Redirtect student thinking** | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| **Show interest in student work** | 0 | 2 | 2 | 2 | 0 | 2 | 2 |
| **Show personal regard for student** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Encourage students to help each other** | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| **Encourage students to succeed** | 0 | 0 | 0 | 0 | 0 | 6 | 0 |
| **Encourage students to question** | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| **Encourage extended student responses** | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **Encourage student self management** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Praise student behaviours** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Praise student performance** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Correct student behaviour** | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Correct Student performance** | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| **Assessment** | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| **Other** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subscale means** | **0,50** | **0,50** | **0,50** | **0,50** | **0,50** | **0,80** | **0,50** |

Through the reading of table 25,with regard to the type of proposals, it is verified that the items related to the articulation of the content to other areas and with local realities, personal respect for the child, encouragement and self-management of children, as well as praising the behaviors of children were not observed in any of the collaborating rooms. Items such as the focus on the product, the encouragement of children to succeed and the correction of children's behaviors were also not evident, occurring only in one room. Regarding the other items, there was a greater dispersion, and situations related to the focus on the process and the encouragement of extended responses of the children were observable in all rooms.

Table 26 - *Teaching-Learning Process Organization*

| Instructional | **1** | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Allocates extended periods of time for students to engage in play and projects** | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| **Facilitates opportunities for students to play with and learn from each other** | 2 | 3 | 1 | 3 | 2 | 3 | 3 |
| **Interacts with students during their play, while avoiding interference** | 0 | 3 | 1 | 1 | 0 | 1 | 1 |
| **Talks with students about ideas related to their play** | 4 | 2 | 1 | 1 | 4 | 1 | 1 |
| **Observes and documents students play to assess progress** | 0 | 1 | 1 | 1 | 0 | 1 | 1 |
| **Provides opportunities for students to sing, listen to, and/or move to music** | 2 | 0 | 1 | 2 | 2 | 2 | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Uses technology to present material** | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Assists students with technology** | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Uses technology as a communication tool** | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Uses technology to create** | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Uses technology to access the Internet** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subscale means | 0,91 | 0,91 | 1,00 | 0,91 | 0,91 | 0,91 | 0,91 |

Regarding the subscale organization of the learning process, whose items are represented in the previous table, it was found that all obtained a score of 0.91. Those who have been observed more frequently and in all rooms are associated with the allocation of extended periods of time for children to participate in games and projects, to facilitate opportunities for children to play and learn from each other, and to talk to children about ideas related to their play. The items related to the use of digital technologies were the least evidenced in the observations made.

### 7.2.5. Marzano Protocol

To evaluate the quality of the educational environment in the 1st cycle of basic education, the Marzano protocol was used, which is composed of 23 items, organized into four categories, to mention: (a) teaching-learning based on the curriculum; (b) Curriculum-based planning (c)
learning conditions; and (d) Professional Responsibilities. The following are the data resulting from the observations made for the categories referred to.

Table 27 - *Curriculum-based teaching-learning*

| Stands-Based Instruction | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Identifying Critical Content from the Standards** | 3 | 2 | 3 | 2 | 4 | 3 | 3 |
| **Previewing New Content** | 3 | 2 | 3 | 2 | 4 | 3 | 3 |
| **Helping Students Process New Content** | 3 | 2 | 3 | 2 | 4 | 3 | 3 |
| **Using Questions to Help Students Elaborate on Content** | 3 | 2 | 3 | 2 | 4 | 3 | 3 |
| **Reviewing Content** | 3 | 2 | 3 | 2 | 4 | 3 | 2 |
| **Helping Students Practice Skills, Strategies, and Processes** | 3 | 2 | 3 | 2 | 4 | 3 | 2 |
| **Helping Students Examine Similarities and Differences** | 3 | 2 | 3 | 2 | 4 | 3 | 2 |
| **Helping Students Examine Their Reasoning** | 3 | 2 | 3 | 2 | 4 | 3 | 2 |
| **Helping Students Revise Knowledge** | 3 | 2 | 3 | 2 | 4 | 3 | 2 |
| **Helping Students Engage in Cognitively Complex Tasks** | 3 | 2 | 3 | 2 | 4 | 3 | 2 |
| Subscale means | 3,00 | 2,00 | 3,00 | 2,00 | 4,00 | 3,00 | 2,40 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Identifying Critical Content from the Standards** | 3 | 2 | 3 | 2 | 4 | 3 | 3 |

With regard to the teaching-learning category based on the curriculum, the averages present values between 2 and 4 points. Overall, it is noteworthy that the different rooms observed present a great uniformity in relation to the different items in this category, and the rooms with the lowest score are room two and room four and room with the highest score is five, with a value of 4 for all items.

Table 28 - *Basic curriculum planning*

| Stands-Based Planning | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Planning Standards-Based Lessons/Units** | 3 | 2 | 3 | 3 | 4 | 4 | 3 |
| **Aligning Resources to Standard(s)** | 3 | 2 | 3 | 3 | 4 | 2 | 2 |
| **Planning to Close the Achievement Gap Using Data** | 3 | 2 | 3 | 3 | 4 | 3 | 3 |
| Subscale means | 3,00 | 2,00 | 3,00 | 3,00 | 4,00 | 3,00 | 2,67 |

Similarly, to the previous category, the reading of the table shows a lot of congruence for the different items per room observed. In this situation the scores vary between 2.67 and 4 points. In room five all items received a score of 4, while in room two they obtained a score of 2 points.

Table 29 - *Learning conditions*

| Conditions for Learning | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Using Formative Assessment to Track Progress** | 3 | 2 | 3 | 2 | 4 | 3 | 3 |
| **Providing Feedback and Celebrating Progress** | 3 | 2 | 3 | 2 | 4 | 3 | 3 |
| **Organizing Students to Interact with Content** | 3 | 2 | 3 | 2 | 4 | 3 | 3 |
| **Establishing and Acknowledging Adherence to Rules and Procedures Using Engagement Strategies** | 3 | 2 | 3 | 2 | 4 | 3 | 3 |
| **Using Engagement Strategies** | 3 | 2 | 3 | 2 | 4 | 3 | 2 |
| **Effective Establishing and Maintaining Relationship in a Student- Centered Classroom** | 3 | 2 | 3 | 2 | 4 | 3 | 2 |
| **Communicating High Expectations for Each Student to Close the achievement Gap** | 3 | 2 | 3 | 2 | 4 | 3 | 3 |
| **Subscale means** | 3,00 | 2,00 | 3,00 | 2,00 | 4,00 | 3,00 | 2,71 |

For the category learning conditions there is a situation similar to that of the other categories, obtaining the room five 4 points for all items and rooms two and four the lowest score, with 2 points for all items.

Table 30 - *Professional Responsibilities*

| Professional Responsibilities | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Adhering to School and District Policies and Procedures** | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| **Maintaining Expertise in Content and Pedagogy** | 3 | 3 | 3 | 3 | 4 | 3 | 3 |
| **Promoting Teacher Leadership and collaboration** | 2 | 2 | 2 | 2 | 3 | 2 | 2 |
| Subscale means | 2,67 | 2,67 | 2,67 | 2,67 | 3,33 | 2,67 | 2,67 |
| **Adhering to School and District Policies and Procedures** | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| **Maintaining Expertise in Content and Pedagogy** | 3 | 3 | 3 | 3 | 4 | 3 | 3 |
| **Promoting Teacher Leadership and collaboration** | 2 | 2 | 2 | 2 | 3 | 2 | 2 |

The table 30 allows us to verify that the items in this category were the ones that obtained one of the most uniform scores among all rooms with values ranging from 2.67 to 3.33. It is noteworthy that only room five obtained 3.33 points, all the remaining ones stood at 2.67.

## Reflexion

In Portugal, from pre-school education to higher education, citizens can opt for a public (free) school or a private school (tuition). Private schools should be certified by the Ministry of Education, or by the Ministry of Science, Technology and Higher Education, considered the level of education they protect and by the Ministry of Labor and Social Solidarity/Social Security Institute in the case of preschool education.

There is no formal curriculum for day-care and nurseries (children 0-3), nor for pre-school education (children 3-6 years). However, there is a guiding document for Preschool Education, which is configured as the legal document that all childhood educators should use as a reference for their practice.

The minimum level of initial teacher training (FIP) is the master's degree. It combines three years of degree in Basic Education (180 ECTS) plus a year and a half (90 ECTS) or two years (120 ECTS) of a professional master's degree. The minimum fip duration is usually between four and a half and five years. Basic Education students (which sets up the first phase of compulsory training for those who wish to become childhood educators or teachers of the 1st and 2nd CEB) can choose from the following master's degrees)
There are 5,900 pre-school education centres in Portugal, including: 3614 public institutions and 2228 private or social solidarity institutions. There are 4209 primary schools – 1st CEB, i.e. 3692 public, 517 privates. There are 1201 basic education institutions 2nd CEB, 937 public, 97 deprived of the state and 167 privates

The quality of the nursery and kindergarten contexts in an area of Portugal (city of Bragança), according to the subscales of ECERS-R, globally, the rooms have good quality, and there are aspects that can be improved.

According to the subscales of ITERS-3. globally, for the six day-care rooms observed, the values obtained are indicators of good quality, with the averages being between 4.72 and 6.54.

## 8. References

Arnett, J. (1989). Arnett Caregiver Interaction Scale. Retrieved from Jaeger, E. & Funk, S. (2001). The Philadelphia Child Care Study: An Examination of Quality in Selected Early Education and Care
Settings. Philadelphia, PA: Saint Joseph's University.

Barros, S., & Leal, T. B. (2015). Parents' and teachers' perceptions of quality in Portuguese childcare classrooms. European Journal of Psychology of Education, 30(2), 209–226. https://doi.org/10.1007/s10212-014-0235-4

Barros, S., Cadima, J., Bryant, D. M., Coelho, V., Pinto, A. I., Pessanha, M., & Peixoto, C. (2016). Infant childcare quality in Portugal: Associations with structural characteristics. EARLY CHILDHOOD RESEARCH QUARTERLY, 37, 118–130. https://doi.org/10.1016/j.ecresq.2016.05.003

Cadima, J., Enrico, M., Ferreira, T., Verschueren, K., Leal, T., & Matos, P. M. (2016). Self-regulation in early childhood: The interplay between family risk, temperament and teacher-child interactions.

European Journal of Developmental Psychology, 13(3), 341–360. https://doi.org/10.1080/17405629.2016.1161506

Conselho Nacional de Educação (CNE) (2018). Estado da Educação 2017. Lisboa: CNE

Correia, N., & Aguiar, C. (2017). Choosing classrooms: A structured interview on children's right to

participate. International Journal of Educational Research, 82, 54–62. https://doi.org/10.1016/j.ijer.2017.01.004

Freitas Luís, J., Andrade, S., & Santos, P. C. (2015). The attitude of the early childhood educator and child participation as benchmarks of quality in education [A atitude do educador de infância e a participação da criança como referenciais de qualidade em educação]. Revista Brasileira de Educacao, 20(61), 521–541. https://doi.org/10.1590/S1413-24782015206112