

Early Childhood Education spaces in Porto Velho-RO

Espaços da Educação Infantil em Porto Velho-RO

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Abstract

This study is the result of research carried out as part of the Postgraduate Program in School Education, Professional Masters and Doctorate of the Federal University of Rondônia, and it aimed to analyze the spaces and environments of early childhood education municipal schools in Porto Velho/Rondônia/Brazil. The research was based on Cultural-Historical Theory, especially on Vygotsky's postulates. The Early Childhood Environment Rating, Third Edition (ECERS-3) and Infant/Toddler Environment Rating, Third Edition (ITERS-3) scales (Harms; Cryer; Clifford, 2020) were used to evaluate the spaces and materials in the nursery and preschool classes of five municipal schools in Porto Velho/Rondônia/Brazil. The evaluation of the educational spaces revealed quality levels ranging from inadequate to minimally adequate. The results obtained with the application of the scales show that these instruments are important for supporting and guiding the implementation of improvements in Early Childhood Education schools since they assess different aspects related to the education of children aged zero to five years old.

Keywords: Early childhood education; School education; spaces and environments.

Resumo

O estudo apresentado é resultado de pesquisa realizada no âmbito do Programa de Pós-Graduação em Educação Escolar, Mestrado e Doutorado Profissional da Universidade Federal de Rondônia, e teve como objetivo analisar os espaços e ambientes de escolas municipais de Educação Infantil de Porto Velho-RO. A investigação se baseou na Teoria Histórico-Cultural, especialmente nos postulados de Vygotski. Foram utilizadas as escalas *Early Childhood Environment Rating, Third Edition* (ECERS-3) e *Infant/Toddler Environment Rating, Third Edition* (ITERS-3) (Harms; Cryer; Clifford, 2020) para avaliar os espaços e materiais das turmas de creches e pré-escolas de cinco escolas de Educação Infantil da rede municipal de Porto Velho-RO. A avaliação dos espaços educacionais apontou uma qualidade entre inadequada e minimamente adequada. Os resultados obtidos com a aplicação das escalas demonstram que tais instrumentos são importantes para subsidiar e orientar a implementação de melhorias nas escolas de Educação Infantil, visto que avaliam diferentes aspectos relacionados à educação de crianças de zero a cinco anos.

Palavras-chave: Educação infantil; Educação escolar; espaços e ambientes.

INTRODUCTION

This paper¹ presents part of a research project carried out within the scope of a Postgraduate Program in Education, entitled *Analysis of the Early Childhood Education spaces and environments*. Evaluating Early Childhood Education (ECE) environments is vital, as they significantly impact children's cognitive and social development (Carvalho and Pereira, 2008). Rethinking and structuring early childhood education spaces should undoubtedly be part of the educational plans and actions of all levels of government.

Carvalho and Pereira (2008) noted that quality concerns go beyond evaluative aspects. According to these authors,

[...] it is not just a question of evaluation but of the impact these types of environments can have on the individual's development. Thus, quality and its assessment are like

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sides of the same coin whose outcome influences development (Carvalho and Pereira, 2008, p. 270, our translation).

In 2009, the Ministry of Education (MEC) published a self-assessment tool called Indicators of Quality in Early Childhood Education (IQEI) (Brasil, 2009). The tool presents quality dimensions and indicators, with spaces—materials and furniture—included in the fifth dimension. According to the IQEI, the physical environments of early childhood education institutions should indicate a concept of education and care that is respectful of children's development needs.

The IQEIs also point out that furniture should be designed for babies and young children of all sizes. Spaces must be suitable for movement and play, and visual stimuli in various colors and shapes should be renewed periodically. These Indicators highlight the need to provide teachers with enough materials, toys and children's books to enable enjoyable and diverse activities. In addition, the spaces must allow for recording and disseminating the projects developed by children.

In addition to legal considerations, recent studies on space and environment organization merit attention. In their research, Zabalza (1998), Forneiro (1998), Barbosa (2006), Horn (2004; 2017), and Horn and Barbosa (2022) deal with the concept of environment and space from three dimensions: the first is related to aesthetic aspects - something welcoming, proportionate, pretty, beautiful; the second dimension, to functional aspects - something adequate, with resources, exercising its educational purpose; and the third, to environmental aspects - cold, heat, light, safety. According to the authors, these dimensions are involved in the pedagogical work of teachers and children's learning and development.

Given the above, we sought to diagnose of the quality of the environments of five Municipal Early Childhood Schools (EMEI) in Porto Velho-RO, based on the information produced using the Early Childhood Environment Rating Scale Third Edition (ECERS-3) and Infant/Toddler Environment Rating Scale Third Edition (ITERS-3), which enabled us to assess physical, socio-emotional, and cognitive aspects.

ROADS TRAVELED

To analyze the internal spaces of the classrooms, we used the ECERS-3 and ITERS-3 scales as assessment tools for early childhood environments (Harms; Cryer; Clifford, 2020b). These scales were designed to assess the overall quality of ECE schools. They have been used in important research projects in the United States and several other countries. ITERS3 is suitable for assessing educational environments for children aged zero to three, while ECER-3 assesses environments catering to children aged three to five.

The third editions of ITERS and ECERS introduce significant updates, including innovations in content and application, while preserving their core characteristics: the broad/global definition of quality and observation as the primary source of information on which classroom quality assessment should be based (Harms; Cryer; Clifford, 2020a).

The original ITERS and ECERS date back to 1980 but were updated and revised through the years up to 2005. The previous versions of the scales have independent translations into Portuguese. In 2020, Portuguese translations of the third edition of the scales were released, which we used in our study.

The scales are structured in items grouped into six sub-scales. The ITERS-3 has 33 items, described in [Chart 1](#).

ECER-3 has 35 items, as shown in [Chart 2](#).

Each item has quality indicators, which must be marked considering their presence or absence in the ECE environment. Once the indicators have been marked, the items are scored from 1 to 7, with (1) inadequate, (3) minimal, (5) good and (7) excellent. Intermediate scores (2, 4 and 6) can be assigned when all the conditions of the lower score and at least half of the upper score are present. Therefore, each mean is extracted by summarizing the items in the sub-scales, and the overall mean is obtained in the evaluation.

Chart 1. Organization of the ITERS-3 Scale.

Sub-scale	Items
Space and furniture	1. Internal space; 2. Furniture for routine care, play and learning; 3. Organization of the room; 4. Display of materials for the children.
Personal care routines	5. Meals/snacks; 6. Diaper changing/bathroom use; 7. Health practices; 8. Safety practices.
Language and books	9. Talking to children; 10. Encouraging vocabulary development; 11. Responding to children's communications; 12. Encouraging children to communicate; 13. Using books with children; 14. Encouraging children to use books.
Activities	15. Fine motor skills; 16. Art; 17. Music and movement; 18. Blocks; 19. Make-believe games; 20. Nature/Science; 21. Mathematics/Numbers; 22. Appropriate use of technology; 23. Promoting acceptance of diversity; 24. Broad motor skills.
Interaction	25. Supervising broad motor skills play; 26. Supervising play and learning; 27. Interaction between peers; 28. Staff-child interaction; 29. Affectionate physical contact; 30. Dealing with children's behavior.
Organizing the moments	31. Structure of the day and transitions; 32. Free play; 33. Large group play.

Source: Prepared by the authors.

Chart 2. Organization of the ECERS-3 Scale.

Subscale	Items
Spaces and furniture	1. Internal space; 2. Furniture for routine care, play and learning; 3. Organization of the room for play and learning; 4. Space for privacy; 5. Display of materials for children; 6. Space for broad motor skills; 7. equipment for broad motor skills.
Routine personal care	8. Meals/snacks; 9. Diaper changing/toilet use; 10. Health practices; 11. Safety practices.
Languages	12. Helping children expand their vocabulary; 13. Encouraging children to use language; 14. Using books with children; 15. Encouraging children to use books; 16. Using the written record.
Learning activity	17. Fine motor skills; 18. Art; 19. Music and movement; 20. Blocks; 21. Make-believe games; 22. Nature/Science; 23. Math materials and activities; 24. Math in everyday events; 25. Understanding written numbers; 26. Promoting acceptance of diversity; 27. Appropriate use of technology.
Interaction	28. Supervision of broad motor skills; 29. Individualized pedagogical attention and learning; 30. Staff-child interaction; 31. Interaction between peers; 32. Discipline.
Organizing the moments of the day	33. Transitions and waiting; 34. Free play; 35. Extensive group activities for play and learning.

Source: Prepared by the authors.

Before applying the scales, we contacted the managers and teachers of the five EMEIs (*Early Education Municipal Schools*) to explain the objectives of the research, clarify the ethical aspects and define the details of the data collection. It should be noted that the schools selected cater exclusively for ECE.

We used the ITERS-3 to assess the quality of spaces in classes with children aged two years and eight months up to three years old and the ECERS-3 to assess classes with children aged three years and ten months up to five years old. The children's ages were collected before the scales were applied. On average, each class was observed for three hours and fifty minutes, exceeding the three-hour 'sample time' recommended by the scales.

THE SPACES AND ENVIRONMENTS OF EARLY CHILDHOOD EDUCATION

When we understand how children learn and develop, we can plan pedagogical work to promote their maximum development. Singulani (2017) points out that the actions of teachers include organizing the space of the preschool and, in doing so, we indirectly interfere with children's experiences. According to Silva and Mello (2017), in the school environment, children expand their social relationships, get to know new cultural tools, and have access to new experiences. Therefore, the Early Childhood Education (ECE) school is a social space mediated by the link between individuals and culture, developed throughout history.

According to Vigotski (2018), culture is the source of human qualities. In children's schools, culture enables children to access cultural objects since they contain the human capacities necessary for their use. In other words, by creating objects, human beings materialize in them the human capacities that are indispensable for their production and use. These capacities, in turn, are appropriated by children as they learn to use these cultural objects. For this reason, when planning the organization of children's school space, teachers should reflect on which cultural objects present can help promote the maximum development of children.

As stated by Silva (2017), the environment where children engage in sensory, relational, and physical experiences is essential to their learning process. In this way, dealing with space for children from zero to five years old means considering a space that creates needs, is welcoming, provokes challenges, and is creative and safe. For the author, space teaches children things since they establish intense relationships with the objects that make it up. For this reason, the organization of space directly interferes with the child's learning and development process.

According to Singulani (2017), school becomes an interesting, challenging space that promotes human development when we bring in large quantities and varieties of cultural objects that children can handle, explore, and observe. In the author's words, "[...] among the materials offered to children, those that contribute most to enriching their experiences are those that allow them greater freedom of action, with which they can create and invent different uses" (Singulani, 2017, p. 131, our translation).

Another issue we must consider when planning the organization of spaces in the ECE school is the inclusion of human production in its most elaborate forms. As Vigotski (2018) reminds us, in the educational process, it is necessary for the final or ideal forms to interact with the child's initial and simpler forms, i.e., this interaction challenges and promotes progress in child development. Vigotski (2018, p. 24) also states that:

[...] if in the middle there is no corresponding ideal form and the child's development, for whatever reason, takes its course without passing through these specific characteristics, which I have already told you about, that is, without interacting with the final form, then the corresponding form in the child does not develop to the end either (our translation).

Recognizing that children's development benefits from access to humanity's collective knowledge underscores the importance of organizing spaces, environments, and materials to support high-quality education that guarantees their full development. In this sense, it is necessary to review our pedagogical practices, starting with the composition of spaces and the organization of materials, with the aim of well-thought-out and intentionally planned childcare.

QUALITY OF EARLY CHILDHOOD EDUCATION SPACES AND ENVIRONMENTS: WHAT DO THE SCALES SAY?

For this study, the schools participating in the research were identified as: EMEI Zona Leste I, EMEI Zona Leste II, EMEI Zona Oeste, EMEI Zona Sul, and EMEI Zona Norte. In these five EMEIs, considering the observations and scores attributed based on the scales used, we checked the average points obtained in each sub-scale. We also examined the scores' means and limits (maximum and minimum). The results were organized in tables for better visualization.

EMEI Zona Leste I - The school has two classrooms for three-year-olds and eight classrooms for children aged between four and five. **Tables 1 and 2** show, respectively, the means and limits (maximum and minimum) of the ITERS-3 and ECERS-3 sub-scales:

Table 1. Means and limits (maximum and minimum) of the ITERS-3 sub-scales: EMEI Zona Leste I.

Classes	Space and furniture	Personal care routines	Language and books	Activities	Interaction	Organizing the moments of the day
Class 1	2.00	2.43	3.20	2.40	2.60	2.00
Class 2	1.80	1.83	3.50	2.30	3.80	2.62
Mean	1.90	2.13	3.35	2.35	3.20	2.31

Source: Prepared by the authors. Data collected from the ITERS-3 sub-scales.

Table 2. Means and limits (maximum and minimum) of the ECERS-3 subscales: EMEI Zona Leste I.

Classes	Space and furniture	Routines of personal care	Language	Learning activities	Interaction	Organization of moments of the day
Class 1	2.38	2.00	3.50	2.40	3.80	3.00
Class 2	2.75	1.60	2.00	2.20	2.40	2.00
Class 3	2.20	1.40	4.00	2.50	5.40	2.25
Class 4	1.90	2.40	3.25	1.90	3.40	2.60
Class 5	2.75	3.00	3.50	2.30	3.00	2.00
Class 6	2.00	3.00	2.25	1.60	2.60	1.67
Class 7	1.90	3.60	2.00	1.30	3.80	2.50
Class 8	2.60	2.00	4.00	2.25	2.00	3.15
Mean	3.14	2.37	3.06	2.05	3.30	2.39

Source: Prepared by the authors. Data collected from the ITERS-3 sub-scales.

The total scores obtained by the nursery classes, assessed using the ITERS-3 scale, showed mean scores for the subscales ranging from 1.90 to 3.35. The preschool classes, assessed using the ECERS-3 scale, obtained means ranging from 2.05 to 3.30. Thus, the evaluation of the educational environments at EMEI Zona Leste I indicates a quality between inadequate and minimally adequate.

On the ITERS-3 scale, the lowest mean ($M= 1.90$) was obtained on the Space and Furniture subscale, while the highest mean ($M= 3.25$) was for the Language subscale. The lowest score was given to the Spaces and Furnishings subscale (1.80) and the highest to the Interaction subscale (3.80). On the ECERS-3 scale, the lowest mean ($M= 2.05$) was obtained on the Learning Activities subscale and the highest ($M= 3.30$) on the Interaction subscale. The lowest score (1.30) was given to the Learning Activities subscale and the highest score (5.40) to the Interaction subscale.

EMEI Zona Leste II - the school has two classrooms for children aged three and over and five classrooms for children aged between four and five. Let's take a look at the means obtained in each subscale of ITERS-3 and ECERS-3, as shown in [Tables 3 and 4](#).

The total scores obtained by the nursery classes, assessed using the ITERS-3 scale, showed mean scores for the subscales ranging from 2.47 to 2.51. The preschool classes, assessed using the ECERS-3 scale, obtained means ranging from 2.26 to 3.23. Thus, the evaluation of educational environments indicates a quality between inadequate and minimally adequate.

On the ITERS-3 scale, the lowest mean ($M= 1.55$) was obtained on the Activity subscale, while the highest mean ($M= 3.65$) was on the Spaces and Furnishings subscale. The lowest score (1.30) and the highest score (3.80) were given to the same subscales, respectively. On the ECERS-3 scale, the lowest mean ($M= 2.06$) was obtained on the Learning Activities subscale and the highest ($M= 3.43$) on the Language subscale. The lowest score (1.40) was attributed to the Personal Care Routines subscale, and the highest score (4.00) was given to the Language subscale.

Table 3. Means and limits (maximum and minimum) of the ITERS-3 sub-scales: EMEI Zona Leste II.

Classes	Space and furniture	Personal care routines	Language and Books	Activities	Interaction	Organizing the moments of the day
Turma 1	3.50	1.83	2.33	1.30	3.33	2.80
Turma 2	3.80	1.60	2.00	1.80	3.00	2.62
Média	3.65	1.71	2.16	1.55	3.16	2.71

Source: Prepared by the authors. Data collected from the ITERS-3 sub-scales.

Table 4. Means and limits (maximum and minimum) of the ECERS-3 subscales: EMEI Zona Leste II.

Classes	Space and furniture	Personal care routines	Language	Learning Activities	Interaction	Organizing the moments of the day
Turma 1	3.38	2.45	3.35	1.90	3.40	2.33
Turma 2	3.13	2.00	3.50	2.20	3.00	2.25
Turma 3	3.03	1.40	3.09	1.80	2.60	1.67
Turma 4	3.62	2.60	4.00	2.40	3.80	3.00
Turma 5	3.50	2.40	3.25	2.50	3.80	2.00
Média	3.33	2.17	3.43	2.06	3.32	2.25

Source: Prepared by the authors. Data collected from the ECERS-3 sub-scales.

EMEI Zona Oeste - The results of the application of the scales are shown in [Tables 5 and 6](#).

The total scores obtained by the nursery classes, assessed using the ITERS-3 scale, showed mean scores for the subscales ranging from 1.79 to 3.95. The preschool classes, assessed using the ECERS-3 scale, obtained means ranging from 2.06 to 3.43. Thus, the evaluation of educational environments indicates a quality between inadequate and minimally adequate.

On the ITERS-3 scale, the lowest mean score ($M= 1.79$) was obtained on the Personal Care Routines subscale, while the highest mean score ($M= 3.95$) was obtained on the Space and Furnishings subscale. The lowest score (1.50) was in the Personal Care Routines subscale and the highest score (4.60) was obtained by Class 2 in the Space and Furnishings subscale. On the ECERS-3 scale, the lowest mean ($M= 2.06$) was obtained on the Organization of the Moments of the Day subscale and the highest mean ($M= 3.43$) on the Language subscale. The lowest score (1.40) was given in the Personal Care Routines subscale, and the highest score (4.00) was given in the Language subscale.

EMEI Zona Sul - The results of the application of the scales are shown in [Tables 7 and 8](#).

Table 5. Means and limits (maximum and minimum) of the ITERS-3 sub-scales: EMEI Zona Oeste.

Classes	Space and furniture	Personal care routines	Languages	Learning activities	Interaction	Organizing the moments of the day
Class 1	3.80	1.83	3.67	1.80	3.75	3.67
Class 2	4.60	2.17	3.00	2.50	1.75	3.33
Class 3	3.60	1.67	4.00	2.50	3.50	2.00
Class 4	3.80	1.50	2.67	1.80	2.75	1.50
Mean	3.95	1.79	3.33	2.15	2.93	2.62

Source: Prepared by the authors. Data collected from the ITERS-3 sub-scales.

Table 6. Means and limits (maximum and minimum) of the ECERS-3 subscales: EMEI Zona Oeste.

Classes	Space and furniture	Personal care routines	Languages	Learning activities	Interaction	Organizing the moments of the day
Class 1	3.50	2.40	3.50	2.20	3.75	1.50
Class 2	3.62	2.60	3.25	1.80	3.50	2.00
Class 3	3.03	1.40	4.00	2.40	2.75	3.00
Class 4	3.13	2.00	3.09	2.50	3.75	2.50
Class 5	3.38	2.45	3.25	1.90	1.75	1.90
Class 6	3.80	3.00	3.50	2.20	3.00	1.50
Mean	3.41	2.30	3.43	2.16	3.08	2.06

Source: Prepared by the authors. Data collected from the ECERS-3 sub-scales.

Table 7. Means and limits (maximum and minimum) of the ITERS-3 sub-scales: EMEI Zona Sul.

Classes	Space and furniture	Personal care routines	Language and books	Activities	Interaction	Organizing the moments of the day
Class 1	3.60	2.00	2.50	1.75	3.00	2.50
Class 2	3.13	2.45	2.25	2.20	3.15	2.33
Class 3	3.03	1.80	2.45	1.80	2.60	2.67
Mean	3.25	2.08	2.40	1.91	2.91	2.50

Source: Prepared by the authors. Data collected from the ECERS-3 sub-scales.

Table 8. Means and limits (maximum and minimum) of the ECERS-3 subscales: EMEI Zona Sul.

Classes	Space and furniture	Personal care routines	Language	Learning Activities	Interaction	Organizing the moments of the day
Class 1	3.80	1.00	3.00	1.75	1.75	1.50
Class 2	3.60	1.67	2.67	1.90	3.75	2.60
Class 3	2.80	1.83	2.33	1.80	2.75	2.00
Class 4	3.62	2.17	3.00	1.20	4.00	2.20
Class 5	2.90	1.83	4.00	1.90	3.00	2.45
Class 6	4.60	2.00	2.20	1.45	2.80	2.90
Mean	3.55	1.75	2.86	1.66	3.00	3.65

Source: Prepared by the authors. Data collected from the ECERS-3 sub-scales.

The total scores obtained by the nursery classes, assessed using the ITERS-3 scale, showed mean scores for the subscales ranging from 1.91 to 3.25. The preschool classes, assessed using the ECERS-3 scale, obtained means ranging from 1.66 to 3.65. Thus, the evaluation of educational environments indicates a quality between inadequate and minimally adequate.

On the ITERS-3 scale, the lowest mean score ($M=1.91$) was obtained on the Activities subscale, while the highest mean score ($M= 3.25$) was obtained on the Space and Furniture subscale. The lowest score (1.75) was given to the Activity Routines subscale in Class 1 and the highest score (3.60) was obtained, also by Class 1, in the Space and Furniture subscale. On the ECERS-3 scale, the lowest mean ($M= 1.66$) was obtained on the Personal Care Routines subscale and the highest ($M= 3.65$) on the Organization of the Moments of the Day subscale. The lowest

score (1.00) was given in the Personal Care Routines subscale in Class 1, and the highest score (4.00) in the Language subscale in Class 4.

EMEI Zona Norte - This institution was the smallest among those surveyed regarding the number of classrooms observed. It has only two nursery classrooms, with three-year-olds, and two preschool classes, with children aged between four and five. The results of applying the scales are shown in [Tables 9 and 10](#).

Table 9. Means and limits (maximum and minimum) of the ITERS-3 sub-scales: EMEI Zona Norte.

Classes	Space and furniture	Personal care routines	Language and Books	Activities	Interaction	Organizing the moments of the day
Class 1	2.20	2.90	1.20	3.00	4.00	2.50
Class 2	2.40	2.00	1.80	2.60	3.80	2.15
Mean	2.30	2.45	1.50	2.80	3.90	2.32

Source: Prepared by the authors. Data collected from the ITERS-3 sub-scales.

Tabela 10. Médias e limites (máximos e mínimos) das subescalas da ECERS-3: EMEI Zona Norte.

Classes	Space and furniture	Personal care routines	Language	Learning activities	Interaction	Organizing the moments of the day
Class 1	2.00	3.70	2.70	3.75	5.50	2.20
Class 2	2.20	3.20	2.50	2.80	4.80	2.40
Mean	2.10	3.45	2.60	3.27	5.15	2.30

Source: Prepared by the authors. Data collected from the ECERS-3 sub-scales.

The total scores obtained by the nursery classes, assessed using the ITERS-3 scale, had mean subscale scores ranging from 1.50 to 3.90. The preschool classes, assessed using the ECERS3 scale, obtained means ranging from 2.10 to 5.15. Therefore, the evaluation of educational environments indicates a quality between minimally adequate and good.

On the ITERS-3 scale, the lowest mean ($M= 1.50$) was obtained on the Language and Books subscale, while the highest mean ($M= 3.90$) was on the Interaction subscale. The lowest score (1.20) was given to the Language and Books subscale in Class 1, and the highest score (4.00) was obtained, also by Class 1, in the Interaction subscale. On the ECERS-3 scale, the lowest mean ($M= 2.10$) was obtained on the Space and Furniture subscale and the highest mean ($M= 5.15$) on the Interaction subscale. The lowest score (2.00) was given to the Spaces and Furnishings subscale in Class 1 and the highest score (5.50) was given to the Interaction subscale in Class 1.

These results are similar to or lower than those of other studies already carried out in Brazil. Carvalho and Pereira (2008) applied the ITERS-R and ECERS-R, revised versions of 2005, in 16 classes of an ECE program, in which the overall mean of the classes was below 3.38. Another national study was carried out by Lima and Bhering (2006), in which the average of 12 classes evaluated with the ITERS-R was 3.4. Furtado (2001) used the original ECERS version, and Souza (2003) used the ITERS version, but the overall averages were not explained.

We also highlight the national survey using the ITERS-R and ECERS-R scales in six Brazilian capitals (Belém, Campo Grande, Florianópolis, Fortaleza, Rio de Janeiro, and Teresina), covering the different regions of the country. The national result for the ITERS-R scale (nursery schools), applied to 91 institutions in the six municipalities surveyed, showed a mean of 3.3 for the whole group, but the average for Belém was 2.7. The national result for the ECERS-R scale (preschool) was 3.4, while Belém's was 3.2.

Therefore, considering the classes in which the ITERS-3 and ECERS-3 scales were applied in the municipality of Porto Velho, the environments are between inadequate and minimally adequate quality, and no environment was rated insufficient or even good. Based on the data,

we can also conclude that there are differences in the quality of the environments in the two age groups since the average scores were higher in preschool classes than in nursery classes.

FINAL CONSIDERATIONS

This study analyzed the spaces and environments used to care for children between zero and five in five EMEIs in Porto Velho, Rondônia. The quality of the nursery and preschool rooms ranged from inadequate to minimally adequate when measured using the ITERS-3 and ECERS-3 scales, and no environment was classified as good. The data reveals the difference in the quality of nursery environments. In the classes assessed with ITERS-3 and ECERS-3, respectively, the Activities and Learning Activities subscales had the worst quality averages.

The results obtained from applying the scales show that they are important for supporting and guiding the implementation of improvements in EI schools since they assess different aspects related to the education of children aged zero to five. We observed that the data collected and analyzed using the ITERS-3 and ECERS-3 scales allowed us to contribute to thinking about spaces and environments aimed at early childhood education.

The analysis of the educational spaces and environments allowed us to highlight some needs which, if considered, could improve the work carried out and contribute to children's experiences. These include the need to organize reading spaces with a wide selection of books accessible to children, the availability of different materials for fine motor skills, the distribution of furniture to ensure play development in the classroom, and the definition of areas of interest.

During the research, we dialogued with some researchers and will use them here to provide some summaries. We begin with Pasqualini and Tsuhako (2016), who mention that the organization of the different spaces in preschool institutions cannot be improvised but must be intentionally planned to enable quantitative leaps in development. Spaces should be conducive to exploring different materials, such as toys, books, games, and materials for research, action, and tactile, visual, olfactory, and auditory movement.

Other aspects to consider are language stimulation and conversations with children during routine moments. Silva (2017) points out that conversation circles allow children to participate in the learning process actively, the experiences they will have, and the organization of the routine, as well as promoting the development of attitudes of respect and otherness:

When children speak and are heard, listen to other people, propose, discuss, suggest, and evaluate, they create new needs for themselves, enhance their learning, develop, and humanize themselves. In this context, the conversation circle can be a dialogical space in which the routine is thought out, elaborated, organized, and constantly evaluated by those who directly experience it (Silva, 2017, p. 147, our translation).

Another important aspect refers to the organization during the transition between activities where children do not have to wait too long, which is another need to be considered. Nunes (2018) states that organizing a routine provides children with security, stability, and consistency and encourages autonomy. In turn, Andrade (2002) considers that there is rigidity in the organization of times of day in preschools. Rigidity, because there is a set time for everything and everyone has to perform tasks in the same time frame: arriving, eating, playing and other pedagogical actions proposed by the teachers. In this way, each child's rhythm is disregarded, and they all have to adapt to a routine that is not designed according to their needs. The author points out that waiting and idleness denounce the practice of an education that lacks learning possibilities, which does not favor children's development and learning.

The accessibility of all spaces, the elimination of dangers in internal and external spaces, the acquisition of routine furniture, and personal use are also aspects to consider that contribute to children's development.

Therefore, we believe that the organization of spaces and environments in EMEIs needs to be planned intentionally and with didactic pedagogical and scientific foundations so that they genuinely become places of learning and development for children.

REFERENCES

Andrade, R. C. **A espera e a ociosidade na rotina da creche comunitária de Fortaleza**. 2002. Dissertação (Mestrado em Educação) – Faculdade de Educação, Universidade Federal do Ceará, Fortaleza, 2002.

Barbosa, M. C. S. **Por amor e por força**: rotinas na educação infantil. Porto Alegre: Artmed, 2006.

BRASIL. **Indicadores da qualidade na educação infantil**. Brasília: MEC/Secretaria de Educação Básica, 2009.

CARVALHO, A. M.; PEREIRA, A. S. Qualidade em ambientes de um programa de educação infantil pública. **Psicologia: Teoria e Pesquisa**, Brasília, v. 24, n. 3, p. 269- 277, 2008. DOI: <http://doi.org/10.1590/S0102-37722008000300002>.

Forneiro, L. I. A organização dos espaços na educação infantil. In: ZABALZA, M. A. **Qualidade em educação infantil**. Porto Alegre: Artmed, 1998. p. 229-281.

Furtado, R. A. **Avaliação de ambientes educacionais coletivos para pré-escolares**. 2001. Dissertação (Mestrado em Psicologia) – Universidade de São Paulo, Ribeirão Preto, 2001.

Harms, T.; Cryer, D.; Clifford, R. M. **Early Childhood Environment Rating Scale Third Edition (ECERS-3)**. São Paulo: Cortez, 2020a.

Harms, T.; Cryer, D.; Clifford, R. M. **Infant/Toddler Environment Rating Scale Third Edition (ITERS-3)**. São Paulo: Cortez, 2020b.

Horn, M. G. S. **Brincar e interagir nos espaços da escola infantil**. Porto Alegre: Penso, 2017.

Horn, M. G. S. **Sabores, cores, sons, aromas**: a organização dos espaços na educação infantil. Porto Alegre: Artmed, 2004.

Horn, M. G. S.; BarboSa, M. C. S. **Abrindo as portas da escola infantil**: viver e aprender nos espaços externos. Porto Alegre: Penso, 2022.

Lima, A. B. R.; Bhering, E. Um estudo sobre creches como ambientes de desenvolvimento. **Cadernos de Pesquisa**, São Paulo, n. 36, p. 573-596, 2006.

Nunes, H. M. C. **A organização do espaço na educação infantil**: contribuições da teoria histórico-cultural. 2018. Dissertação (Mestrado em Educação) – Universidade Estadual de Maringá, Maringá, 2018.

Pasqualini, J. C.; Tsuhako, Y. N. (org.). **Proposta pedagógica da educação infantil do sistema municipal de ensino de Bauru/SP**. Bauru: Secretaria Municipal da Educação, 2016. Disponível em: <https://www2.bauru.sp.gov.br/educacao/>. Acesso em: 12 nov. 2022.

Silva, G. F. A participação das crianças na organização da rotina. A organização do espaço da escola de educação infantil. In: COSTA, S. A.; MELLO, S. A. (org.). **Teoria histórico-cultural na educação infantil**: conversando com professoras e professores. Curitiba: CRV, 2017.

Silva, R. A. M.; Mello, S. A. A organização do espaço da escola de educação infantil. In: COSTA, S. A.; MELLO, S. A. (org.). **Teoria histórico-cultural na educação infantil**: conversando com professoras e professores. Curitiba: CRV, 2017.

Singulani, R. A. D. A organização do espaço da escola de educação infantil. In: COSTA, S. A.; MELLO, S. A. (org.). **Teoria histórico-cultural na educação infantil**: conversando com professoras e professores. Curitiba: CRV, 2017.

SOUZA, T. N. **Análise da adequabilidade da Infant/Toddler Environment Rating Scale para avaliar ambientes de creches de Ribeirão Preto**. 2003. Dissertação (Mestrado) – Universidade de São Paulo, Ribeirão Preto, 2003.

Vigotski, L. S. **Sete aulas de L. S. Vigotski sobre os fundamentos da pedagogia**. Organização [e tradução] Zolia Prestes, Elizabeth Tunes. Tradução Claudia da Costa Guimarães Santana. Rio de Janeiro: Papers, 2018.

Zabalza, M. A. **Qualidade em educação infantil**. Porto Alegre: Artmed, 1998.

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