

EARLY YEARS TEACHER'S CONCEPTIONS AND PRACTICES TO ASSESS AND DOCUMENT CHILDREN'S CONCEPTIONS

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Abstract

This text examines early childhood education in Portugal, which is divided into two categories: daycare for children aged 0-3 years and Preschool Education in Kindergartens for children aged 3-6 years. The study focuses on Preschool Education, which is part of the Portuguese educational system and emphasizes educational preparation for children. The Framework Law for Preschool Education sets goals for socio-emotional and intellectual development, education for citizenship, correcting social asymmetries, and equalizing opportunities. The study aims to understand kindergarten teacher knowledge beliefs and practices regarding children's assessment and pedagogical documentation. Data were collected using an online questionnaire, distributed through social networks, and made available on the website of the APEI. The data were processed and analyzed with the aid of the Pandas tool, revealing that most kindergarten teachers engage in weekly reflections with children regarding the collected learning evidence and believe that a digital application could facilitate the documentation process. The most common use of digital applications is to share photos and/or videos and exchange messages with families. Kindergarten teachers use various methods to collect data on children's activities, such as direct observation and conversation with children, photographic records, and analysis of children's work. Overall, the study sheds light on how kindergarten teachers perceive pedagogical documentation, its importance, and the challenges associated with assessing children. It also highlights how digital applications can facilitate the documentation process, making it easier to share learning evidence with parents and track children's development.

Keywords: Children's assessment, Pedagogical documentation, Early childhood Education.

1 INTRODUCTION

Regarding Portuguese regulation assessment is an essential part of the educational process in pre-school education in Portugal. According to the legislation, the official guidelines are established in the Curriculum Guidelines for Early Childhood Education (OCEPE), which is the mandatory document that guides the construction and management of the curriculum, as described in Despacho no. 9180/2016 of 19/7. It is important to note that, in addition to the information provided in the OCEPE and in the Specific Professional Performance Profile of the Kindergarten Teacher, which is established in Decree-Law no. 241/2001 of 30/8, there are no other official guidelines on assessment in early childhood education [1].

Assessment involves collecting, analysing, and reflecting on data to support decision-making, improve learning outcomes, and promote the quality of educational practices. According to the OCEPE, observing, recording, documenting, planning, and evaluating are interconnected steps that develop in successive and interactive cycles, integrated into an annual cycle. It is emphasized that assessment and planning are interdependent, and planning becomes more meaningful when based on systematic evaluation, while systematic evaluation is useful if it influences action planning. Through reflective and sensitive assessment, the educator obtains information to adapt planning to the group and its evolution. It is important to observe children from different angles and to situate their learning in the context in which they are located [2].

In 2021, the Portuguese Ministry of Education presented the document titled "Planning and Evaluation in Early Childhood Education" [1], which aims to clarify the concepts of assessment and planning. In this document, it is expressed that in Portugal, the main objective of the assessment is to support the flexible and appropriate development of the curriculum and children's learning. Assessment is not limited to outcomes but focuses on processes as well. In this line of thought, the authors reveal that assessment is a fundamental part of the educational process, as it is interconnected with curriculum planning,

development, and monitoring and can be carried out through the same activities, spaces, and times used for educating and teaching. Therefore, educators must have a deep understanding of the curriculum and learning so that they can use assessment appropriately, reflecting and contributing to the regulation and development of the curriculum, education, and learning.

According to the Specific Profile of Professional Performance, early childhood educators must individually observe each child and the group, and plan integrated and flexible educational interventions supported by observation data, children's proposals, and emerging themes. They must assess their intervention, the environment, and educational processes, as well as the development and learning of each child and the group [3]. Assessment and communication of assessment require organization and synthesis, adapting it to the interlocutors. Assessment is a procedure that must be carried out responsibly, in the interest of the children and their learning, recognizing their successes and individual characteristics.

According to Circular No 17/DSDC/DEPEB/2007, it is up to the educator: to prepare the assessment Report of the Curricular Project; produce a written document with the overall information of the most significant learnings of each child, highlighting their path, evolution, and progress; communicate to parents/guardians as well as teachers what children know and can do.

The following points summarize some of the practices of assessment in Preschool education in Portugal:

- 1 Systematic assessment: Assessment in Preschool education in Portugal is a continuous process that involves systematic and regular data collection, analysis, and reflection. It is based on observation, documentation, and interactions with children, families, and other stakeholders.
- 2 Comprehensive assessment: The assessment process in Preschool education in Portugal is comprehensive, considering different aspects of child development, including cognitive, social-emotional, physical, and linguistic development. It also considers the child's family and social context and the interactions between the child and their environment.
- 3 Participatory assessment: Assessment in Preschool education in Portugal involves the participation of all stakeholders, including children, families, educators, and other professionals. It fosters a collaborative approach that values the contributions of all involved and promotes a shared understanding of the child's development and learning.
- 4 Reflective assessment: Assessment in Preschool education in Portugal encourages educators to reflect on their practice and to continuously improve it. It involves analyzing data, reflecting on their practice, and making changes to improve learning outcomes.

The assessment process in preschool education uses multiple assessment tools, such as observation, documentation, and testing, to gather data on children's development and learning. This allows for a more comprehensive and accurate understanding of the child's strengths and areas for improvement. It focuses on learning outcomes, using data to inform teaching practices and to promote the child's development and learning. Another essential point of the assessment in early childhood education is to value diversity and promote an inclusive approach to education. It considers the unique characteristics and needs of each child and family and respects their cultural and linguistic diversity.

The national regulation encourages a collaborative, reflective, and comprehensive assessment process that aims to promote the child's development and learning and to improve the quality of educational practices.

Documentation practices in preschool education in Portugal are inspired by various pedagogical approaches. The Reggio Emilia approach is one of them., which emphasizes the importance of observing and documenting children's experiences, ideas, and learning processes. It encourages teachers to use various forms of documentation, such as photos, videos, and written notes, to capture children's learning and progress over time [4].

The Movimento da Escola Moderna Portuguesa uses project-based learning and documentation to record children's questions, ideas, and discoveries as they work on a project. This documentation helps kindergarten teachers to assess children's learning and to plan future activities that build on their interests and strengths [5].

Play-Based Learning is a child-centred approach that emphasizes the importance of play in children's learning and development. Kindergarten teachers must document children's play experiences to gain insights into their interests, social interactions, and problem-solving skills [6], [7].

In *Pedagogia-em-Participação* documentation is seen as a collaborative process involving teachers, children, families, and the wider community. This approach values the diversity of perspectives and experiences and seeks to engage all stakeholders in the documentation process. This approach encourages the use of different types of documentation, such as photographs, videos, drawings, and written records. This allows for a more comprehensive and nuanced understanding of children's learning processes and experiences. Documentation is not just a record-keeping process in *Pedagogia-em-Participação*, but a tool for reflection and analysis. Teachers engage in regular meetings to analyse and interpret the documentation, identify patterns and trends, and make informed decisions about their pedagogical practice. It is a way of valuing children as active participants in the documentation process. This approach recognizes that children can contribute to their learning and development. *Pedagogia-em-Participação* sees documentation to involve families in their children's learning and development. Teachers use documentation to share information with families about what their children are learning and doing in the classroom and to invite them to participate in the documentation process [8], [9].

Overall, pedagogical documentation is an important tool for teachers to assess children's learning, plan future activities, and communicate with parents and other educators. These approaches provide some guidance for teachers in documenting children's experiences and learning processes in the classroom [10].

The main purpose of the study was to understand kindergarten teacher knowledge beliefs and practices regarding children's assessment and pedagogical documentation. Understanding kindergarten teachers' conceptions about assessment and documentation is important because it can impact the learning outcomes and overall development of young children. The way teachers collect, analyze, and use data to document children's learning and development can have significant implications for their educational experiences. Additionally, understanding teachers' attitudes towards digital applications for documentation can inform the development and implementation of technology-based solutions to support teachers in their work. Overall, studying teachers' conceptions of assessment and documentation can contribute to the improvement of early childhood education practices and outcomes.

2 METHODOLOGY

This study was developed within the scope of the Early Year Digital Portfolio Project, a KA2 Erasmus+ project with the Number: 2022-1-PT01-KA220-SCH-000086979, funded by the European Union. It relates to the assessment of the needs, beliefs, and knowledge of Portuguese Early Childhood Educators about documentation.

The methodology followed in this study was based on a quantitative approach, with data collection by questionnaire made available online and using statistical treatment through the tool Pandas. The aim is to know and describe childhood educators' perspectives on pedagogical documentation. The online questionnaire was distributed through social networks and made available on the website of the APEI (Associação de Profissionais de Educação de Infância). The questionnaire was structured into five sections. The first section, called "Profile of Participants", was intended to characterize the respondents. This was followed by the section "Concept of Assessment and Pedagogical Documentation", which aimed to obtain the kindergarten teachers' perceptions regarding the assessment methods and objectives. The third section, called "Relationship between pedagogical documentation and children's learning", relates to the understanding of the teachers about the importance of documentation and children's learning. The section "Challenges of Assessing Children" follows, with questions related to the difficulties inherent to assessing the child. Finally, the section "Process of documenting roles and participants" aims to obtain teachers' perceptions of the methodology that should be used to document the learning process.

In total, 210 answers were obtained. The data were processed with the aid of the Pandas tool, according to the following sequence of actions: (i) Elimination of empty or incorrect answers; (ii) Counting of the categories in each section; (iii) Ordering of questions in descending order of agreement; (iv) Graphic representation, for easier viewing.

After data processing, they were analyzed and cross-referenced to interpret, more rigorously and thoroughly, the perceptions of the students in each of the sections.

2.1 Participants profile

Based on the collected data, it was found that most early childhood educators who participated in this study were between the ages of 51 and 60 years (37.1%), followed by the group between 41 and 50 years (26.7%). The same percentage of respondents falls between the age groups of 31-40 years and over 60 years (16.7%), with a smaller percentage being from the age group of 20 to 30 years (2.9%). These results indicate that kindergarten teachers in Portugal are mostly over 40 years old.

Regarding academic qualifications, it was noticed that most kindergarten teachers have a bachelor's degree (69%), followed by a significant proportion with a master's degree (27.6%). Only a small percentage had a doctoral or vocational education degree (1.4% and 0.5%, respectively).

In terms of years of professional experience as childhood educators, the highest percentage falls between 31 and 40 years of service (37.6%), followed by the groups between 11 and 20 years (25.2%) and between 21 and 30 years (24.8%). The group with less than 1 year of experience had the lowest percentage (1.9%).

Most respondents had between 11 and 20 years (32.9%) of experience as kindergarten teachers in their current institution, followed by those with 1 to 5 years (15.2%), 6 to 10 years (14.8%), 21 to 30 years (14.3%), and less than 1 year (13.8%). The lowest percentage of participants (9%) revealed having between 31 and 40 years of experience as an educator in their current institution.

Most of the respondents worked in public institutions (52.9%), followed by private non-profit institutions (social solidarity) (35.2%), and private institutions (11%). Most of these institutions were in urban areas (56.7%), but significant percentages were found in rural and suburban areas (23.3% and 19.5%, respectively).

Regarding the number of children, they work with, the highest percentage of respondents (47.6%) work with a group of 21 to 30 children, followed by A group of 11 to 20 children (42.4%). Only a small percentage (1.4%) worked with more than 30 children. It was also observed that most respondents (46.7%) work with children aged 3, 4, or 5 years, while the group of children aged 0-3 years had the second-highest percentage (22.9%).

3 RESULTS

Pedagogical documentation goes beyond a simple record of children's actions; it is a comprehensive approach that delves into understanding and enhancing their learning experiences. In this exploration, we examine key insights derived from a study involving kindergarten teachers and their practices of documenting children's developmental and learning milestones. The data provides valuable glimpses into the types of evidence used, methods of organization, tools for data collection, and approaches to documenting children's free play. These insights underscore the importance of thoughtful documentation in shaping effective teaching practices and fostering optimal growth and development in early childhood education.

3.1 Relation between pedagogical documentation and children's learning

Pedagogical documentation is not merely a record of children's observable behaviours. It encompasses much more than that. When teachers document their practices and turn them into informative documents that highlight children's learning, they also reflect on their pedagogical knowledge. Early childhood educators should integrate pedagogical documentation into their teaching practice to enhance children's learning.

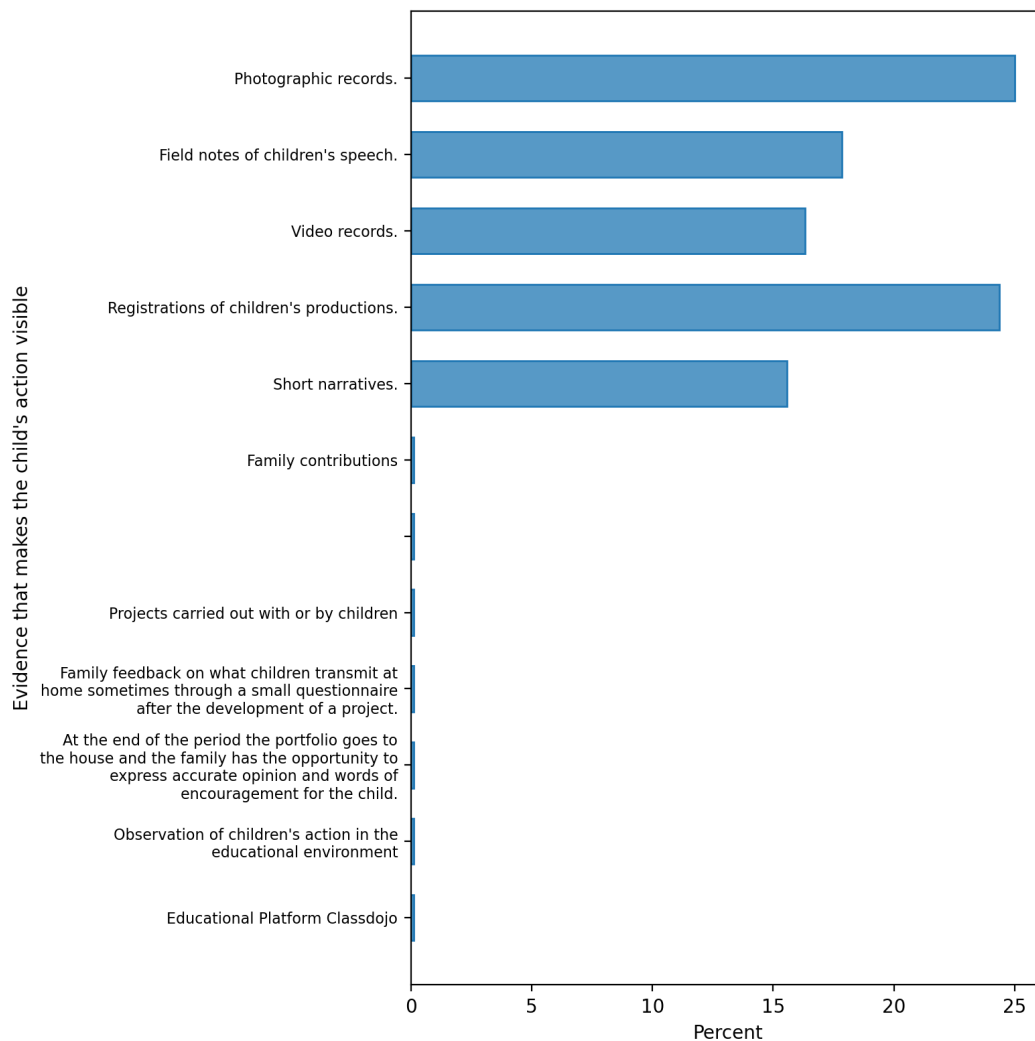


Figure 1 - Evidence that makes visible the child's action.

As shown in Figure 1 the surveyed kindergarten teachers use various types of evidence to make visible the actions that demonstrate how children develop and learn. The most common type of evidence is photographic records, which make up 25% of the total. This is followed closely by children's drawings, paintings, sculptures, writings, or any other form of creative work, which make up 24% of the evidence. Field notes recording children's speech make up 18%. Video recordings and short narratives are the next most commonly used types of evidence, comprising 17% and 16% respectively. The remaining items, such as family contributions, projects carried out by children, and family feedback on what children convey at home (sometimes obtained through a short questionnaire after the development of a project), are all equally represented at 0.5%. At the end of the period, the portfolio goes home, allowing families to express an accurate opinion and words of encouragement to the child. Observation of children's activities in the educational environment and the use of the educational platform Clasdojo are also used by some teachers.

Considering the data, kindergarten teachers perform a fundamental task in organizing the evidence they have collected.

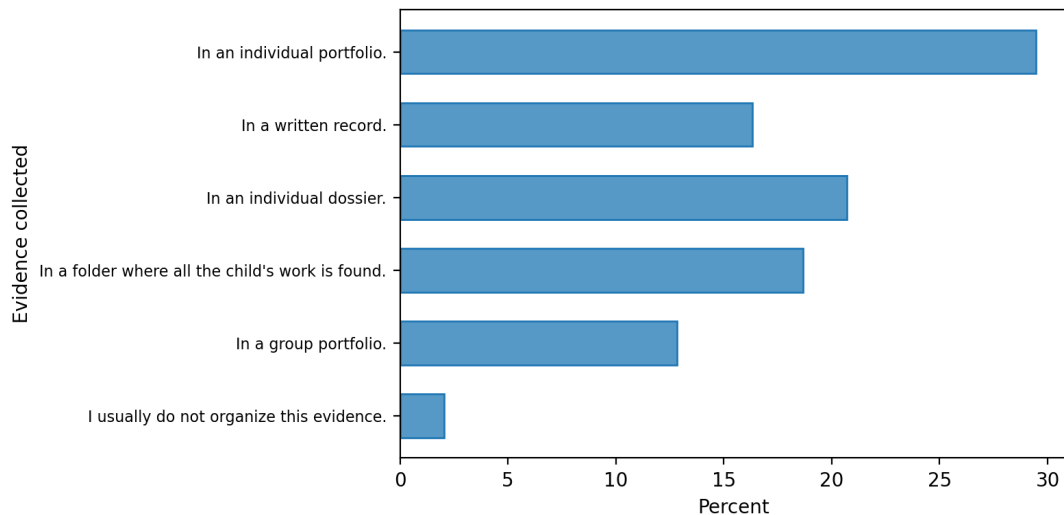


Figure 2 - Instruments to organize the evidence collected.

According to Figure 2, the most commonly used options are the individual portfolio with 30% and the individual dossier with 20%. The option of organizing the evidence in a folder where all the child's work is stored is used by 18% of the teachers. The written record and the group portfolio are the least used, with 17% and 13%, respectively. However, it is important to note that these numbers only reflect the surveyed teachers and may not be representative of all kindergarten teachers' practices. can verify that 1.5% of the interviewees do not usually organize any evidence.

As illustrated in Figure 3, data collection through direct observation stands out with 23% of the answers of the respondents. The conversation with children with 19% is also widely used to collect data on children. Photographic records with 14%, analysis of children's work with 12.5% and video records with 10.5% are also important means of data collection. The least used forms of data collection are family reports, playing with the child and experiments.

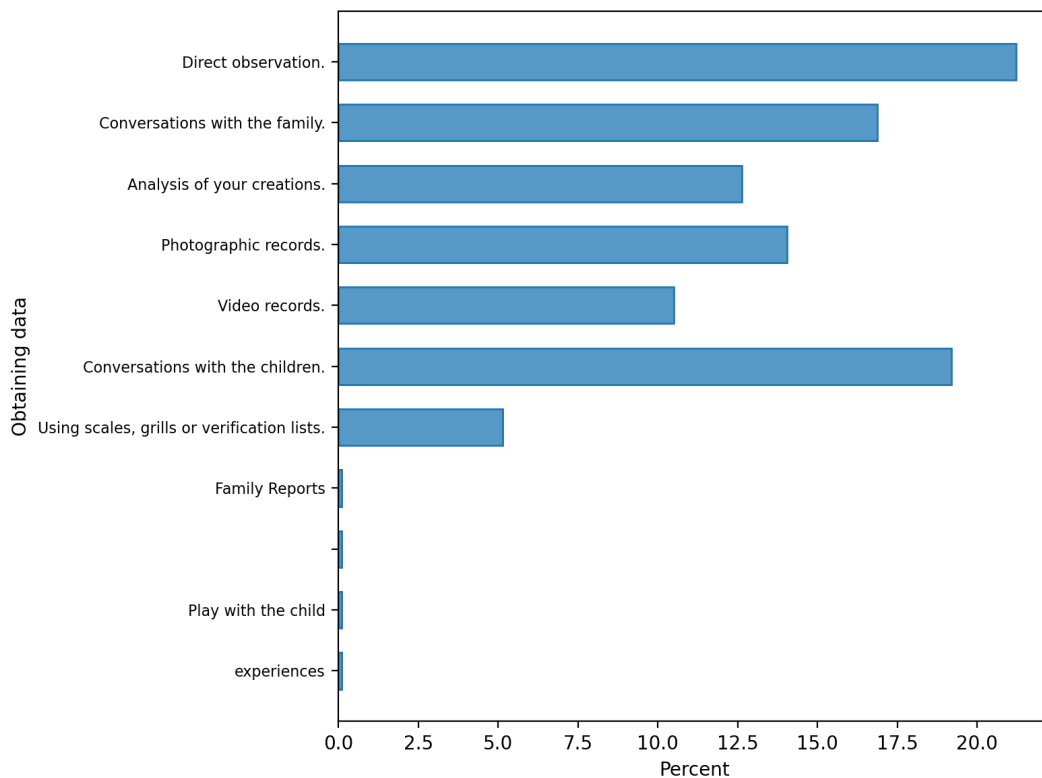


Figure 3 - Instruments to obtain data about the child.

In the open response that requested to indicate the type of scales, grids, and checklists used by educators, 70 answers were collected. The instruments mentioned in some of these responses were the Children Observation Record from the HighScope Foundation, the Child Monitoring System, the Well-being Scale, and the Involvement Scale, but also checklists and instruments created by educators based on OCEPE.

Figure 4 illustrates the various methods employed by kindergarten teachers to document children's free play.

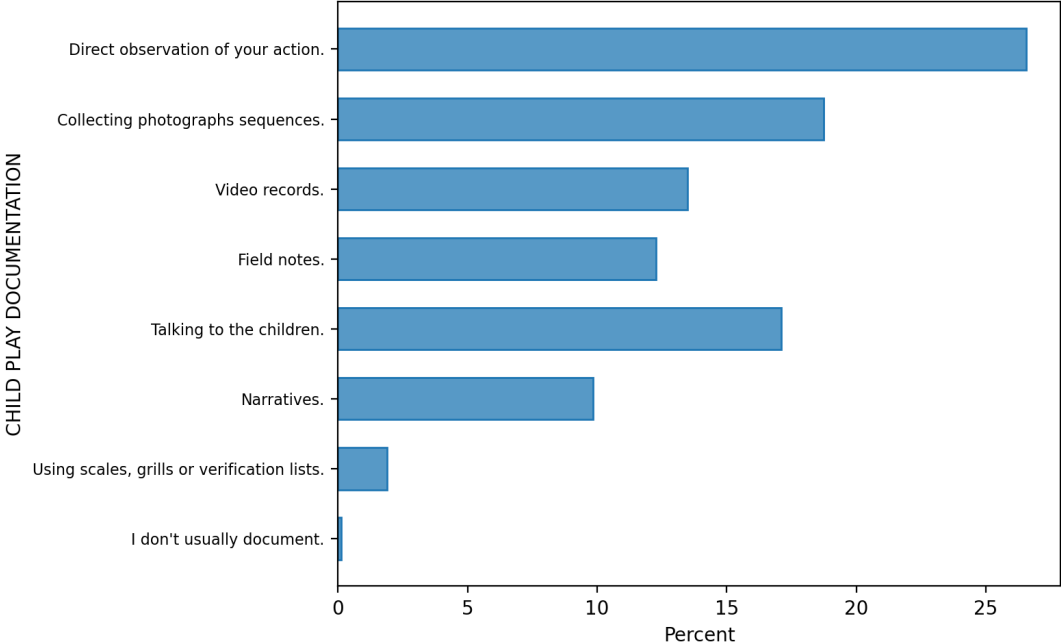


Figure 4 - Documenting the child's free play.

The most common method used by respondents is direct observation of children's actions, which was chosen by 26%. Taking photographic sequences was the second most popular choice with 18%, followed by talking to children with 16% of respondents' answers. Video recordings (14%), field notes (11.5%), and narratives (10%) were also utilized. Scales, grids, or checklists were the least commonly used methods, with only 1.5% of respondents selecting this option. A mere 0.1% of respondents stated that they do not document children's play in any way.

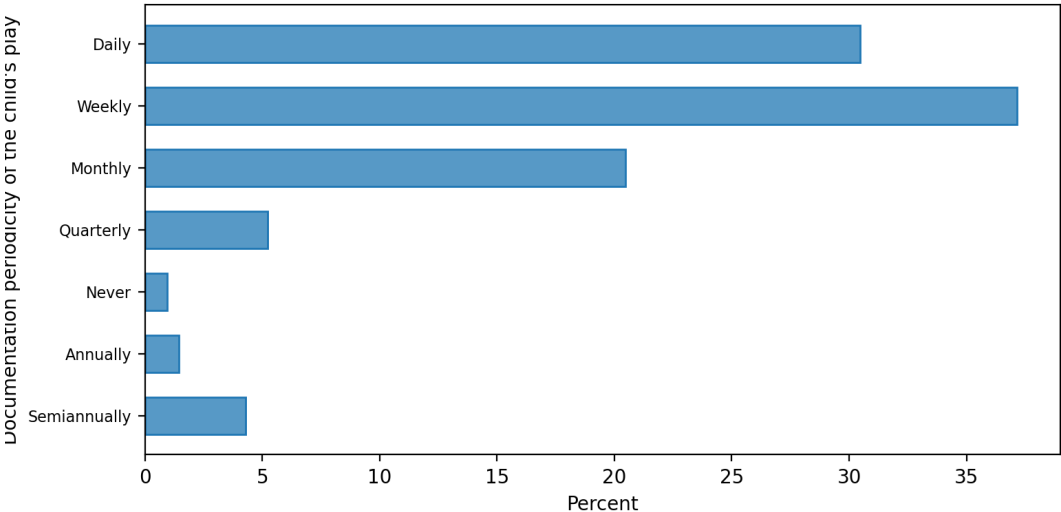


Figure 5 - Documentation periodicity of the child's play.

Based on the collected data (Figure 5), it was revealed that 37% of kindergarten teachers document children's actions weekly, while 30.2% document daily and 20.2% document monthly. It is noteworthy

that 5.1% of respondents document every three months, 4% document every six months, and 1.5% document annually. Interestingly, 1% of respondents do not make any records.

4 CONCLUSIONS

The first part of this text discusses early childhood education in Portugal, which is divided into two tasks: daycare for children aged 0-3 years and Preschool Education in Kindergartens for children aged 3-6 years. Preschool Education is part of the Portuguese educational system and emphasizes educational preparation for children. The Framework Law for Preschool Education sets goals for socio-emotional and intellectual development, education for citizenship, correcting social asymmetries, and equalizing opportunities. There is no national curriculum for Preschool education in Portugal, but there are Curricular Guidelines for Preschool Education that reflect a perspective of how children develop and learn. Assessment in Preschool education in Portugal is a continuous and comprehensive process that involves systematic and regular data collection, analysis, and reflection. It also involves the participation of all stakeholders, including children, families, educators, and other professionals, and encourages reflective practices.

This study on kindergarten teachers in Portugal revealed that the majority of teachers are over 40 years old, with 37.1% between 51-60 years old. Most teachers have a bachelor's or master's degree, with only a small percentage holding a doctoral or vocational education degree. The highest percentage of teachers have 31-40 years of professional experience, and 32.9% have 11-20 years of experience in their current institution. Public institutions employ the majority of teachers (52.9%), and most teachers work with a group of 21-30 children, with 46.7% working with children aged 3, 4, or 5 years.

Pedagogical documentation is seen, by the respondents as a continuous process of gathering information about learning processes. Respondents believe pedagogical documentation enables the acquisition of information, identification of how children learn, and the creation of strategies to improve their learning. Kindergarten teachers consider assessing children to be relevant and important for observing, planning, acting, assessing, communicating, and articulating, as well as seeing the progress and development of children. They perceive pedagogical documentation as a process that involves children, kindergarten teachers, families, and institutions. It is seen as evidence of the actions taken by the group of children and the educator and a process that records the learning of children and childhood education professionals, families of children, and institutions.

A majority of kindergarten teachers engage in weekly reflections with children regarding the collected learning evidence (41%) and usually reflect with parents on the evidence of children's learning quarterly (41.9%). Most (87.1%) believe a digital application could facilitate the documentation process. Out of 210 kindergarten teachers, 64% reported using digital applications to assist in their documentation processes, while 36% stated that they do not use any. The most common use of digital applications is to share photos and/or videos (25.29%) and exchange messages with families (25.29%).

The survey data suggests that kindergarten teachers commonly use different types of evidence to make visible how children develop and learn, such as photographic records, children's drawings or creative work, field notes, video recordings, and short narratives. They also organize the evidence they collect in different ways, such as individual portfolios or dossiers, folders, written records, and group portfolios. Direct observation and conversation with children are the most widely used methods to collect data on children's activities, followed by photographic records, analysis of children's work, and video recordings. Most kindergarten teachers document children's actions on a weekly or daily basis and feel challenged by time spent on management activities and bureaucratic tasks when carrying out evaluations.

ACKNOWLEDGEMENTS

This work has been supported by FCT – Fundação para a Ciência e Tecnologia within the Project Scope: UIDB/05777/2020.

This study was developed within the scope of the Early Year Digital Portfolio Project, a KA2 Erasmus+ project with the Number: 2022-1-PT01-KA220-SCH-000086979, funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

REFERENCES

- [1] M. J. Cardona, S. da Isabel Lopes, Marques, Liliana, e Rodrigues, Pedro, Planear e avaliar na educação pré-escolar, Ministério da Educação/Direção-Geral da Educação (DGE). 2021.
- [2] I. Silva, L. Marques, L. Mata, e M. Rosa, Orientações Curriculares para a Educação Pré-Escolar. Lisboa: Ministério da Educação/Direção-Geral da Educação (DGE), 2016. [Em linha]. Disponível em: http://www.dge.mec.pt/sites/default/files/Noticias_Imagens/ocepe_abril2016.pdf
- [3] Diário da República, Decreto-Lei 241, Perfis Específicos de Desempenho Profissional Do Educador de Infância e Do Professor Do 1.o Ciclo Do Ensino Básico. 2001.
- [4] C. Edwards, L. Gandini, e G. Forman, As cem linguagens da criança: a experiência de Reggio Emilia em transformação, vol. 2. Porto Alegre: Penso, 2016.
- [5] M. A. Folque, An investigation of the Movimento da Escola Moderna (MEM) pedagogy and its contribution to learning to learn in Portuguese Pre-schools. Thesis for the degree of Doctor of Philosophy. London: Institute of Education, University of London, 2008.
- [6] Neto, «Brincar e Ser ativo na escola», em Diversidades- Educação e Aprendizagem, 2017. [Em linha]. Disponível em: http://www02.madeiraedu.pt/Portals/5/documentos/PublicacoesDRE/Revista_Diversidades/Revista%20Diversidades%2051.pdf
- [7] C. Neto e F. Lopes, Brincar em todo o lado. Cascais: Câmara Municipal de Cascais, 2018.
- [8] J. Formosinho e J. Oliveira-Formosinho, Pedagogy-in-Participation: Childhood Association. Lisbon: Aga Khan Foundation, 2008.
- [9] J. Formosinho e J. Peeters, Eds., Understanding pedagogic documentation in early childhood education: revealing and reflecting on high quality learning and teaching. London; New York: Routledge Taylor & Francis Group, 2019.
- [10] J. Oliveira-Formosinho, «A documentação Pedagógica: revelando a aprendizagem solidária», em Documentação Pedagógica e Avaliação na Educação Infantil: Um Caminho para a Transformação, J. Oliveira-Formosinho e C. Pascal, Eds., Porto Alegre: Penso Editora, 2019, pp. 111–134.